Analysis of Cadet Needs for the Implementation of Hybrid Learning in Aviation English Courses `

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ABSTRACT

Indonesia is currently in an endemic era. This condition is behind the issuance of a joint decision by the Minister of Education and Culture, Minister of Religious Affairs, Minister of Health, and Minister of Home Affairs to allow students to return to school with limited face-to-face learning. One of the learning models that supports the government's decision to conduct limited face-to-face learning is the hybrid learning model. However, to implement the learning model, it is necessary to conduct an initial analysis related to the needs of cadets for the learning model to be implemented. **The research objective** to analyze the needs of cadets for the implementation of hybrid learning. The research was conducted in the Aviation English course at Politeknik Penerbangan Palembang. The number of respondents was 23 cadets who took Aviation English courses. The research measuring instrument used is in the form of a non-test, namely in the form of a closed questionnaire with 4 answer choices. The data analysis is carried out through descriptive statistical analysis. Percentage data from filling out cadet questionnaires was used to analyze the need to implement a hybrid-learning model. **Results** of the study, it was concluded that all respondents who were cadets of the Palembang Polytechnic Publications needed the application or implementation of hybrid learning in the Aviation English course.

INTRODUCTION

Currently, it seems that the Covid-19 virus has been overcome by the world community, especially the people of Indonesia. Indonesia is currently said to be in an endemic era (Ariga, 2022). However, the Covid-19 virus is still there, and we coexist with it. The Covid-19 virus has an impact on all fields, especially education (Balqis, 2022; Ningsih et al., 2022). The learning model has changed drastically from face-to-face learning to online learning (Suhendro, 2022). Over time, the face-to-face learning process in schools and colleges has gradually reopened with various methods (Prasojo et al., 2022). There are schools that enforce the morning and afternoon session learning system; some enforce the 1-day online, 1-day offline system and other policies. There are unique difficulties for teachers and students with the sudden transition from in-person learning to online learning (Cavanaugh, 2023; Svihus, 2024; Sidi, 2023). The lack of direct contact with lecturers and their friends makes many students struggle to adjust to the online learning approach (Yeung, 2022; Khan, 2022). Effective classroom delivery through digital platforms is another difficulty for teachers (Benjamin, 2020). Therefore, governments and educational institutions must find ways to maintain effective teaching

procedures (Nathan, 2023). Educational institutions have been compelled to innovate rapidly in order to address these challenges, integrating new technologies and pedagogical strategies to bridge the divide between online and offline learning. These endeavors encompass the implementation of hybrid learning models, which integrate the interactive advantages of traditional classroom settings with the adaptability of online education.

This hybrid approach is designed to accommodate a wide range of learning requirements and preferences, thereby establishing a more adaptable and resilient educational framework (Mourtzis D. P., 2022; Nazari-Shirkouhi, 2023). Furthermore, teachers must engage in ongoing professional development to acquire the requisite skills and knowledge to effectively employ digital tools and design meaningful, engaging learning experiences for their students. The ongoing adaptation to this new educational landscape emphasises the necessity of a collaborative effort among educators, students, and policymakers to guarantee that the quality of education remains high, despite the obstacles presented by the pandemic. These policies are made to anticipate learning loss, among others. This is in accordance with the Joint Decree of the Minister of Education and Culture, the Minister of Religion, the Minister of Health, and the Minister of Home Affairs Number 03/KB/2021, Number 384 of 2021, and Number HK.01.08/Menkes/4242/2021, Number 440-7 of 2021 concerning Guidelines for the Implementation of Learning during the Covid-19 Pandemic. Essentially, the decision allows students to return to school with limited face-to-face learning (Wahyuni, 2021). To ensure the safety of students, teachers, and school staff, this limited face-to-face learning is implemented in accordance with various strict health protocols (Erizal, 2023). Several policies have been implemented, such as establishing physical distancing in classrooms, using masks, and providing adequate hand hygiene and sanitation facilities in each school (Godana, 2023). Ministry of Education with Culture. In addition, schools are required to routinely monitor the health of all members of the school community and establish an emergency plan in case of positive cases of Covid-19 in the school environment (Sabrina, 2022).

This proactive approach not only helps in maintaining the continuity of education but also ensures that any outbreak can be quickly contained, minimizing disruption to the learning process. Schools have also been encouraged to integrate health education into their curriculum, teaching students about hygiene practices and the importance of vaccinations to foster a community-wide understanding of how to combat the virus (Dawn H Gauge, 2023). This comprehensive strategy underscores the critical role of policy and collaborative efforts in navigating the complexities of the educational landscape during the pandemic, aiming to safeguard educational outcomes and public health simultaneously. The implementation of these policies requires continuous support from all stakeholders, including government agencies, educational institutions, parents, and students themselves. Effective communication channels must be established to keep everyone informed about the latest guidelines and protocols, ensuring that the entire school community remains vigilant and proactive in their response to the ongoing pandemic.

