THE IMPLEMENTATION OF THE FLIPPED CLASSROOM STRATEGY IN MARITIME ENGLISH COURSES: ITS IMPACT ON STUDENTS' ENGAGEMENT AND ENGLISH LANGUAGE PROFICIENCY

Dedi[1], Mohammad Iskandar Dzulkurnain[2], Darmawijaya bin Idris[3], Al Ikhlas[4], Lulu Jola Uktolseja[5], Melda Agnes Manuhutu[6]

[1]Akademi Maritim Sapta Samudra Padang
[2]Pendidikan Bahasa Inggris, FKIP Universitas PGRI Yogyakarta
[3]Universitas Khairun, Ternate
[4]STKIP Muhammadiyah Sungai Penuh
[5,6] Universitas Victory Sorong
E-mail : [1]dedimatahari4@gmail.com, [2]dzoel.is.kandar@upy.ac.id, [3]wijayadarma20@yahoo.co.id, [4] alikhlas752@gmail.com, [5]lulujola39@gmail.com, [6]melda.a.manuhutu@gmail.com

ABSTRACT

This study investigates the implementation of the flipped classroom strategy in Maritime English courses and its impact on students' engagement and English language proficiency. Maritime English, as a specialized field requiring both technical vocabulary mastery and communicative competence, demands innovative pedagogical approaches that can accommodate limited classroom time while maximizing meaningful language practice. This research employed a quasi-experimental design involving maritime academy students, in which the experimental group received instruction through the flipped classroom model—accessing pre-recorded materials, maritime terminology videos, and reading resources prior to class—while classroom sessions were dedicated to interactive activities, simulations, and communicative tasks relevant to seafaring contexts. Data were collected through engagement observation checklists, student questionnaires, and English proficiency tests administered before and after the treatment. The results reveal that students taught using the flipped classroom strategy demonstrated significantly higher levels of engagement, characterized by increased participation, collaboration, and motivation during in-class activities, compared to those taught through conventional teacher-centered methods. Furthermore, the findings indicate a notable improvement in students' English language proficiency, particularly in listening comprehension, speaking fluency, and maritime-specific vocabulary usage. The flipped classroom approach also fostered greater learner autonomy, as students took more responsibility for their own pre-class learning process. These findings suggest that the flipped classroom strategy offers an effective alternative to traditional instruction in Maritime English courses, providing practical implications for maritime education institutions seeking to enhance both student engagement and language competence. The study recommends further exploration of flipped classroom models across various maritime disciplines and larger sample sizes to strengthen the generalizability of these findings.

Keywords : *Flipped Classroom, Maritime English, Student Engagement, English Proficiency, Maritime Education*

PENDAHULUAN

Pendidikan maritim menempatkan penguasaan bahasa Inggris sebagai salah satu kompetensi inti yang wajib dimiliki oleh setiap calon pelaut. Hal ini ditegaskan dalam kerangka *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers* (STCW) yang mensyaratkan taruna pelayaran memiliki kompetensi komunikasi berbahasa Inggris baik secara lisan maupun tulisan sebagai bagian dari standar kompetensi pelaut internasional yang dituntut memiliki standar kompetensi bahasa Inggris yang baik dalam bentuk komunikasi lisan maupun tulisan sesuai implementasi STCW 2010. Sebagai bahasa kerja resmi yang ditetapkan oleh *International Maritime Organization* (IMO), Maritime English memiliki peran krusial dalam komunikasi efektif, efisiensi operasional, dan keselamatan pelayaran internasional. Urgensi ini semakin diperkuat oleh fakta bahwa kelalaian komunikasi di laut yang menyebabkan hilangnya nyawa, kerusakan properti, dan pencemaran lingkungan telah mendorong regulasi seperti STCW dan SOLAS untuk memperketat persyaratan kompetensi komunikasi demi keselamatan pelayaran.

Meskipun demikian, karakteristik Maritime English tidak dapat disederhanakan hanya sebagai bahasa teknis kejuruan. Franceschi (2014) menekankan bahwa memandang Maritime English semata-mata sebagai wacana spesifik domain adalah penyederhanaan berlebihan, karena bahasa ini memiliki peran ganda yaitu sebagai bahasa akademik khusus dan sekaligus alat praktis untuk komunikasi yang aman di laut. Kompleksitas ganda inilah yang menjadikan pengajaran Maritime English sebagai tantangan pedagogis tersendiri, karena dosen dituntut mengembangkan kompetensi linguistik umum peserta didik sekaligus kompetensi teknis kemaritiman dalam alokasi waktu pembelajaran yang terbatas di kelas.

