Motivation, anxiety, and self-efficacy in learning aviation English: a study of Indonesian aviation cadets

Laila Rochmawati[1*], Fatmawati[2] and Meita Maharani Sukma[3]

*Correspondence:
lailarochmawati@poltekbangsby.
ac.id

[1] Department of Air Traffic Controller, Politeknik Penerbangan Surabaya, Surabaya, Indonesia
[2] Department of Aeronautical Communication, Politeknik Penerbangan Surabaya, Surabaya, Indonesia
[3] Department of Air Navigation Engineering, Politeknik Penerbangan Surabaya, Surabaya, Indonesia

Abstract

Indonesian aviation cadets' complex and multi-faceted tasks have directed them to exhaustion and less learning focus. Their motivation and self-efficacy in learning Aviation English are hampered so their anxiety dominates. This hypothetical cause and effect enforce the present study to describe their motivation, anxiety, and self-efficacy in learning Aviation English. The present study also aimed to reveal the effect of each construct on their learning performance and identify the most predictive sub-skills that contribute to their motivation, anxiety, and self-efficacy formation. This study used a cross-sectional survey research design with a quantitative research approach. There were 207 aviation cadets chosen purposely to participate in the study. Data were collected using the Motivation, Anxiety, and Self-Efficacy Scale (MASS) with a 6-point Likert's scaling method (a = .987) and cadets' final test scores. Data were analyzed using descriptive statistics, *Pearson r* correlation, and hierarchical multiple regression with the assistance of SPSS software. Results showed that cadets' motivation, anxiety, and self-efficacy in learning Aviation English were high, thus, their learning optimism and pessimism were growing together. Each variable had a positive and strong relationship with one other (r > .05, p < .001). Another finding was that communication and test anxiety was the most influencing factor in determining cadets' learning performance.

Keywords: Motivation, Anxiety, Self-efficacy, Aviation English, Indonesian aviation cadets

Introduction

Many aviation polytechnics under the Indonesian Ministry of Transportation have adapted to the operation of semi-military schools (Saputro & Sujanto, 2020). Cadets, a special military term referring to students, are compelled to master various physical exercises (e.g., steeplechase and marathons) and military training such as drill commands, morning roll calls, and evening reports (Bobdey, et al., 2021; Nevzorov, 2021; Hariri et al., 2020; Setiawan et al., 2020). Further, they also need to focus on elevating their academic performance, especially in mastering Aviation English. Aviation English is an important course to master due to the fact that it covers materials of English

for specific purpose for aviation field (Ishihara & Prado, 2021; Oda, 2020; Park, 2020). This study uses Aviation English to represent the topics of an introduction to aircraft and helicopter types, parts of aircraft and helicopters, airside, landside, controller's jobs, ground officers, airport management, and aircraft and flight problems. These topics are the basic Aviation English that should be introduced to cadets in the first year of the study. Moreover, cadets are still obliged to participate in several extracurricular activities and routine campus agendas (Sterkhova & Lisikh, 2021). The rationale of enforcing them in extracurricular activities lies on two justifications; cadets need to improve their interest in sport or non-sport activities and to compete in numbers of competitions. At last, cadets are required to participate in several routine campus agendas such as day roll call, religious activities, and campus cleanliness.

Such very hectic cadets' activities indeed affect their learning performances including understanding subject matter, attaining better scores, and passing an undertaken assessment (Jamro et al., 2021; Evwiekpaefe & Lawi, 2020). There are three major constructs that influence students' learning achievement namely motivation, anxiety, and self-efficacy (Bandura, 1993; Piniel, 2013). Motivation is an influential aspect in determining one's decision to do or to do not something (Dornyei, 2009). It can be affected by economic, social, or political capitals that cause one's better condition (Bruwer & Rueger-Muck, 2019; Carriles-Alberdi, et al., 2021). Ryan and Deci (2020) categorize learning motivation into two namely intrinsic and extrinsic motivations. Intrinsic motivation is more influenced by self, whereas, extrinsic motivation comes outside of one's self encompassing nearby environment, family, and friendship (Ryan & Deci, 2000, 2020). Ritonga et al. (2020) stated that one's learning motivation, further, is often interrelated with learning anxiety. Anxiety is a sense of bad expectancies and perspective of self-incapacitation that can affect classroom learning performance (Horwitz, 1986, 2016). Horwitz (1986) divided anxiety into three types of traits namely communication anxiety, test anxiety, and fear of getting negative evaluation. However, this study aimed to collide communication and test anxiety into one trait as the present study measured those traits as the aspect of knowledge obstacles in learning aviation English. At last, self-efficacy is a self-construct that refers to confidence in accomplishing task covering mastery experience, vicarious experience, social persuasion, and emotional state (Bandura, 1977, 1997).

Unconducive learning environment might not strengthen cadets' motivation in learning (Bobdey et al., 2021). This is due to the fact that their nearby situation does not create effective learning milieu. Their exhausting campus activities can be the reason in decreasing their learning focus (McCrea, 2012; Näykki, et al., 2018). In addition, a typically traditional lecturing mode is a complement to the hardness of the learning process. Once the cadets have no motivation, their predictive learning process and outcomes lead to troublesome, which is expected to be difficult to hinder. This situation, consequently, also generates high learning anxiety and low self-efficacy in learning Aviation English. Cadets might get stuck of being overthinking of impossibilities in mastering the subject matter, understanding it, and finally passing the course. Therefore, Zimmerman (2000) conveyed that conceiving good learning motivation, perceiving low learning anxiety, and perceiving high self-efficacy are the formula considered in elevating their learning performance.

In coping with the scope of aviation English, Karimi et al. (2019) conducted a study in aviation English for pilot. They explain that aviation English is mostly used by pilots for communication with the air traffic controller and with other pilots. Similarly, Moskalenko et al. (2019) also refer aviation English more specific into English for pilots. They cover some specific phrases and codes for air communication. At last, Seçer et al. (2015) also mean aviation English as a language specific for air communication. However, aviation English, in facts, is used for many aviation officers such as ground and management officers too (Moder, 2012). It is generally used to apply English for specific purpose, in this case in aviation field in general. Thus, the concept of aviation English is wider and context-based (Moder, 2012). In general conception, it includes English for air communication officers, air traffic controllers, pilots, ground officers, aircraft maintenance technicians, navigation technicians, airport management officers, and avionic technicians. In the present study, aviation English refers to basic materials that include an introduction to aircraft and helicopter types, parts of aircraft and helicopters, airside, landside, controller's jobs, ground officers, airport management, and aircraft and flight problems.