Moreover, the shift to hybrid learning necessitates significant investment in technology infrastructure and resources. Schools need to be equipped with reliable internet access, adequate devices for students and teachers, and robust digital platforms that facilitate interactive and engaging learning experiences (Sofi-Karim, 2023; Timotheou, 2023). This investment extends beyond hardware and software to include training programs that help educators develop the skills needed to effectively use these tools. Professional development workshops, webinars, and peer support networks are essential components of this training, enabling teachers to share best practices and learn from each other's experiences. The transition to a hybrid model also requires a reevaluation of curriculum design and instructional strategies. Educators must find a balance between synchronous (live) and asynchronous (self-paced) learning activities, ensuring that students have ample opportunities for direct interaction with their teachers and peers while also benefiting from the flexibility to work independently. Assessments and evaluations need to be adapted to this new model, incorporating both traditional testing methods and innovative approaches that leverage digital tools for formative and summative assessment (Riegel, 2024). Parental involvement is another crucial element in the success of hybrid learning. Parents need to be informed and engaged in their children's education, understanding the structure and expectations of the hybrid model. Schools should provide resources and support for

parents to help them navigate the challenges of supporting their children's learning at home. This may include training sessions, informational materials, and regular communication with teachers.

In conclusion, the shift to hybrid learning in response to the Covid-19 pandemic represents a significant transformation in the educational landscape. By accommodating diverse learning needs and preferences, engaging in continuous professional development, and implementing comprehensive health and safety protocols, schools can create a more adaptable and resilient educational framework. This approach, guided by policies such as the Joint Decree of the Minister of Education and Culture, the Minister of Religion, the Minister of Health, and the Minister of Home Affairs, ensures that education continues effectively while prioritizing the health and well-being of students, teachers, and staff. The collaborative efforts of all stakeholders are essential in navigating this new era of education, maintaining high standards of learning, and mitigating the impact of the pandemic on educational outcomes (Sims, 2024).This policy considers the psychological and social aspects of students in addition to health protocols. Many students experience decreased motivation to learn and feelings of isolation from their social environment during distance learning (Zamecnik, 2022; DeCoito, 2022).

Therefore, students can gradually and more adapt to rebuilding their school routines in response to the changes brought about by the pandemic. However, the implementation of this policy is not without challenges. The implementation of health protocols is hampered by the limited infrastructure and resource constraints faced by some schools, especially those in remote locations (Moshtari, 2024; Le, 2022). However, the ambiguity of the pandemic has also prompted parents and educators to express concerns about children's safety in schools (Shiran, 2023). Therefore, it is imperative that all parties involved ensure the effective and safe operation of these policies with the support of various entities, such as governments, communities, and institutions. One solution to be able to do limited face-to-face learning is to implement a hybrid learning model, (Gultom et al., 2022). Hybrid learning combines face-to-face and online learning simultaneously (Ismunandar et al., 2022; Rahmayanti, 2022) . This means that some students participate in direct learning activities (face-to-face) while others participate in learning activities through online media (through zoom, google meet and others) at the same time.

Several researchers have previously conducted research on hybrid learning, including to find out whether the application of hybrid learning improves learning outcomes. Puspitorini et al. (2020) Examining how hybrid-based TPSW learning on circulatory system materials improves cognitive learning outcomes. Wardhani et al. (2022) Examining the influence of hybrid learning on the motivation and learning outcomes of entrepreneurship students of the Economics and Management Education Study Program. The three previous studies concluded that hybrid learning is able to improve student learning outcomes. From several relevant previous studies, the researcher makes the latest or (novelty) of the research to be conducted. In this case, the researcher focused his research on the Aviation English course, which is one of the courses for aviation students. Before implementing the hybrid learning model in the Aviation English course at the Politeknik Penerbangan Palembang, the question arises whether cadets need a hybrid learning model to facilitate their learning activities during a pandemic like the current one. To answer this problem, the researcher analyzed the needs of cadets for the implementation of hybrid learning in the Aviation English course at the Politeknik Penerbangan Palembang