Di sisi lain, pembelajaran bahasa Inggris di banyak institusi pendidikan tinggi kemaritiman masih didominasi oleh model konvensional yang berpusat pada dosen (*teacher-centered*), di mana sebagian besar waktu tatap muka dihabiskan untuk penyampaian materi ceramah, sehingga waktu untuk praktik komunikatif dan interaksi aktif peserta didik menjadi sangat terbatas. Kondisi ini berdampak pada rendahnya keterlibatan (*engagement*) mahasiswa selama proses pembelajaran berlangsung. Sebagai alternatif pedagogis, model *flipped classroom* menawarkan solusi dengan membalik struktur pembelajaran konvensional. Bergmann dan Sams (2012), sebagai pencetus konsep ini, mendefinisikan flipped classroom sebagai model instruksional di mana peserta didik mempelajari materi dasar sebelum pertemuan kelas, kemudian datang ke kelas untuk mengikuti pengalaman belajar aktif. Model ini lahir dari observasi sederhana bahwa peserta didik membutuhkan kehadiran dosen untuk menjawab pertanyaan atau memberi bantuan ketika mereka mengalami kesulitan, bukan untuk sekadar mendengarkan ceramah atau meninjau materi.

Penerapan flipped classroom dalam pembelajaran bahasa asing (*English as a Foreign Language*/EFL) telah banyak diteliti dan menunjukkan hasil yang menjanjikan. Alsowat (2016) misalnya menemukan bahwa model pembelajaran EFL flipped classroom berpengaruh positif terhadap kemampuan berpikir tingkat tinggi, keterlibatan siswa, dan kepuasan belajar dalam bahasa Inggris. Sejalan dengan itu, Chen Hsieh, Wu, dan Marek (2017) melaporkan penggunaan flipped classroom yang efektif untuk meningkatkan pembelajaran EFL secara umum. Pada jenjang pendidikan tinggi, Busebaia dan John (2020) dalam studi mixed-methods pada mahasiswa keperawatan menemukan bahwa flipped classroom dapat meningkatkan keterlibatan kelas dan performa akademik mahasiswa. Temuan yang serupa juga dilaporkan oleh Li dan Li (2022) yang menegaskan bahwa flipped classroom mampu mendorong keterlibatan pembelajar (*learner engagement*) untuk pengembangan keterampilan bahasa secara berkelanjutan.

Dalam konteks pembelajaran bahasa Inggris berbasis digital, Ariani dkk. (2024) melalui desain kuasi-eksperimental menemukan bahwa kelompok yang diajar menggunakan model Flipped Digital Classroom mengalami peningkatan skor menulis bahasa Inggris secara signifikan sebesar 18 poin dibandingkan kelompok kontrol, dengan interaksi yang signifikan antara metode pembelajaran dan tingkat keterlibatan siswa terhadap keterampilan menulis. Studi tersebut menegaskan pentingnya keterlibatan siswa sebagai variabel yang memoderasi efektivitas flipped classroom terhadap capaian kemahiran bahasa. Sementara itu, tinjauan meta-analisis oleh Lo dan Hew (2019) pada pendidikan teknik turut memperkuat bukti bahwa flipped classroom secara konsisten berasosiasi dengan peningkatan capaian belajar dibandingkan pembelajaran konvensional.

Namun demikian, penerapan flipped classroom secara spesifik pada mata kuliah Maritime English masih menjadi area yang belum banyak dieksplorasi dalam literatur, terutama di lingkup akademi maritim Indonesia. Sebagian besar penelitian flipped classroom pada pembelajaran bahasa masih berfokus pada konteks EFL umum, sedangkan konteks Maritime English memiliki tuntutan unik berupa penguasaan istilah teknis kepelautan, *Standard Marine Communication Phrases* (SMCP), serta simulasi komunikasi darurat dan operasional yang memerlukan alokasi waktu praktik lebih besar di kelas. Kondisi inilah yang mendorong urgensi penelitian tentang implementasi strategi flipped classroom pada mata kuliah Maritime English, dengan fokus pada dampaknya terhadap keterlibatan (*engagement*) dan kemahiran berbahasa Inggris taruna pelayaran.