Unfortunately, an early observation conducted by Aviation English lecturers revealed that cadets were less interested during the class. Some of them were busy with their drawings and less focusing on the materials explained, whereas, some others were sleepy due to overloaded physical trainings and tasks. Consequently, they only absorb materials of Aviation English at lowest. They still got similar learning problems such as difficult in pronouncing words in aviation terms and differentiating the use of plain language and English for radiotelephonic communication. At the end of the semester, there were numbers of cadets who had to do remedial learning and assessment as they attained below minimum standard score or passing grade. When some cadets were interviewed randomly, they stated that their overloaded campus activities and regulations bond them too tight so that they cannot elasticize their times to learn Aviation English. Unfortunately, this observation was only limited to casual talks and short observation. Therefore, further study is necessary to be conducted to reveal their real constructs in supporting the learning process.

The present study aimed at describing aviation cadets' motivation, anxiety, and self-efficacy in learning Aviation English, depicting the effect of each construct with cadets' learning performance in Aviation English course, and revealing the most predictive factors on each construct namely motivation, anxiety, and self-efficacy. The results of the study can be used by Aviation English lecturers to generate more effective learning process by considering the cadets' motivation, anxiety, and self-efficacy. Moreover, the lecturers can determine significant procedures to advance their cadets' learning performance in Aviation English course.

Learning motivation

Motivation can be understood as an important self-construct used as one's rationale in responding to certain conditions (Henry & Thorsen, 2018). In many psychological studies, it is often engaged to employment absenteeism, patient's way to heal, and surviving from difficult life problems (Henry & Davydenko, 2020; Kanfer & Fletcher, 2020; Refai, et al., 2018). It reveals someone's justifications of doing or not doing something to gain

benefits or secured position in a hypothetic situation. It is more affected by two factors namely intrinsic and extrinsic motivations (Ryan & Deci, 2020; Ryan & Deci, 2000; Dornyei, 2009; Vallerand, 1997). Intrinsic motivation refers to a sense of willingness to accomplish tasks in which self-forces dominate to its formation (Ryan & Deci, 2020; Ryan & Deci, 2000; Barack et al., 2019; Aydoğan, 2016). For instance, cadet's happy feelings while learning aviation English can be an indicator that he conceived an intrinsic motivation. Another example might cover self-comfortability while learning, self-interest in learning, and self-satisfactory feelings (Ryan & Deci, 2000). In addition, Aydoğan (2016) pointed some gauges to indicate extrinsic motivation such as getting other's recognition, attaining better scores among others, getting rewards, and having prestige. These aspects, in short, stated that extrinsic motivation is "a construct that pertains whenever an activity is done in order to attain some separable outcomes" (Ryan & Deci, 2000:60).

Many previous studies had dealt with motivation in learning foreign language, especially English for aviation field (aviation English). Unfortunately, some studies that investigated motivation in learning aviation English only focused on the materials of being a pilot (Karimi et al., 2019; Moskalenko et al., 2019; Seçer et al., 2015). Karimi et al., (2019) stated that Content and Language Integrated Learning (CLIL) could enhance Iranian pilot students' motivation in dealing with the highly specialized features of aviation English. This study did not include other basic aviation English such as airside and landside and air transportation management. Moskalenko et al. (2019) also focused on pilot students' motivation in learning aviation English in which the results hadn't included other important materials in aviation English. At last, Seçer et al. (2015) tested the use of audio-visual materials to uplift pilot students' motivation and participation in classroom activities. This study was extraneous since it focused on resource media testing that inflicted motivation, not the intrinsic and extrinsic motivation in particular. Therefore, the present study's novelty lied on the results of examining intrinsic and extrinsic motivation of learning aviation English that included general topics ranging from ground, traffic, technique, and management.

Learning anxiety

Different from motivation, which underlies someone's willingness to accomplish tasks, anxiety tends to have a negative implication. It can be a blockade of successful learning process; therefore, it should be avoided (Heckel et al., 2021). Learning anxiety might connect to self-pessimism that bears worries and over hypothetical thoughts (Zorowitz, et al., 2020). It does not release one's maximum ability because he might get frightened that he cannot accomplish the tasks and get punished. Horwitz (1986) explains that there are three traits of anxiety namely communication anxiety, test anxiety, and fear of negative evaluation in Foreign Language Classroom Anxiety (FLCA). Communication anxiety refers to worries of unsuccessful communication with others in terms of the learned materials (Horwitz, 2016). Test anxiety is similar to anxiety to specific-content mastered that is more cognitive scope in language acquisition (Horwitz, 1986; Tanveer, 2007). Tanveer (2007) stated that some relevant traits of test anxiety might cover linguistics difficulties, pronunciation, grammar, and vocabulary. At last, fear of negative evaluation is a fright that occurs to criticize individual due to some failures or unsuccessful

performance (Horwitz, 1986). Some studies had successfully dealt with the use Foreign Language Classroom Anxiety Scale (FLCAS) proposed by Horwitz (1986) (Nassif, 2019; Sparks, 2023; Sparks & Alamer, 2022; Sparks & Patton, 2013). Generally, these previous studies could describe learning anxiety based on the aforementioned three anxiety traits. However, Horwitz (2016) states that each region, educational institution with diverse paradigms, and culture must have different addition anxiety traits. Therefore, nowadays, FLCAS is adaptive to different setting for anxiety measurement.

Self-efficacy in learning

Likely to be in a cutline between motivation and self-belief, self-efficacy is a construct that refers to confidence to accomplish a task well (Bandura, 1997; Bandura & Adam, 1977; Pajares, 1997). Somehow, many scholars clash it with anxiety. There are three interrelated aspects determining the construct namely behavior, personal state, and environment, of which the set is called Triadic Reciprocal Determinism theory (Bandura, 1986, 1997, 2006). By denoting the three aspects, Bandura (2006) introduces four sources of information that affect the formation of self-efficacy namely mastery experience, vicarious experience, social persuasion, and emotional state. Mastery experience is the most significant source of information in affecting one's efficacy level because the experience reflects one's skills and knowledge in accomplishing certain tasks (Bandura, 1997). A person might get this experience through, for instance, trainings and education undertaken. A person might also learn from others to enrich his skills and knowledge, where this is further called as vicarious experience. Some people get vicarious experience from modelling from the resource persons. Social persuasion, or also known as verbal persuasion, is the condition where one gets additional supports to successfully accomplish the tasks from the nearby people. At last, emotional state, or also called as physiological state, refers to one's emotional condition when completing the tasks, i.e., confidence.

In connection with language learning, motivation, anxiety, and self-efficacy in learning are essential to form one's better learning attainment. A set of strong willingness to learn is an important initial capital for students to run the learning process well. There have been numbers of previous studies investigating motivation, anxiety, and self-efficacy in learning with different results. Bai et al. (2020) and Ritonga et al. (2020) conducted a study to unravel the relationship between motivation and anxiety in learning English. Those studies found that there was a negative relationship between motivation and anxiety in learning English, of which the result was confirmed by many other similar studies (Heckel et al., 2021; Yang et al., 2020; Chen & Hwang, 2020). Some studies also revealed that students with high self-efficacy in learning English experienced less learning anxiety due to their high emotional or physiological states (Unlu, et al., 2017).