METHOD
The objective of the research conducted in the Aviation English course at Politeknik Penerbangan Palembang was to evaluate the necessity of incorporating hybrid learning modules into the curriculum. A focused sample that represents the perspectives and requirements of students engaged in this specialized area of study was obtained by this study, which involved 23 cadets enrolled in the Aviation English course. The researchers employed a closed questionnaire survey method to collect pertinent data, relying on established research methodologies (Zhang, 2022; Hoeijmakers 2024). The questionnaire provided respondents with four distinct answer alternatives, which enabled a structured and quantitative analysis of their responses. The cadets' feedback was exhaustively interpreted through a comprehensive descriptive statistical analysis of the collected data. This analysis method was selected

due to its ability to accurately summarize extensive datasets and present data in a manner that reveals patterns, trends, and insights that are relevant to the research objectives. The necessity and potential impact of an e-module designed for hybrid learning in the Aviation English course were specifically determined by the percentage data derived from the cadet questionnaires. The research employed a modified Likert Scale calculation to guarantee the precision and reliability of variable measurement.

The Likert scale is a widely recognized instrument in the social sciences that is used to evaluate attitudes, opinions, and behaviors by presenting a series of statements or questions. Each statement is accompanied by a set of answer alternatives that indicate the degree of agreement or disagreement. The Likert scale was modified in this study to produce percentage values that accurately represented the recruits' responses. The development of variable indicators marked the commencement of the Likert scale's implementation. In essence, these indicators are specific aspects or dimensions of the broader variable being measured, which is the necessity of hybrid learning modules in the Aviation English course. The questionnaire subjects were developed on the basis of these indicators, which were established. The survey's statements and questions were designed to elicit responses that would provide insight into the cadets' perspectives on these indicators. Researchers could quantify the degree to which cadets perceived a necessity for hybrid learning and the ways in which they believed it would enhance their educational experience by conducting a systematic analysis of the responses to these questions.

The recruits' collective attitudes and preferences were clearly represented numerically by the percentage data, which enabled more nuanced comprehension of their educational requirements. Moreover, the findings were both credible and robust due to the study's reliance on established research methodologies and statistical analysis techniques. The descriptive statistical analysis not only revealed the prevalence of specific opinions but also allowed the researchers to identify significant trends and outliers. This thorough methodology guaranteed that the conclusions derived from the investigation were accurate and representative of the cadet population's actual sentiments.

RESULT AND DISCUSSION

The research conducted in the Aviation English course at Politeknik Penerbangan Palembang, which involved 23 cadets and made use of a closed questionnaire survey method with a modified Likert scale, successfully identified the necessity for hybrid learning modules. The descriptive statistical analysis of the percentage data from the cadet responses yielded valuable insights into their educational requirements and preferences. The study underscored the significance of incorporating hybrid learning into the Aviation English curriculum to improve the cadets' learning experience and better prepare them for their future roles in the aviation industry by providing a detailed and reliable assessment of their perspectives through the use of established research practices and statistical tools. Table 1 shows the quantitative values assigned to an instrument item:

Table 1. Likert Scale Calculation

Valuation	Scale Value
Strongly Agree	4
Agree	3
Disagree	2
Strongly disagree	1

Both the validity and reliability of the questionnaire were tested using SPSS. The calculated r value must be greater than the table r value to be categorized as valid, and the questionnaire is considered reliable if the alpha Cronbach value is more than 0.60 (Budiwibowo & Nurhalim, 2016) . The table shows the results of the reliability and validity test of the instrument. The questionnaire was tested for validity and reliability using SPSS. To be valid, the calculated r value must be greater than the table r value and reliable if the alpha Cronbach value is more than 0.60. The results of the reliability and validity test of the instrument are shown in the table.
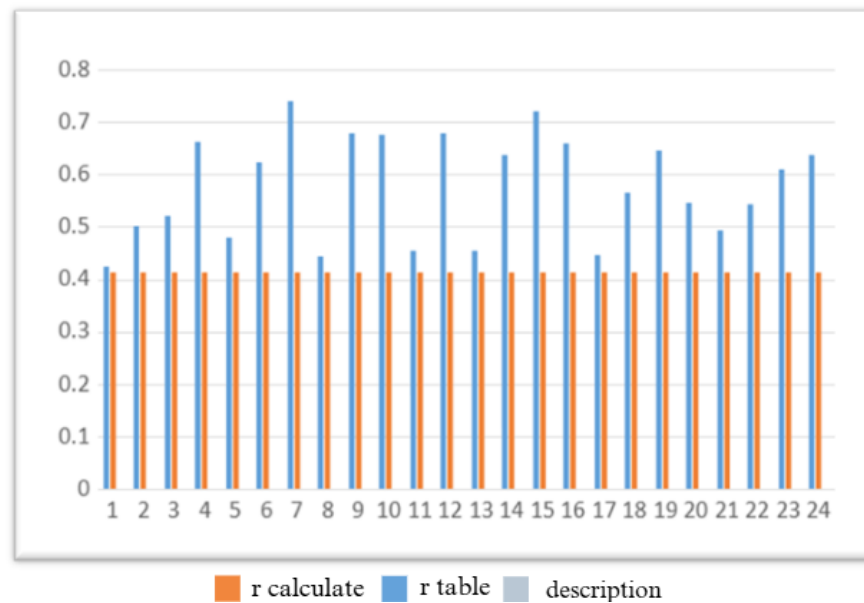
Figure 1 Instrument Validity Test Results