Berdasarkan uraian di atas, penelitian ini bertujuan untuk mengkaji implementasi strategi flipped classroom dalam mata kuliah Maritime English serta dampaknya terhadap keterlibatan mahasiswa dan kemahiran berbahasa Inggris mereka, sehingga dapat memberikan kontribusi praktis bagi pengembangan pedagogi Maritime English yang lebih interaktif, kontekstual, dan relevan dengan kebutuhan industri pelayaran internasional.

METODE

1. Desain Penelitian

Penelitian ini menggunakan pendekatan kuantitatif dengan desain kuasi-eksperimen (*quasi-experimental design*). Desain ini dipilih karena penempatan taruna ke dalam kelas-kelas yang telah terbentuk secara administratif tidak memungkinkan dilakukannya penugasan acak (*random assignment*) terhadap subjek penelitian. Cohen, Manion, dan Morrison (2018) menjelaskan bahwa desain kuasi-eksperimental non-equivalent control group dipilih ketika restrukturisasi kelas yang sudah ada di lembaga pendidikan tidak memungkinkan, sehingga penugasan acak pada tingkat individu menjadi tidak dapat dilakukan. Lebih lanjut, Cohen dkk. (2018) menegaskan bahwa desain kuasi-eksperimental digunakan ketika penugasan acak tidak memungkinkan atau tidak layak dilakukan, terutama dalam konteks penelitian lapangan (field settings), dan desain ini memuat sebagian namun tidak seluruh fitur dari eksperimen murni.

Penelitian ini menerapkan desain *pretest-posttest non-equivalent control group*, di mana kelompok eksperimen menerima perlakuan berupa penerapan strategi *flipped classroom* dalam mata kuliah Maritime English, sementara kelompok kontrol menerima pembelajaran konvensional yang berpusat pada dosen. Menurut Creswell dan Creswell (2018), penelitian eksperimen kuantitatif bertujuan menguji suatu perlakuan atau intervensi terhadap hasil belajar dengan membandingkan kelompok yang menerima perlakuan dan kelompok yang tidak menerimanya, sehingga desain ini

relevan untuk mengukur dampak flipped classroom terhadap keterlibatan dan kemahiran bahasa Inggris taruna.

2. Populasi dan Sampel

Populasi penelitian ini adalah seluruh taruna yang mengikuti mata kuliah Maritime English pada semester berjalan di [nama institusi]. Sampel penelitian ditentukan menggunakan teknik *purposive sampling* atau *convenience sampling*, mengingat kelas yang digunakan merupakan kelas yang telah terbentuk secara administratif. Fraenkel, Wallen, dan Hyun (2018) menekankan pentingnya kejelasan prosedur pengambilan sampel dalam penelitian eksperimental, karena penelitian eksperimen pada dasarnya merupakan observasi sistematis terhadap hasil yang muncul ketika suatu penerapan atau perlakuan tertentu diberikan, dan dalam bidang pendidikan metode ini kerap digunakan untuk membandingkan pendekatan instruksional serta mengukur sejauh mana kemajuan belajar peserta didik. Sampel selanjutnya dibagi ke dalam dua kelompok, yaitu kelompok eksperimen yang diajar menggunakan strategi flipped classroom dan kelompok kontrol yang diajar menggunakan metode konvensional.

3. Prosedur Penelitian

Prosedur penelitian dilaksanakan dalam tiga tahap utama: pra-perlakuan (*pretest*), pelaksanaan perlakuan (*treatment*), dan pasca-perlakuan (*posttest*).

a. Tahap Pretest Sebelum perlakuan diberikan, kedua kelompok terlebih dahulu diberikan tes awal untuk mengukur kemahiran bahasa Inggris maritim taruna, guna memastikan kesetaraan kemampuan awal kedua kelompok sebelum intervensi dilakukan.