Unfortunately, the findings of the previous studies are too generalized due to the fact that different students have perceived different types of motivation (e.g., dominating intrinsic or extrinsic motivation) and experienced various factors of anxiety, such as communication anxiety, test anxiety, and fear of negative evaluation, or both (Chen & Hwang, 2020). Moreover, to the best of the researcher's knowledge, there has been no study investigating the relationship between motivation, anxiety, and self-efficacy in learning Aviation English that also reveals the relationship among factors of each

variable. The researcher is also confident that such a study must be undertaken especially in the context of military schools to unravel further learning strategies to maximize cadets' motivation and self-efficacy and to put down anxiety. Therefore, the present study is exclusively to be conducted with the aims to describe cadets' motivation, anxiety, and self-efficacy in learning Aviation English, examining these variables' relationship, and inspecting the effect of these variables on cadets' learning performance.

Methods

The setting of the study was in Politeknik Penerbangan Surabaya (Aviation Polytechnic of Surabaya). The campus was one of official schools located in Surabaya, Indonesia, under the Indonesian Ministry of Transportation, especially under the Human Resources Development Agency, with the specialization in aviation engineering and management. The graduates were officially recruited to support aviation sector of the country. Thus, the mastery of Aviation English was necessary since many aircraft and airport manuals and other important documents such as ANNEX and DGCA were written in English. Moreover, many field communication, regardless written and oral forms, should be undertaken in English. Currently, there are 650 cadets spread from the first to third grade. Annually, not all study program opened a new enrolment as it was based on the government approval and needs too.

In regard to the population of the study, there were 210 cadets that had completed the first and second year of study time. This population was predetermined due to the fact that the focus of the present study was in the learning of aviation English course, which was enrolled only in the first and second year of study times in Politeknik Penerbangan Surabaya along with elementary to intermediate English courses. Therefore, the suitable population was the third graders. Out of 210 cadets, the samples were 207 cadets chosen using simple random sampling by online administration. The researchers were surprised that the samples were approximately approaching the total population as the results generalization would be more reliable and authentic to the present case. Table 1 shows the demographic data of the participants.

Table 1 Participants' demographic data

Aspects	Frequency	Percentage (%)
Gender		
Male	174	84.1
Female	33	15.9
Grade		
Third grade	207	100
Program study		
Air Communication	51	24.6
Electrical Engineering	26	12.6
Civil Engineering	26	12.6
Air Traffic Controller	26	12.6
Aircraft Maintenance Engineering	26	12.6
Air Transportation Management	26	12.6
Air Navigation Engineering	26	12.6

The present study used a cross-sectional survey research design with a quantitative research approach. The cross-sectional research design was appropriate to the present study's research questions due to the fact that the present study did not examine the gradual changes of constructs (e.g., motivation, anxiety, and self-efficacy) that required longitudinal examination (Bhattacherjee, 2012). Moreover, the study approached the quantitative analysis for the easiness of transforming untouchable and invisible constructs into more countable, definable, and understandable such many previous studies investigated motivation, self-efficacy, and anxiety (Aydoğan, 2016; Bandura, 2006). Therefore, the design of the present study had been relevant to answering the problems addressed in the present study.

In addition to the data collection, there was a questionnaire called Motivation, Anxiety, and Self-Efficacy Scale (MASS) used as the main instrument. This study developed the MASS by considering some previous devised scales (see "Appendix 1" section). It consisted of 35 items divided into two parts namely Demographic Data (3 open-ended questions revealing name, gender, and program study) and Motivation, Anxiety, and Self-Efficacy Scale (MASS) with 32 closed-ended items: 4 items for each motivation aspect (e.g., intrinsic and extrinsic motivations) (Kruglanski et al., 1975; Ryan & Deci, 2000; Noels et al., 2000; Aydoğan, 2016); 4 items for each anxiety aspect (e.g., communication and test anxiety and fear of negative evaluation) (Horwitz, 1986; Liu & Huang, 2011); and, 4 items for each self-efficacy aspect (e.g., mastery experience, vicarious experience, social persuasion, and emotional state) (Bandura, 2006). It had been trialed in a pilot study to measure its reliability ($\alpha = 0.987$) and validity conducted by three expert judgments, of which the result was categorized as a very high validity. In addition, a semi-structured interview was used to gather the supplementary qualitative data as the triangulation only for the quantification result in the first and third research questions. There were 8 open-ended questions used in the semi-structured interview asking about the cadet's motivation (2 questions about intrinsic and extrinsic motivations), anxiety (2 questions about communication-test anxieties and fear of negative evaluation), self-efficacy (4 questions about mastery experience, vicarious experience, social persuasion, and self-efficacy aspects). The cadets' learning performance in the Aviation English course was obtained through the final test with 20 multiple-choice questions. The test was developed based on the curriculum applied at Politeknik Penerbangan Surabaya with 8 basic topics of Aviation English, which were applicable to all study programs. It consisted of an introduction to aircraft and helicopter types, parts of aircraft and helicopters, airside, landside, controller's jobs, ground officers, airport management, and aircraft and flight problems. The test was tested in the previous academic year of 2020/2021 for its reliability and validity conducted by campus' academic professionals who understood the curriculum and the learning goals of the learning process of Aviation English, of which the results were reliable ($\alpha = 0.775$; very high reliability) and valid with a very high category. Table 2 depicts the distribution of test items.

The MASS was conducted online and in direct administration due to the limited physical interaction in accordance with the health protocol applied during the Covid-19 pandemic. The online administration was supported by Google Forms, whereas, the direct administration was conducted offline on the campus of Politeknik Penerbangan Surabaya. The test was undertaken online using Quizzes online website so that it could ease

