BASIC PSYCHOLOGICAL NEEDS, MOTIVATION, AND FOREIGN LANGUAGE VOCABULARY LEARNING STRATEGIES AND SKILLS OF INDONESIAN UNIVERSITY STUDENTS

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A B S T R A C T

Foreign language vocabulary learning can be pursued if the students have motivation and interest in which psychological factors play an important role in enacting learning strategies toward increased skills. This study aims to examine the integrated process model of the BasicPsychological Needs (BPN) variable as a behavioural phenomena in relation to autonomous and controlled motivation individually or collectively toward Vocabulary Learning Strategies (VLSs) and Vocabulary Skills (VSs). A total of (186 students of one university participated in this research. The Basic Psychological Needs of Second Language Scale (BPNSLS) was employed to assess the BPN, meanwhile the Self-Determination Theory of Second Language Scale (SDTSLS) was to assess the autonomous and controlled motivation. There are three questionnaires (BPNSLS, SDTSLS, VLSs) were adopted and adapted of the previous study. The fourth research instrument was Vocabulary Level Test (VLT) version b to assess vocabulary skills. A partial least square was used to contest the research model. The structural model of the relationship between the variables of basic psychological needs, self-determination theory, vocabulary learning strategies, and vocabulary mastery, revealed that vocabulary learning strategies play a crucial role in looking at the influence of motivational orientation on vocabulary skills described in the proposed model. This study suggests that further research can explore more on how motivation relates to learning strategies in general and comparing between autonomous versus controlled motivation.

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1. INTRODUCTION

Foreign language (FL) experts have perceived that guiding language learners to acquire a certain level of target language skill is not always contented due to the process influenced by many variables and known as gradual, nonlinear, dynamic, complex, and social (Karbakhsh & Safa, 2020). The factors that foresee FL skills have long been the attentiveness of the researchers (Abdulrahman, 2023; Prodanovska-Poposka & Todorova, 2023). The concern of why language learners fail to master the target language is pervasive and crucial. However, from the variations that are often put forward by some linguists, individual cognitive, and affective differences are considered to cover a very wide area of FL mastering (Alamer, 2021). The personality traits of language learners are examples of individual differences, influenced by temporal and situational variables. It seems necessary to investigate the relationships model of the most prominent psychological and/or cognitive factors of FL learners skills route and rate, count on individual skill differences.

Allegedly, most of language educators would agree that FL students could delay or even not be able to move further on their learning progress when they are unmotivated. In contrast, those who are motivated get to pursue the learning goal more actively, associating, and connecting with a large number of learning activities independently. Researchers then postulate diverse perspectives and approach upon motivation to have a better understanding of its relationship with language acquisition (Susanto et al., 2019). Among recent studies in language learning motivation, the component "self" has been considered to be very influential in the psychological aspect. FL motivational self-system that focuses on the "ought to L2 self" and "ideal L2 self" have been considered one of the most dominant and influential motivational theories (Alamer, 2021).

Regardless of augmentations in our understanding of different factors involved in vocabulary skills success, the overall patern and interrelationship of critical factor involved in language learning remain ambiguous. How the learning mechanism regulates their motivation and learning strategies and the extent to which it contributes to the achievement of their vocabulary skills is a big question that requires answers in various learning communities, contexts, and individuals.

1.1 Basic Psychological Needs

The interplay of psychological factors in the learning process of FL has long been the obsession of educational researchers. Hence, the meaning of these psychological constructs for individuals with the most extensive support needs remains evasive. BPN is broadly defined as a critical resource underlying an individual's natural tendency to move toward increased self-regulation, adjustment, and empathy (Vansteenkiste et al., 2020). The word "need" ascribe the existence of a certain preference, often in a lack, limited experience, and among individuals. The BPN phrase generally illustrates that individuals in the context of language learners have a limited set of basic psychological needs and an increase in their satisfaction is very important for the development of their achievements in a positive direction. Even though the basic psychological needs of a learner are open, in several theories that have been put forward by experts into 3, they are autonomy, competence, and relatedness (Alamer, 2021).

When a person perceives that activity is meaningful for him and interesting to participate in, then the value of self-autonomy encourages him to exercise more control, whether he is involved or not. Social learning contexts 'usually provided by teachers, parents, or peers that can nurture the learner's need for autonomy or let them choose personally relevant language activities. In the time learner feel effective, competent, and able to perform the target activity, it is the state of competence (Chiu, 2021b; Zainuddin & Perera, 2019). In learning a language, a clear, well-prepared structures, and objectives will spur an ideal sense of competence (Salikhova et al., 2020). Meanwhile relatedness refers to an interpersonal relationship among people and a sense of warmth with others. Some language experts suggest that the psychological need for relatedness is important for the internalization of the learning process, a sense of belonging, and involvement (Chiu, 2021a).