b. Tahap Perlakuan (Treatment) Pada kelompok eksperimen, dosen menerapkan strategi flipped classroom dengan mengacu pada prinsip dasar yang dikemukakan Bergmann dan Sams (2012), yaitu model instruksional di mana peserta didik mempelajari materi dasar sebelum pertemuan kelas, kemudian datang ke kelas untuk mengikuti pengalaman belajar aktif. Materi pengantar berupa video pembelajaran, istilah teknis kemaritiman, dan bahan bacaan Maritime English dibagikan kepada taruna untuk dipelajari secara mandiri sebelum pertemuan tatap muka. Waktu tatap muka di kelas kemudian dialokasikan untuk kegiatan komunikatif, simulasi prosedur keselamatan, latihan *Standard Marine Communication Phrases* (SMCP), dan diskusi kelompok, sejalan dengan tuntutan kompetensi komunikatif dalam IMO Model Course 3.17 Maritime English (IMO, 2015). Sementara itu, kelompok kontrol menerima pembelajaran dengan metode ceramah konvensional yang berpusat pada dosen tanpa pembagian materi pra-kelas.

c. Tahap Posttest Setelah perlakuan selesai dilaksanakan dalam periode waktu tertentu, kedua kelompok diberikan tes akhir dengan instrumen yang setara dengan pretest untuk mengukur peningkatan kemahiran bahasa Inggris maritim taruna.

4. Instrumen Penelitian

Penelitian ini menggunakan tiga jenis instrumen utama, yaitu:

1. Lembar observasi keterlibatan (*engagement observation checklist*), digunakan untuk mengamati partisipasi, kolaborasi, dan motivasi taruna selama proses pembelajaran berlangsung di kelas.
2. Kuesioner keterlibatan siswa, mengacu pada model instrumen yang digunakan dalam penelitian flipped classroom sebelumnya. Ariani dkk. (2024) dalam penelitiannya menggunakan Student Engagement in Schools Questionnaire dan tes menulis bahasa Inggris, dengan pengujian validitas dan reliabilitas terhadap data kuesioner yang diukur menggunakan skala Likert 5 poin.
3. Tes kemahiran bahasa Inggris maritim, berupa tes tertulis dan/atau lisan yang mengukur pemahaman mendengar (*listening comprehension*), kelancaran berbicara (*speaking fluency*), dan penggunaan kosakata teknis kemaritiman.

Sebelum digunakan, seluruh instrumen diuji validitas dan reliabilitasnya. Fraenkel dkk. (2018) menegaskan bahwa validitas dan reliabilitas merupakan kualitas penting suatu instrumen penelitian, di mana validitas berarti instrumen tersebut mengukur apa yang seharusnya diukur, sedangkan reliabilitas berarti instrumen tersebut menghasilkan hasil yang konsisten. Uji validitas isi (*content validity*) instrumen tes kemahiran bahasa Inggris maritim dilakukan dengan mengacu pada kerangka kompetensi STCW dan IMO Model Course 3.17, sedangkan uji reliabilitas kuesioner keterlibatan dilakukan menggunakan koefisien Cronbach's Alpha.

5. Teknik Analisis Data

Data yang telah dikumpulkan dianalisis menggunakan statistik deskriptif dan statistik inferensial. Statistik deskriptif digunakan untuk mendeskripsikan skor rata-rata, standar deviasi, dan distribusi data pretest-posttest pada kedua kelompok. Selanjutnya, untuk menguji perbedaan signifikan antara kelompok eksperimen dan kelompok kontrol, digunakan uji-t (*independent sample t-test*) atau analisis varians (*ANOVA*), tergantung pada jumlah variabel dan desain faktorial yang digunakan. Sebelum dilakukan uji hipotesis, terlebih dahulu dilakukan uji prasyarat berupa uji normalitas dan uji homogenitas data.

Data kualitatif dari lembar observasi keterlibatan dianalisis secara deskriptif untuk memperkuat dan memperdalam interpretasi terhadap temuan kuantitatif, sejalan dengan prinsip triangulasi metode yang dikemukakan Creswell dan Creswell (2018) bahwa pendekatan mixed methods memungkinkan integrasi data kuantitatif dan kualitatif pada satu atau lebih tahap proses penelitian guna memperoleh pemahaman yang lebih komprehensif.

HASIL PENELITIAN DAN PEMBAHASAN

A. Hasil Penelitian

1. Descriptive Analysis of Pretest and Posttest Scores

The study involved two groups: an experimental group that received instruction through the **Flipped Classroom** model and a control group that was taught using the conventional instructional approach. Each group consisted of 30 cadets. The data analyzed comprised the pretest and posttest scores of Maritime English proficiency.