Table 2 Distribution of test items

Topics	Sub-topics	Question script examples	Number in the test
Introduction to aircraft and helicopters	Definition of aircraft	In the world of aviation, what is the difference between aircraft and airplanes?	1
	Types of aircraft	What is a cargo aircraft?	2
	Definition of helicopters	What makes helicopters special compared to aircraft?	3
	Types of helicopters	Which one of the following sentences is CORRECT according to the characteristics of military helicopter?	4
Parts of aircraft and helicopters	Parts of aircraft (e.g., head, fuselage, wing, and tail)	Which one of the following sentences is CORRECT according to the parts of aircraft?	5
	Parts of helicopter	What is the function of main rotor and tail rotor in a helicopter?	6
Airside	Parts of airside (e.g., runway, taxiway, and apron)	Assuming an aircraft intended to fly, which one of the following schemes that represents the best process of take-off?	7
Landside	Parts of landside (e.g., check-in counter, security check service, and public facilities)	Here are some activities passengers should NOT do in the security check, except…	8
Controller's jobs	Air traffic controller's jobs	What is the main job of air traffic controller?	9
	Air communication officer's jobs	How is the air communication officer's job different from the air traffic controller's job?	10
Ground officers	Ground officer's jobs	In what circumstance do the ground officers communicate with the tower?	11
	Ground handling	Which one of the following sentences is CORRECT about *special needs handling*?	12
Airport management	Airport management	Here are some responsibilities involved in the airport management, except…	13
	Airline management	Here are some responsibilities included in the airport management, except…	14
Aircraft and flight problems	Engine on fire	What kind of situation is the engine on fire?	15
	Bird strike	What is a bird strike phenomenon?	16
	Meteorological problems	How do meteorological problems affect a flight?	17
	Near miss	What is a near miss phenomenon?	18
	Pilot incapacitation	What situation category is the pilot incapacitation?	19
	Depressurization	If an aircraft experiences depressurization, what should the pilot do?	20

the administration of the test since there were online and hybrid classes. Moreover, the use of the online test administration was to ease the calculation of the test scoring. In connection with the supplementary qualitative interview data, seven participants were chosen to represent seven study programs at Politeknik Penerbangan Surabaya. They were chosen as they were the class leader, in which, in a semi-military school in Indonesia, a class leader was the face of the whole class, thus, he knew the condition of the class and became the one who dominantly influenced the class decision-making process. Therefore, interviewing the class leaders was objected to being the face of the whole sample involved in the present study.

The obtained quantitative data were analyzed using descriptive statistics, *Pearson r* correlation, and hierarchical multiple regression with the assistance of SPSS software to reveal the depiction of cadets' motivation, anxiety, and self-efficacy in learning Aviation English and to examine the effect of the three constructs to their learning performance at Aviation English course. Parametric test was undertaken due to the fact that the obtained data were normally distributed after the normality statistical test using Kolomogorov-Smirnov and Shapiro–Wilk, of which the results were said to be normal, $p = 0.045$ and $p = 0.653$ respectively (Shapiro et al., 1968). In terms of homogeneity test, Levene test were undertaken for all subscales and resulted in very homogenous (< 0.01). Figure 1 shows the normal P–P Plots.

To confirm the result of the quantitative analysis, qualitative interview data were conducted online with the assistance of Zoom and Google Meet. For some bases, due to some technical issues, WhatsApp call features (e.g., voice or video call) were used to carry out the interview. The obtained interview data were transformed into a script that was then analyzed using the narrative analysis technique. The data were coded, interpreted, and presented regarding the topics addressed in the first and third research
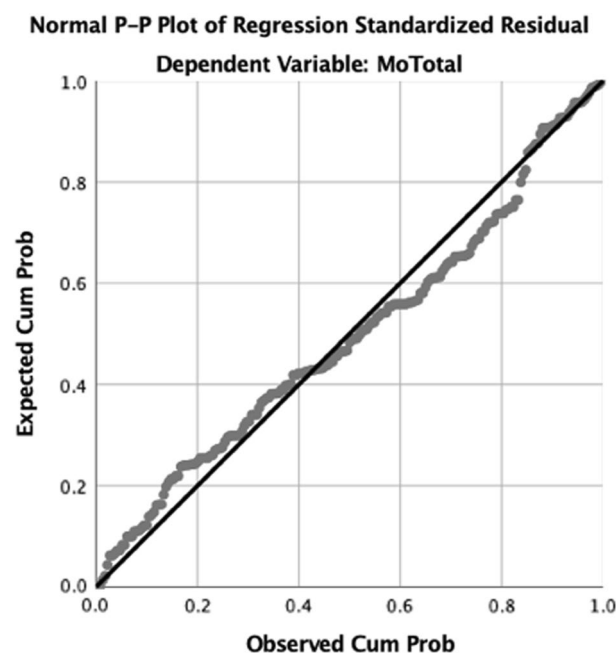

Fig. 1 P-P plot showing normal data

questions. The codes included some categorizations encompassing cadets' motivation, anxiety, and self-efficacy. The conclusion was drawn by generating a dialog between quantitative and qualitative data.

Aviation English: ESP context used in this study

The context of Aviation English used in the present study comprised the basic aviation operations in the field. These reliable materials are capped from the investigation of the curriculum development needs analysis. The suggestions from the relevant stakeholders matter in inventing the needs of the graduates, i.e., the need for mastered skills, especially in English. Thus, aviation English covered an introduction to aircraft and helicopters, parts of aircraft and helicopters, airside, landside, controller's jobs, ground officers and their responsibilities, airport management, and aircraft and flight problems. All those materials are compatible with seven study programs in Politeknik Penerbangan Surabaya, consisting of Air Communication, Electrical Engineering, Civil Engineering, Air Traffic Controller, Aircraft Maintenance Engineering, Air Transportation Management, and Air Navigation Engineering. The class is undertaken in two settings namely classroom activities and laboratory activities. The cadets learn the theory and related concepts in the class, whereas, they do more listening and speaking practices in the language laboratory. The materials are authentic as they consisted of professional handbooks of basic aviation and the module developed based on the needs of the curriculum and cadets. Even though this seems to be local, the materials and the integrated 4 Cs skills in 21st-century education (communication, collaboration, creativity, and critical thinking) are internationally relevant references. The materials, moreover, also reflect the whole airport officer's jobs, therefore, any country with different education system is still applicable to apply this learning concept.

Results and discussion

Cadets' motivation, anxiety, and self-efficacy in learning aviation English

In connection with describing the variables included in the present study, Swanson's levelling method (2014) was performed to determine the level of each variable namely

Table 3 Descriptions of motivation, anxiety, and self-efficacy in learning aviation English

Variables	SD	*M**	Swanson's percentage (*M* %)	Description
Motivation	1.16873	4.4155	73.59	High
Intrinsic motivation	1.18923	4.4573	74.28	High
Extrinsic motivation	1.19329	4.3736	72.89	High
Anxiety	1.15235	4.2395	70.69	High
Communication-test	1.14121	4.1947	69.91	High
Fear of negative evaluation	1.27617	4.3514	72.52	High
Self-efficacy	1.16063	4.2134	70.22	High
Mastery experience	1.03830	4.8100	80.16	Very high
Vicarious experience	1.35504	3.7617	62.69	High
Social persuasion	1.39775	3.7617	62.69	High
Emotional state	1.16516	4.5201	75.33	Very high

*N = 207

motivation, anxiety, and self-efficacy. There were four quartiles to describe the level: Quartile 1 (M % ≤ 25%) was very low; Quartile 2 (25% < M % ≤ 50%) was low; Quartile 3 (50% < M % ≤ 75%) was high; and Quartile 4 (M % > 75%) was very high. Table 3 depicts the results of M % quantification along with each description.