Figure 1 indicates that all statements in the questionnaire have count r values greater than the table r value, hence they are all classified as legitimate. In other words, each item in this questionnaire passed the necessary statistical validity standards. This validity implies that every comment made in the questionnaire accurately measures what is intended to be measured. In practice, this validity allows us to use the full item in the questionnaire to derive values relevant to the construction under consideration. A count r number greater than the table r value suggests a significant link between the items and the measured variables, indicating that the data gathered provides an accurate and reliable picture of the research issue. The validity of all of these statements is critical to the study instrument's overall reliability and the ability to extract relevant results from the collected data.

The data presented in Table 2 illustrates the instrument's reliability, as evidenced by a Cronbach alpha value of 0.911, which above the widely accepted threshold of 0.60. The threshold mentioned is a widely accepted standard in the field of social sciences. It is used to assess whether a group of items has sufficient internal consistency. A Cronbach alpha value exceeding 0.60 indicates that the items on the questionnaire are effectively measuring the same underlying construct and are hence reliable in their replies. The alpha value of 0.911 is not only above the threshold but also greatly above it, indicating strong proof of the instrument's reliability.

A Cronbach alpha score, as high as the one reported, signifies a robust level of internal consistency among the items, indicating a strong correlation between the items. The consistency of a measuring tool is essential for its reliability as it guarantees that the instrument consistently catches the expected properties across many things. The instrument's dependability, as indicated by the alpha value, suggests that the responses are consistent and trustworthy. Therefore, the instrument can be reliably utilized to evaluate the structures under consideration. To summarize, the instrument's strong reliability strengthens its validity and appropriateness for the intended study objectives, guaranteeing that the obtained data will be reliable and significant.

Table 2. Instrument Reliability Test Results

Cronbach Alpha	N of Items
.911	24

The instrument's reliability is demonstrated by the data in Table 2, which has a Cronbach alpha value of 0.911, which is statistically significant and significantly higher than the threshold of 0.60. The instrument's reliability in evaluating the structures in question is confirmed by the high alpha score,

which suggests a high level of internal consistency among the items. The validity of the research findings is contingent upon the consistency and dependability of the responses collected, which is guaranteed by a robust reliability measure. The instrument's items are closely related, as indicated by the high Cronbach alpha value, which provides a coherent measure of the constructs under investigation. In order to make informed decisions and draw accurate conclusions based on the data, it is imperative to maintain this reliability. Additionally, the instrument's consistent internal reliability implies that it can be used with confidence in comparable future studies, thereby increasing its applicability and effectiveness in broader research contexts. The model score for the Likert scale is interpreted in the following table, which offers a clear framework for comprehending the respondents' perceptions and attitudes as captured by the survey. The study's methodological integrity is increased by the guarantee of high reliability, which enables a more precise and trustworthy analysis of the data.

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Table 3. Interpretation of the Likert Scale

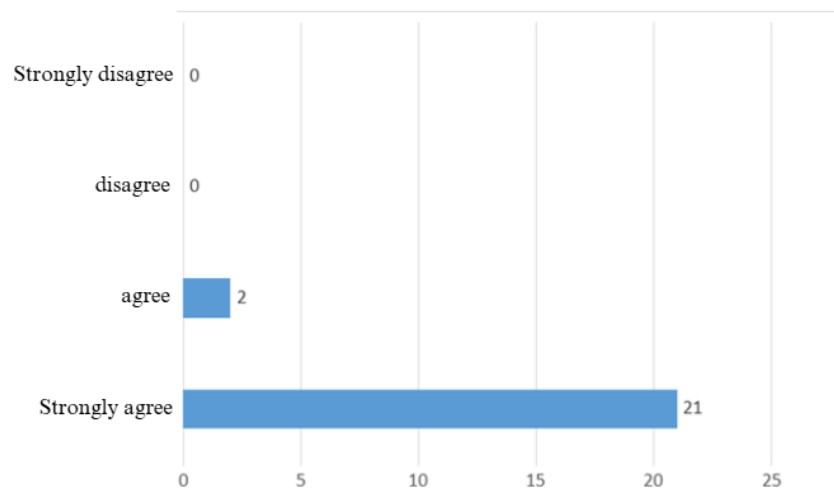| Percentage(%)	Category
0% - 25 %	Strongly disagree
26% - 50 %	Disagree
51% - 75 %	Agree
76% - 100%	Strongly Agree