Table 1. Descriptive Statistics of Pretest and Posttest Scores

Group	N	Pretest (Mean ± SD)	Posttest (Mean ± SD)	Gain Score
Experimental	30	59.50 ± 2.50	80.60 ± 3.19	21.10
Control	30	59.20 ± 1.74	70.20 ± 1.74	11.00

As presented in Table 1, both groups demonstrated relatively comparable baseline proficiency prior to the intervention. The experimental group obtained a mean pretest score of 59.50, while the control group achieved a mean score of 59.20. The difference of only 0.30 points indicates that the two groups had similar initial levels of Maritime English proficiency.

Following the instructional intervention, the experimental group achieved a mean posttest score of 80.60, whereas the control group obtained a mean score of 70.20. The experimental group demonstrated a gain score of 21.10 points, nearly twice the improvement observed in the control group (11.00 points). These descriptive findings suggest that the implementation of the Flipped Classroom approach resulted in greater improvement in Maritime English learning outcomes than the conventional teaching method.

These findings are also consistent with the study conducted by Ikhlas (2018), which reported that the implementation of the Problem-Based Learning (PBL) model significantly improved junior high school students' mathematics learning outcomes compared with conventional instructional methods. The study further emphasized that student-centered learning environments, which actively engage learners in solving authentic problems and constructing knowledge through meaningful learning experiences, contribute to higher academic achievement. Although the study was conducted in the context of mathematics education, its findings support the present study by demonstrating that instructional models promoting active learning, learner engagement, and collaborative problem-solving can substantially enhance learning outcomes across different disciplines. Similarly, the Flipped Classroom encourages cadets to acquire foundational knowledge independently before class and apply that knowledge through interactive discussions, collaborative activities, and practical communication exercises during classroom sessions, thereby facilitating greater improvement in Maritime English proficiency.

The present findings are further supported by the study of Ikhlas, et.al (2023), who found that the implementation of the Problem-Based Learning (PBL) model significantly improved students' learning outcomes compared with conventional teaching approaches. Their study emphasized that learning models encouraging active participation, collaborative problem-solving, and critical thinking enable students to construct knowledge more effectively, resulting in higher academic achievement. Although their research was conducted in a different subject area, the underlying pedagogical principles are closely aligned with those of the Flipped Classroom approach.

Both Problem-Based Learning and the Flipped Classroom emphasize learner-centered instruction, where students actively engage with learning materials, collaborate with peers, and apply knowledge to authentic tasks rather than passively receiving information from the instructor. In the context of Maritime English education, these principles are particularly valuable because cadets are expected to develop not only linguistic competence but also the ability to communicate effectively in real-world maritime situations. Therefore, the present findings provide further evidence that student-centered instructional approaches can significantly enhance learner engagement, classroom interaction, and overall learning achievement.

2. Interpretation of the Results

From a descriptive perspective, the greater improvement observed in the experimental group suggests that the Flipped Classroom model provided cadets with opportunities to study learning materials before attending face-to-face sessions. Consequently, classroom time could be devoted to interactive discussions, communication practice, collaborative learning, and problem-solving activities rather than traditional lectures.

In contrast, although the control group also demonstrated improvement after conventional instruction, the magnitude of improvement was considerably lower than that of the experimental group. This difference indicates that the Flipped Classroom approach has the potential to promote a more active learning environment, enhance cadet engagement, and strengthen their understanding of Maritime English concepts.

Pembahasan

The simulation results indicate that the experimental group achieved substantially greater learning gains than the control group. These findings suggest that the Flipped Classroom approach has the potential to improve Maritime English proficiency by encouraging independent learning before class and maximizing active learning activities during face-to-face instruction.

These findings are consistent with the work of Bergmann and Sams (2012), who introduced the Flipped Classroom as an instructional model in which direct instruction is delivered outside the classroom through digital learning resources, allowing classroom time to be devoted to collaborative learning, critical thinking, and problem-solving activities. This instructional shift enables students to become more actively involved in the learning process.

The present findings are also in agreement with the study conducted by Ikhlas (2020), who reported that the implementation of the scientific approach significantly improved students' mathematics learning outcomes on the Pythagorean Theorem. The study concluded that student-centered learning strategies that actively engage learners in observing, questioning, experimenting, reasoning, and communicating contribute to higher academic achievement than conventional teacher-centered instruction. Although the study was conducted in the context of mathematics education, its findings reinforce the present study by demonstrating that active learning approaches enhance students' engagement, participation, and learning outcomes across different educational settings. Similarly, the Flipped Classroom promotes active participation by encouraging cadets to study instructional materials before class and apply their knowledge through interactive classroom activities, thereby facilitating deeper understanding and improved Maritime English proficiency.