Table 3 portrays that all variables were in a high level or in Quartile 3 (50% < M % ≤ 75%), however, only two variables of self-efficacy namely mastery experience and emotional state obtained a very high level or Quartile 4 with the percentage of 80.16% and 75.33%, respectively. The data implied that the cadets were so optimistic about their mastery experience to accomplish the course, at the same time, they were confident too. Unfortunately, the very high level of mastery experience and emotional state remained not significant due to the slightly closed number to the high level or Quartile 3. This situation needed further confirmation why the cadets' motivation and self-efficacy were at a not-maximum level, while the anxiety was considered very high.

Acting as a data triangulation, the present study used qualitative data obtained from interviewing seven cadets representing each study program. After the data synthesis and interpretation, there were various reasons that might be employed to confirm the coping statistical data. First, C1, referring to the first interviewee code, explained his motivation and believe in learning aviation English, as well as pointing out his learning anxiety (see Interview 1).

> *"I am motivated to learn aviation English. I always contact my lecturer once I have problems. I know I can do this. However, when facing too intense physical activities, I am less eager and, somehow, I am afraid I cannot do the tasks well because I am already tired physically and mentally." (C1, Interview 1)*

In accordance with the above data, C1 tried to perform better in the course. He had good motivation in learning aviation English and believed that he could accomplish the course well. Moreover, he also conveyed his efforts when he had been confronted with many learning obstacles, i.e., approaching his lecturer. Unfortunately, he also conveyed a learning incapacitation when he was physically and mentally exhausted. This phenomenon implied that there was a normal condition (e.g., no intense physical exercises or military training activities) where a cadet felt motivated and optimistic. This situation, suddenly, could turn into the opposite concept when an abnormal condition appeared (e.g., too intense military activities and other tasks extraneous to academic scope). Therefore, in accordance with the statistical data, the cadet's aggregate motivation and self-efficacy were at a high level, while the anxiety was also high. This, consequently, created an interesting finding that the cadets' motivation and self-efficacy in learning aviation English were high, but not maximum due to the high anxiety intervention.

Another cadet experienced the same condition of her motivation, anxiety, and self-efficacy. The interesting fact was that she got different causes of motivation and anxiety (see Interview 2).

> *"I like English since the high school. I also love the lecturers because they are friendly. I can follow the learning process very well. However, I feel insecure when there were too many seniors' tasks that often messed my learning mood and focus. So, everything is in a so-so condition." (C4, Interview 2)*

C4 was motivated to learn English because she liked the subject course since high school. Her English lecturers were friendly so she felt more motivated to learn aviation English. By stating *I can follow the learning process very well*, it was assumed that her self-efficacy in learning aviation English was high. Unfortunately, she was confronted with seniors' tasks that might demotivate her to learn. In the setting of military schools, seniority was existing. Meaning that juniors should respect the seniors and accept the instructions addressed to them, including but not limited to non-academic tasks. This seniority concept lasted longer even though the seniors had graduated. In short, their junior-senior relationship was honored longer even though each of them had a different career path. This condition burdened C4 a lot and affected her performance in learning aviation English. She finally uttered a so-so condition to describe her motivation and belief after explaining her learning threats. Therefore, her motivation and self-efficacy were not perceived maximally, whereas, her anxiety determined her learning process a lot.

Relationship between cadets' motivation, anxiety, and self-efficacy in learning aviation English

This section describes the relationship between variables used in the present study encompassing motivation, anxiety, and self-efficacy in learning aviation English. *Pearson r* correlation was also undertaken to look at the relationship between factors of motivation, anxiety, and self-efficacy (see Table 4).

Table 4 portrays the relationship between cadets' motivation, anxiety, and self-efficacy in learning aviation English along with their factors' correlation. The present study found that the relationships between cadets' motivation, anxiety, and self-efficacy in learning aviation English were positive, strong, and significant ($p < 0.001$). This implied that the higher their motivation, the higher their self-efficacy in learning aviation English. Moreover, the stronger they were motivated, the stronger they were confronted with learning anxiety. Such typical findings might be interesting to examine due to learning anxiety was significantly progressive along with cadets' motivation and self-efficacy in learning aviation English. In coping with the fact, some causes might permeate to affect the positive relationship. First, cadets felt that when they had higher motivation and self-efficacy, they also experience extraneous learning obstacles or problems, such as intense military trainings and seniors' tasks, that made their anxiety increase. Such two different phenomena confirmed that internal psychological supports (e.g., motivation and self-efficacy) had a close cause-effect relationship with external causes (e.g., intense military trainings, exhausting physical exercises, campus' activity burnout, and seniors' tasks). Therefore, the present study found that cadets' motivation, anxiety, and elf-efficacy were three dependent variables to one another.

In addition, Table 4 also illustrates that the relationships between factors of motivation, anxiety, self-efficacy in learning aviation were high ($0.5 \leq r \leq 1$). It was also suggested that the relationship between extrinsic motivation and emotional state was the highest compared to other factor correlations. Meaning that, the higher the extrinsic motivation, the higher the cadets' emotional state. Cadets were meant to be more confident and optimistic when they got external psychological supports. Unfortunately, different external supports might influence differently to the cadets (see the following interview results with C4 and C7).

Table 4 Relationship between motivation, anxiety, and self-efficacy in learning aviation English

Pearson correlation	Motivation	Intrinsic motivation	Extrinsic motivation	Anxiety	Comm.- test	Fear of Neg. Eval.	Self-efficacy	Mastery experience	Vicarious experience	Social persuasion	Emotional state
Motivation	1										
Intrinsic motivation	.984*	1									
Extrinsic motivation	.984*	.935*	1								
Anxiety	.942*	.934*	.919*	1							
Comm.-Test	.938*	.929*	.918*	.990*	1						
Fear of Neg. Eval.	.877*	.873*	.852*	.948*	.892*	1					
Self-efficacy	.928*	.921*	.904*	.960*	.938*	.937*	1				
Mastery experience	.808*	.808*	.782*	.884*	.823*	.832*	.884*	1			
Vicarious experience	.850*	.854*	.820*	.960*	.893*	.897*	.960*	.787*	1		
Social persuasion	.850*	.845*	.827*	.956*	.870*	.896*	.956*	.753*	.936*	1	
Emotional state	.967*	.942*	.961*	.933*	.921*	.875*	.933*	.812*	.839*	.849*	1

*Significant at $p < 0.001$, $N = 207$

> *"The English lecturers were so helpful. Such typical lecturers also give me special encouragement to learn aviation English. That is one of motivation why I like English class and always be active in the class. That's why I am indeed eager to learn." (C4, Interview 3)*

In accordance with Interview 3 with C4, she aimed to convey that her kind lecturers were kind of her extrinsic motivation because the presence of somebody, as a role model, could boost her motivation up. This might describe that C4 was easily influenced by the existence of helpful persons to elevate her confidence. There was a dialogue between a role model as extrinsic motivation and emotional state, which was to determine how confident and optimistic one accomplished a task course. Similarly, C7 also pointed that extrinsic motivation might influence his emotional state (see Interview 4).