Figure 2. Results of Filling Out the Needs Questionnaire

From the figure above, it can be seen that 21 out of 23 respondents strongly agree with the implementation of hybrid learning in the Aviation English course at the Politeknik Penerbangan Palembang. While the other 2 are in the agreeing category. For the other 2 categories, namely disagree and strongly disagree, there are 0 respondents. So it can be concluded that all respondents who are cadets of the Politeknik Penerbangan Palembang need the application or implementation of hybrid learning in the Aviation English course. It also stated by Rossydi, A. et.all, 2023, the research finding indicate that the lecturer at Makassar Aviation Polytechnic can fully implement Hybrid Learning-based Instruction in the Aviation English class. Aviation English Learning encompasses three stages: planning, implementation through face-to-face meetings, and virtual learning cooperation involving synchronous and asynchronous modes

As a generation Z (Digital), cadets certainly prefer learning that relates to material with things related to technology. Respondents also stated that it is easier for them to understand the learning provided if it is given systematically using learning steps (Model), which is interesting and can arouse curiosity. The results of the analysis also show that cadets like learning that can combine online learning and conventional learning (face-to-face) at the same time so that they can be more flexible because

learning with this model allows cadets to be able to access material anytime and anywhere. With a system like this, cadets stated that they would be more disciplined in doing assignments and evaluations given by lecturers.

As generation z, cadets also want learning that can improve digital literacy skills according to the demands of the current era and are also able to explore knowledge and train cadet skills with an information technology approach. In addition to some of the things above, cadets also need live event learning, which means that learning can be done together, even though the places are different, self-paced learning, which means students can learn independently anytime and anywhere online; collaborative, which means students can cooperate with each other during the learning process; and performance supportive, which means that learning resources must be prepared both online and offline. In learning, cadets also need a learning model that can increase their knowledge of Aviation English material, understanding of Aviation English concepts and the ability to apply, analyze, conclude and abstract the material in the Aviation English course.

Cadets also need a learning model that is easy to learn, easy to control or master, clear and easy to understand, has flexibility in interaction (unlimited with space and time) and which is easy to use. The results of the research obtained are in line with the results of research conducted by several previous researchers, one of which is the results of research from (Widyasari et al., 2022) . The results of Widyasari et al's research show that a model modification with a mixed or hybrid system is needed that facilitates student learning activities both face-to-face and virtually. Other research conducted by (Triyono & Saleh 2023) . The results of the study show that a hybrid learning model is needed to improve the mathematical communication skills of prospective mathematics teachers. Thus, the results of the research on the analysis of student needs for the hybrid learning model can be the basis for implementing or implementing the hybrid learning model for further discussion.

CONCLUSION

The analysis of the necessity for instituting hybrid learning in the Aviation English course at the Politeknik Penerbangan Palembang was meticulously conducted, utilizing comprehensive data from questionnaires completed by the cadets. The cadets' unanimous agreement regarding the necessity of hybrid learning in their Aviation English curriculum was disclosed through a comprehensive examination of these responses. This conclusion is founded on the numerous advantages of hybrid learning, including the capacity to reconcile theoretical learning with practical training and access course materials at their leisure. The cadets' feedback articulated their admiration for hybrid learning environments' interactive and engaging nature, which integrate the most advantageous features of traditional classroom settings and digital platforms. The data indicates that hybrid learning not only improves their comprehension and retention of intricate aviation terminology and concepts but also enhances their overall communication skills in English, a critical competency in the aviation industry. The cadets demonstrated a clear preference for a learning model that is flexible enough to accommodate their unique schedules and learning paces, thereby promoting a more effective and personalized educational experience. Additionally, the integration of hybrid learning is perceived as a progressive step toward the modernization of the educational approach at the Politeknik Penerbangan Palembang, ensuring that it is in accordance with global standards and technological advancements in aviation training.. Consequently, the analysis demonstrates that there is a substantial demand and a compelling rationale for the integration of hybrid learning into the Aviation English course, which will more effectively prepare cadets for their future careers in the aviation sector by reflecting the cadets' evolving needs and preferences.

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