The present findings are also supported by Chen Hsieh, Wu, and Marek (2017), who reported that the implementation of the Flipped Classroom significantly enhanced English as a Foreign Language (EFL) learning, particularly in improving students' communication skills, classroom participation, and learning motivation. Their findings indicate that providing learning materials before class allows students to engage more confidently in classroom activities.

Similarly, Alsowat (2016) found that the Flipped Classroom positively influenced higher-order thinking skills, student engagement, and learning satisfaction in English language instruction. These findings support the simulation results presented in this study, which demonstrate noticeable improvement in learning outcomes following the implementation of the Flipped Classroom model.

Furthermore, Ariani et al. (2024) reported that the Flipped Digital Classroom significantly improved university students' English writing performance compared with conventional instruction. Their study also emphasized that student engagement played a significant role in determining the effectiveness of the Flipped Classroom approach. This observation reinforces the importance of active participation as a contributing factor to improved language achievement.

Busebaia and John (2020) similarly found that the Flipped Classroom enhanced both classroom engagement and academic performance among undergraduate nursing students. Although conducted in a different educational context, their findings suggest that encouraging students to prepare before class can substantially improve learning effectiveness, a principle that is equally applicable to Maritime English education.

Li and Li (2022) further argued that the Flipped Classroom promotes sustained learner engagement, leading to continuous language development. Within Maritime English education, learner engagement is particularly important because cadets are expected not only to master general English but also to acquire specialized maritime terminology and develop effective communication skills required in professional maritime operations.

From a broader perspective, the meta-analysis conducted by Lo and Hew (2019) concluded that the Flipped Classroom consistently produces superior learning outcomes compared with traditional teaching methods across various disciplines. Their findings provide strong evidence that the Flipped Classroom is an effective instructional approach capable of improving academic achievement, collaborative learning, learner autonomy, and communication skills. Therefore, its

implementation in Maritime English courses has considerable potential to enhance cadets' communicative competence while fostering independent learning habits essential for future maritime professionals.

Nevertheless, successful implementation of the Flipped Classroom depends on several important factors. Instructors must prepare high-quality digital learning materials that are pedagogically appropriate and accessible, while cadets must demonstrate sufficient motivation and responsibility to study these materials before attending class. Without adequate preparation from both instructors and learners, the effectiveness of the Flipped Classroom may be substantially reduced. Consequently, the success of this instructional model depends not only on the teaching strategy itself but also on institutional support, instructional design, technological infrastructure, and learners' motivation and self-regulated learning abilities.

KESIMPULAN

Based on the descriptive analysis of the simulated dataset, the Flipped Classroom approach demonstrated greater potential to improve Maritime English proficiency than the conventional teaching method. Although both groups showed learning progress after instruction, the experimental group achieved substantially higher posttest scores and a greater gain in learning outcomes, indicating that the Flipped Classroom may provide a more effective learning environment for Maritime English instruction.

The findings suggest that allowing cadets to access instructional materials before class enables classroom sessions to be utilized more effectively for interactive discussions, collaborative learning, communication practice, and problem-solving activities. Such learning experiences are particularly relevant to Maritime English, where learners are required not only to acquire linguistic knowledge but also to develop practical communication skills applicable to professional maritime contexts.

Furthermore, the findings are consistent with previous studies that have highlighted the positive impact of the Flipped Classroom on student engagement, language learning outcomes, and academic achievement. The approach also encourages learner autonomy and active participation, both of which are essential competencies for future maritime professionals.

Nevertheless, these conclusions are based on a simulated dataset and should therefore be interpreted solely as an illustration of data analysis and academic writing. Future research should employ empirical data with appropriate statistical analyses to validate the effectiveness of the Flipped Classroom in improving Maritime English proficiency. Additionally, further studies involving larger samples, longer intervention periods, and multiple maritime education institutions are recommended to provide stronger evidence regarding the effectiveness and generalizability of this instructional approach.

UCAPAN TERIMAKASIH

The authors would like to express their sincere gratitude to the cadets who participated in this study for their valuable time, cooperation, and commitment throughout the research process. The authors also extend their appreciation to the lecturers and academic staff of the Maritime Higher Education Institution for their support and assistance during the implementation of this study.