> *"To me, I have no problems who will teach aviation English. I will be more motivated if there were no intense military exercises. To me, being physically tired and mentally exhausted gives me a space to do not enjoy every step of learning process. Thus, it depends on my physical and mental readiness." (C7, Interview 4)*

Even though C7 confirmed C4's idea, he stated that lecturers did not influence his learning motivation. He was motivated to learn, especially aviation English, when he got no intense exposures of military trainings. According to his opinion, he would be less motivated if he had been physically tired and mentally exhausted. Such condition might bear burnout and serious anxiety that might affect the level of motivation and self-efficacy. However, the present study only found that the cadets' motivation and self-efficacy were high, while the anxiety was high too due to different causes influencing each variable.

Furthermore, Table 3 depicts the most significant factors of each variable to the least ones. For instance, intrinsic motivation and extrinsic motivation shared similar relationship with the cadets' motivation ($r = 0.984$, $p < 0.001$, respectively). Moreover, communication-test anxiety factor had the biggest relationship with the cadets' anxiety ($r = 0.990$, $p < 0.001$), of which the phenomenon assumed that cadets' communication and test-taking anxiety were influential. In other words, the more they had problems in understanding aviation English grammar or expressions, the more they were anxious. This, further, could be seen in Research Question 3 result to confirm whether communication-test anxiety factor influenced the cadets' learning anxiety a lot, or more into their learning performance. In connection with self-efficacy, cadets' vicarious experience was the factor that had a positive and significant relationship with their aggregate self-efficacy. By looking at how the factors related to its aggregate scores, this might give a discourse of what factors contributed a lot to the formation of motivation, anxiety, and self-efficacy.

The influence of CADETS' motivation, anxiety, and self-efficacy in learning aviation English on their learning performance

The present study used multiple regression to examine the effect of cadets' motivation, anxiety, and self-efficacy in learning aviation English on their learning performance. Besides, this study also revealed the most influencing factor on their learning performance. The study used 2 factors of motivation (e.g., intrinsic and extrinsic motivation), 2 factors of anxiety (e.g., communication-test anxiety and fear of negative evaluation),

Table 5 The influence of cadets' motivation, anxiety, and self-efficacy in learning aviation English on their learning performance

Variables	R	F	df 1	df 2	R^2_{part}	f^2	Label
Motivation	.934*	1400.976	1	205	.872	6.81	Very big effect
Anxiety	.984*	6437.364	1	205	.968	30.25	Very big effect
Self-Efficacy	.932*	1350.388	1	205	.868	6.57	Very big effect

*Significant at $p < .001$, $N = 207$

Table 6 The most influencing factor of cadets' learning performance

Dependent variable	Model	R	Change Statistics			β
			F change	df 1	df 2	
Learning performance	Model 1	.935*	705.489	2	204	
	Intrinsic motivation					1.840*
	Extrinsic motivation					1.840*
	Model 2	.995*	1101.155	2	202	
	Intrinsic motivation					.050
	Extrinsic motivation					− .046
	Communication-test					.992*
	Fear of negative evaluation					− .003
	Model 3	.995	.861	4	198	
	Intrinsic motivation					.079
	Extrinsic motivation					.038
	Communication-test					.988*
	Fear of negative evaluation					.010
	Mastery experience					− .032
	Vicarious experience					.073
	Social persuasion					− .051
	Emotional state					− .121

*Significant at $p < .001$

and 4 factors of self-efficacy (e.g., mastery experience, vicarious experience, social persuasion, and emotional state). Table 5 explains the effect of cadets' motivation, anxiety, and self-efficacy in learning aviation English on their learning performance. Meanwhile, Table 6 shows the result of hierarchical multiple regression to generate the most influencing factor on cadets' learning performance.

Table 5 describes that motivation, anxiety, and self-efficacy in learning aviation English influenced cadets' learning performance. All three variables showed a very big effect to influence cadets' learning performance. However, among those three variables, anxiety influenced the learning performance a lot ($r = 0.984$, $p < 0.001$, $R^2_{part} = 30.24$) compared to the others. This finding implied that when the cadets felt more anxious, including burnout, tremendous stress, and physical and mental incapacitation, their learning performance would be directly affected. For instance, intense military trainings and lots of non-academic tasks could affect their success in attaining better learning performance.

Hierarchical multiple regression was undertaken to know the best model to indicate the most significant factor in influencing cadets' learning performance. Table 6 shows that Model 1 depicted that intrinsic and extrinsic motivation fairly shared contribution to the learning performance ($β = 1.840$, $p < 0.001$). Model 2 consisted of

four factors namely intrinsic and extrinsic motivation, which was added with two factors of anxiety namely communication-test and fear of negative evaluation ($r = 0.995$, $F = 1101.155$, $p < 0.001$). In Model 2, communication-test anxiety showed the highest β value ($\beta = 0.992$, $p < 0.001$) meaning that, it became the most influencing factor in determining the success of cadets' learning process among intrinsic motivation, extrinsic motivation, and Fear of Negative Evaluation. Unfortunately, the other three factors in Model 2 did not show significance, therefore, they did not contribute a lot to the cadets' learning performance. At last, after being added with 4 sources of information of self-efficacy, Model 3 did not show significance. This implied that the four factors of self-efficacy did not influence the cadets' learning performance a lot. It was proven by the β values that only ranged between -0.121 to 0.073 and had no significance ($p > 0.001$). Therefore, in accordance with Model 2 and Model 3, cadets' communication-test anxiety was the most influencing factor to their learning performance in aviation English course ($\beta = 0.988$, $p < 0.001$).

Such finding implied that communication-test anxiety consistently influenced the cadets' learning performance whatever the models applied. There was a tendency that cadets' linguistics competence and knowledge, especially in aviation English, were less sufficient so that their learning performance was unsatisfied. In addition, among other factors, the worries of incapacitation of using appropriate and acceptable communication and test-taking competence contributed bigger, even it could make the two factors of motivation and the four factors of self-efficacy could not signify. In addition, this founded fact was interesting to examine further how the cadets' communication and test anxiety had been the most influencing or determinant factor to their learning performance, whereas, their mastery experience was categorized in a very high category (see Table 3).

To cope with that question, interview was conducted to look at the qualitative perspective. The interview was conducted to reveal what made the cadets perceive very high mastery experience of self-efficacy in learning aviation English and how communication and test anxiety could determine their learning performance.

> *"Talking about belief, I am sure I can pass the course. What I get during the course is enough to direct me to getting the passing grade (score 75 out of 100). But I am afraid that I pass the course by the fact that I actually do not have sufficient knowledge of aviation English. When getting into a remedial teaching process, it means that my aviation English is still bad (laughing)." (C2, Interview 5)*

Interview 5 shows that C2 believed that his learning experience along with the materials mastered were enough to make him pass the aviation English course. In the same time, he realized that getting into numbers of remedial teaching process remained a bad fact that he had not conceived good aviation English competence, i.e., communication and aviation English test-taking competence. In addition, C2 shows two different claims. First, passing the course did not mean that he had to get maximum material mastery. He only needed to get the minimum score to pass the course even with several remedial teaching. Second, when he mentioned about getting into remedial teaching, he realized that his communication-test anxiety influenced his final learning performance. Therefore, it was not surprising that cadets' mastery

experience in accomplishing aviation English course was high, whereas, their learning performance was still much more affected by their communication-test anxiety factors.

Discussion

The present study showed that cadets' motivation, anxiety, and self-efficacy in learning performance were categorized in a high level, or Swanson's Quartile 3. This became an interesting fact since the motivation and self-efficacy were not maximum, in other words, categorized in Quartile 4. Meanwhile, their anxiety was also high, in Quartile 3. Through some qualitative data, it was obtained the fact that the cadets' motivation and self-efficacy could not be maximum due to high anxiety caused by external factors namely intense military and physical trainings. When the cadets felt physically tired and exhausted, their motivation and self-efficacy were affected, that is, they seemed to be mostly dependent on how well their physical and mental condition. Several studies confirmed that anxiety might increase along with the increase of burnout, stress, decreasing motivation, and physical exhaustion (Priya et al., 2020; Magtibay et al., 2017; Paolini et al., 2016). Hong, et al. (2015) also stated that a student was easily anxious when he was confronted too many homework or tasks accomplished every day, so that teachers needed to manage the times of assigning out-of-class tasks. Moreover, teachers needed to collaborate with their colleagues to assign tasks so that students could accomplish assignments of different subject courses in once seated. Therefore, minimizing anxiety could be the best effort to keep up the motivation and self-efficacy into maximum level (Ritonga et al., 2020).

Motivation, anxiety, and self-efficacy were indeed so famous in accelerating students' learning performance. Tanaka et al. (2016) stated that motivated students got the best score in class while the less motivated ones could not pass the course. Somehow, a few of studies considered that different students might perceive dissimilar types of motivation. The present study found that intrinsic motivation and extrinsic motivation shared similar correlation to one's aggregate motivation. This implied that both types of motivation might have a fifty-fifty share in determining how high one's motivation. Another important fact was that many studies confirmed that learning anxiety was the most significant threat to student's learning performance (Bai et al., 2020; Heckel et al., 2021; Zorowitz et al., 2020). Unfortunately, many of them also could not portray what kinds of anxiety contributed to the determination of successful learning process. The present study confirmed that communication and test anxiety became the most significant factor in the formation of student's anxiety. At last, many studies confirmed that mastery experience became the dominant factor in the formation of one's self-efficacy (Gebauer et al., 2020; Capa-Aydin et al., 2018; Loo & Choy, 2013). Similarly, the present study also found that mastery experience contributed a lot to the formation of cadets' self-efficacy in learning aviation English.

In connection with the relationship between factors of motivation, anxiety, and self-efficacy, the present study showed that the correlation between cadets' emotional state and extrinsic motivation was the highest. The present study found the rationales that cadets' confidence and optimism could elevate better if they had external supports, for instance, friendly and good teachers and less intense military training. Gebauer, et al.

([2020](#)) found that one's physiological state might increase if their environment supported him. This was in accordance with Bandura's Triadic Reciprocal Determinism Theory (Bandura & Adams, [1977](#)), which stated that one's efficacy was interfered with by his surrounding supports, including but not limited to existing someone or actions. In coping with a deeper discussion of this finding, one's emotion is indeed a personal construct in which individual management of feelings became the factor that could affect one's decision, including but not limited to self-motivation. Persons with so many worries in life might not elevate their job or task progress due to limited self-space to conduct analysis about how to cope with life obstacles and challenges. Instead, their times were overshot by many uncertainties and unsolved problems as they were incapable of handling their feelings. Such an environment and atmosphere might not a good setting for them to advance their motivation. That psychological feeling might interfere with how eager a person would complete the task. Several psychological studies had resulted in a positive relationship between the condition of one's mood or emotion and external supports as extrinsic motivation (Cho & Yang, [2018](#); Sotak et al., [2021](#)).

In coping with a learning process, when a student had a good emotional state, he would likely have a good extrinsic motivation, for instance, of getting high scores or performance. The students' emotion was ought to be a special consideration for teachers when they would determine a judgment over their learning performance. Teachers should understand when they had a bad emotional state, they might not have any interest in other things except their problems solved. If this situation happened, the conclusion of overall tests and score monitoring was invalid to determine whether they were successful in passing the course grade. For practical significance, a student with lots of family heart-breaking issues (e.g., a broken home) might be detrimentally hurt by the situation. His mood might not be stable, or he became to be more sensitive and retracted himself from the school crowds. In this phase, what he needed was the fact that his family turned around the fact and be harmonious as previously. When he got assessed by his teacher regarding Aviation English, for instance, he might not reflect his whole competencies on it. When he did not cognitively, affectively, and motorically perform better, then his teacher concluded that he was not passing the course. This conclusion was too surficial, therefore, knowing the condition of the students in various aspects was essential for teachers.

In addition, once a teacher cared about the student's condition and became a good role model for them in any aspect, this teacher could be another cause of one's increasing emotional state. Similar to the present study results, a cadet was too exhausted from several military training and task that was given by the lecturer, campus, and seniors. She had limited time for refreshments and almost a few times to take a rest. This affected her physical and emotional states. When confronted with the learning process of Aviation English, she found that her lecturer became her extrinsic motivation, so that, she completely studied the course with a good personal feeling. She believed that her lecturer showed care and was helpful and willing to uplift every cadet's learning problem. Referring to this finding, behaving nicely to students was merely a look for a good teacher, but a good teacher understood and uplifted them and boosted their learning motivation to be better and to attain better. Hence, several studies came to the conclusion that teachers' responsibilities were not only transferring knowledge and conducting assessments

but also counseling and parenting. By this, a typical cadet like C4 in this study could be helped.