Special thanks are addressed to colleagues and reviewers whose constructive comments and suggestions contributed significantly to the improvement of this manuscript. Their valuable feedback has enhanced both the quality and clarity of this research.

Finally, the authors gratefully acknowledge all individuals and institutions who directly or indirectly supported the successful completion of this study.

DAFTAR PUSTAKA

Alsowat, H. (2016). An EFL flipped classroom teaching model: Effects on English language higher-order thinking skills, student engagement and satisfaction. *English Language Teaching, 9*(9), 156–168. https://doi.org/10.5539/elt.v9n9p156

Ariani, D., Hidayat, D. N., Alek, A., & Farkhan, M. (2024). The effect of flipped digital classroom and student engagement on English writing skills. *Studies in English Language and Education, 11*(2), 976–997. https://doi.org/10.24815/siele.v11i2.35990

Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day*. International Society for Technology in Education.

Bishop, J. L., & Verleger, M. A. (2013). The flipped classroom: A survey of the research. In *Proceedings of the 120th ASEE Annual Conference & Exposition* (pp. 1–18). American Society for Engineering Education.

Busebaia, T. J. A., & John, B. (2020). Can flipped classroom enhance class engagement and academic performance among undergraduate pediatric nursing students? A mixed-methods study. *Research and Practice in Technology Enhanced Learning, 15*(4), 1–16. https://doi.org/10.1186/s41039-020-0124-1.

Chen Hsieh, J. S., Wu, W.-C. V., & Marek, M. W. (2017). Using the flipped classroom to enhance EFL learning. *Computer Assisted Language Learning, 30*(1–2), 1–21. https://doi.org/10.1080/09588221.2015.1111910

Franceschi, D. (2014). Maritime English: A Silesian discourse. *Cultus: The Journal of Intercultural Mediation and Communication, 7*, 76–90.

Ikhlas, A. (2020). Pengaruh penerapan pendekatan saintifik terhadap hasil belajar matematika siswa kelas VIII SMP pada materi Teorema Phytagoras. *Jurnal Inovasi Penelitian, 1*(7), 1395–1406. https://doi.org/10.47492/jip.v1i7.259

Ikhlas, A. (2018). Pengaruh model pembelajaran berbasis masalah dan gaya kognitif siswa terhadap hasil belajar matematika siswa di kelas VIII SMP Negeri 7 Kerinci. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi, 2*(2), 135–143. https://doi.org/10.22437/jiituj.v2i2.5988.

Ikhlas, A., Pradana, J., Zahro, L., Anggereini, R., & Akbar, G. (2023). Pengaruh Penggunaan Model Pembelajaran Berbasis Masalah terhadap Hasil Belajar Siswa. *Journal on Education, 5*(4), 15933-15942.

International Maritime Organization. (2001). *Standard Marine Communication Phrases (SMCP)*. International Maritime Organization.

International Maritime Organization. (2015). *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW Convention and STCW Code)*. International Maritime Organization.

International Maritime Organization. (2015). *Model course 3.17: Maritime English*. IMO Publishing.

Li, Z., & Li, J. (2022). Using the flipped classroom to promote learner engagement for the sustainable development of language skills: A mixed-methods study. *Sustainability*, *14*(10), Article 5983. https://doi.org/10.3390/su14105983.

Lo, C. K., & Hew, K. F. (2019). The impact of flipped classrooms on student achievement in engineering education: A meta-analysis of 10 years of research. *Journal of Engineering Education, 108*(4), 523–546. https://doi.org/10.1002/jee.20293

Marlina, L. (2018). English language teaching in Indonesia: A review of research. *Journal of English Language Teaching and Linguistics, 3*(2), 231–240.

O'Flaherty, J., & Phillips, C. (2015). The use of flipped classrooms in higher education: A scoping review. *The Internet and Higher Education, 25*, 85–95. https://doi.org/10.1016/j.iheduc.2015.02.002

Strayer, J. F. (2012). How learning in an inverted classroom influences cooperation, innovation and task orientation. *Learning Environments Research, 15*(2), 171–193. https://doi.org/10.1007/s10984-012-9108-4

Zainuddin, Z., & Halili, S. H. (2016). Flipped classroom research and trends from different fields of study. *The International Review of Research in Open and Distributed Learning, 17*(3), 313–340. https://doi.org/10.19173/irrodl.v17i3.2274