At last, another important finding of the present study was that cadets' communication and test anxiety affected their learning performance. Tanveer (2007) explained that communication and test anxiety included fear of making mistakes and apprehension about others' evaluation, self-related cognition, variations in an individual's self-perceptions, and linguistics difficulties (including pronunciation, grammar, and vocabulary). In this study, the cadets had no science background in aviation, thus, they were new to Aviation English class. Consequently, it was justifiable that the communication and test anxiety occurred and affected their learning process and performance. Communication-test anxiety discussed one's cognition covering how a cadet operates the thinking process and individual incomparable brain works as it could be interfered with by a genetical descendant (Rakhimov, 2020). Moreover, language skills and prior knowledge were included in the linguistics field which could be a bigger threat to those who learned languages. When someone with no prior knowledge and was mandatory to learn a new language, the anxiety of self-capabilities in making use of cognition and linguistics skills could occur. This could be a threat to everyone, not to aviation cadets and the Aviation English course presented in the study. Generally speaking, if a student was not ready to appropriate new things, he might get confused and tremor in accepting the inputs. This consequently caused low communication and aviation English test-taking competence. One thing to offer to avoid this is by conducting the assessment as learning, a circumstance where a student understood what they would survive within the course matters. This helped the student get a portrayal of the whole input they would encounter. Their psychological side would be ready, their cognition was prepared for such new experience, thus, the student performed better. Law and et al., (2019) also shared a similar finding that students' cognition determined the successful learning process. In coping with English subjects, linguistics knowledge was indeed important and influential to attain better learning performance (Cappelli et al., 2018). This was due to the fact that, at school, teachers mostly considered students' cognition as the parameter of achieving good mastery (Cappelli et al., 2018). Among other competencies such as psychomotor and affective domains, the cognitive domain seemed to be more exaggerated in a test, regardless of the test type. Therefore, communication and aviation English material mastery seemed influential on students' learning performance.

The present study is only limited to the case appeared in Politeknik Penerbangan Surabaya, Surabaya, Indonesia, especially the cadets' motivation, self-efficacy, and anxiety in learning Aviation English. To the best of the researchers' knowledge, aviation English is taught in most aviation polytechnic under the Indonesian Ministry of Transportation, however, it could be differently implemented due to some dissimilarities in study programs available at the schools. Moreover, the present study portrays cadets' military trainings relevant to the scope of Politeknik Penerbangan Surabaya. Even some other semi-military schools do similar military trainings, there is a possibility of different physical training portions, types, schedules, and intensities. Therefore, future research is invited to examine how other aviation semi-military schools do the learning activities to portray cadets' psychology during the

study times as this trait is important in elevating their academic performance too. In addition, future research might investigate the uniqueness found in the present study where high anxiety could happen even students have tried to perceive high self-efficacy too.

Conclusion

The present study concludes that cadets' motivation, anxiety, and self-efficacy in learning aviation English is high. Each factor of the aforementioned three variables also shows a high category. Moreover, each variable conveys a positive and strong relationship, so that the three of them influence one another. The present study also finds that communication and test anxiety becomes the most determinant factor in attaining better learning performance. Referring to the fact, it is suggested that lecturers can monitor cadets' cognitive mastery along with their communication and test anxiety in learning aviation English especially. Moreover, lecturers, also applicable to other educators, are encouraged to look at several external learning threats such as intense campus activities and overloaded autonomous tasks that can signify the learning achievement. Theoretically, the present study is expected to give a new perspective that motivation and self-efficacy do not always have a negative and strong relationship, the opposite rather. The present study is also expected to give a new learning paradigm that, communication and test-taking competence still becomes the most worrying skill compared to fear of negative evaluation, or social prejudice. However, the present study is only limited to aviation military schools, where most reasons included military activities as the cause. Henceforth, it is necessary for further research to examine different school settings to find out different learning threats.

Appendix 1: content of motivation, anxiety, and self-efficacy scale (MASS)

No.	Aspects	Items
Part 1: personal information		
1	Cadet's name	…
2	Gender	Male/female
3	Program study	Air Communication
		Electrical Engineering
		Civil Engineering
		Air Traffic Controller
		Aircraft Maintenance Engineering
		Air Transportation Management
		Air Navigation Engineering
Part 2: motivation, anxiety, and self-efficacy		
1	Intrinsic motivation (Kruglanski et al., 1975; Ryan & Deci, 2000; Noels et al., 2000; Aydoğan, 2016)	Learning every topic in aviation English is pleasurable
2		I learn aviation English to get personal satisfaction

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No.	Aspects	Items
3		I dedicate lots of time to learn English because I am interested in it
4		I learn aviation English for the sake of self-improvement and professionalism
5	Extrinsic motivation (Kruglanski et al., 1975; Ryan & Deci, 2000; Noels et al., 2000; Aydoğan, 2016)	I learn aviation English in order to get good score specially to increase my GPA
6		I accomplish aviation English course to get scholarship
7		I do the best efforts in learning aviation English to get others' recognition of my capabilities
8		I learn aviation English in order to reach upper level of courses that are compulsory to be accomplished
9	Communication and test anxiety (Horwitz, 1986; Liu & Huang, 2011)	I am afraid of unsuccessful conversation in learning aviation English
10		Learning materials in aviation English makes me tired and exhausted
11		I find difficulties in mastering every linguistic aspect in aviation English
12		I think I cannot do the best for my exams in aviation English
13	Fear of negative evaluation anxiety (Horwitz, 1986; Liu & Huang, 2011)	I am afraid of getting bad scores in every topic in aviation English
14		I am afraid that my lecturer gives me bad learning feedbacks
15		I am afraid of getting bullied as I cannot accomplish aviation English course
16		I am afraid that my parents will be disappointed with my learning attainment in aviation English
17	Mastery experience (Bandura, 2006)	I believe my prior knowledge in aviation English is sufficient to accomplish the course
18		I can use some vocabularies that are relevant to the topics in aviation English
19		I have sufficient English grammar to support my learning process in aviation English
20		I am familiar with some aviation topics
21	Vicarious experience (Bandura, 2006)	I am confident that some previous workshops can help me pass the aviation course
22		I believe my seniors' experience can help me pass the learning process in aviation English
23		Some advices from my supervisor make me more confident in learning aviation English
24		I believe some seniors' note about aviation English can prepare my learning process
25	Social persuasion (Bandura, 2006)	I learn aviation English because its importance in aviation community
26		My parents give me positive supports to accomplish aviation English
27		I get full encouragement from my seniors to complete aviation English course

No.	Aspects	Items
28		My program study supports me provides facilities to finish learning aviation English
29	Emotional state (Bandura, 2006)	I am very curious in learning every topic of aviation English
30		I feel no physical and metal oppression when learning aviation English
31		I enjoy every learning steps
32		I am always patient in learning new materials in order to get better understanding

Declarations

Ethics approval and consent to participate

Not applicable.

Competing interests

The authors have no competing interests both financially and non-financially.

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