1.2 Autonomous and Controlled Motivation

FL learning can also be pursued because of interesting and enjoyable. The language learners' purpose and manner of doing, studying, completing the task are illuminated by their motivational orientation that consist of autonomous motivation and controlled motivation (Alamer, 2021; Chiu, 2021a). When the learning activities is enjoyable in and of itself, it is intrinsic orientation (Alamer, 2021). If learning is in line with its professional goals, then it is said to be an identified orientation. Orientation under the circumstances all activities seem valuable and make sense for a learner to undertake. Then the intrinsic and identified are categorized as autonomous motivation as they use the power of will (Chiu, 2021a, 2021b). Learning activity may also be experienced in a controlled fashion. Introjected orientation is when a learner may undertake the subject because he feels obliged and undergoes the lesson to avoid feeling guilty. Meanwhile the external orientation comes from the urge to behave because it is oriented towards reward or punishment. The two reasons 'introjected orientation and external orientation' are described as controlled motivation (Ryan & Deci, 2020).

A recent study related to motivation has reported that the ideal FL "self" has more closely related to language acquisition than the "ought to FL self" (Alamer, 2021; Alamer & Lee, 2019). The theory about motivation generally utilizes "self" which is part of the elements of self-determination (SDT) (Alamer, 2021). SDT is an approach to examine the relationship along with language acquisition variables. FL learners achieve good and even high levels of language acquisition as they are self-motivated due to instrumental and external goals (Kim & Kim, 2021). SDT predominate the process of mechanisms that transpire language learners as they have autonomously motivated. It is the situation when the learners experience the learning activities as enjoyable, important, and interesting. Linear to the situation, some others could be compelled by instrumental and external goals. It is the condition when the learners are controlled and motivated.

1.3 Foreign Language and Language Proficiency

Foreign language is generally defined as language that does not have a direct connection with the person's immediate social or personal environment. Language experts stated that the second, third, or fourth language learning is not intended to contrast with the foreign language (Gardner, 2020; Kuiken, 2023). However, the differences is in how language mastered; the first language is acquired while the second language is learned (Kuiken, 2023). The learning process goes through stages, and several experts always link social interaction skills such as motivation, emotion, and learning strategies to language proficiency as an academic measure (Devi, 2023; Plonsky et al., 2022; Susanto et al., 2019). English proficiency influenced the challenges students reported for each academic skill (Aizawa et al., 2023). Five performance indicators are usually used to assess language proficiency, namely accuracy, fluency, complexity, accuracy (Barrot & Gabinete, 2021). Some studies and linguist opinions state that the idea of proficiency is an artifact influenced by the ebb and flow of intellectual movements and conceptual recontextualization of the process of acquiring the language, and many things are looked at, either academically or the level of maturity in the context of social emotions and individual differences (Leung, 2022; Plonsky et al., 2022).

Factors that contribute to the target language proficiency involve a complex set of issues that cannot be related simply to a single cause. Before attempt to improve the proficiency, understanding the issues and set of basic psychological needs (Alamer, 2021; Alamer & Lee, 2019). Initial conceptions about the psychological condition of learners, such as many theories that have been put forward by experts to achieve the best level of language learner, still need to be proven empirically to justify it as cause and effect. Likewise studies Investigating language proficiency comprehensively and longitudinally could be measured by one of the more basic components of language, namely vocabulary skills (Alamer, 2021; Susanto et al., 2019, 2020). Yet, the importance of vocabulary in language acquisition is uncontested and indispensable for successful communication in any language (Benrabah, 2019; Susanto et al., 2019, 2022).

1.4 Vocabulary Learning Strategies and Vocabulary Skills

Among the cognitive factors to vocabulary skills, vocabulary learning strategies are defined as specific actions that FL learners employ to improve their own progress in retrieving the target language (Gorgoz, Seda, 2020; Susanto et al., 2019). Some studies had correlated learning strategies with academic achievement (Almoslamani, 2022; Baş & Beyhan, 2019). For example, the use of learning strategies significantly predicts student achievementand enriching the knowledge of Saudi students (Almoslamani, 2022).

Some linguists devide vocabulary learning strategies into several sections (Gorgoz, Seda, 2020; Susanto et al., 2019). Strategies to discover the meaning of new vocabulary items, strategies to retain the knowledge of newly learned vocabulary items, and strategies to expand the knowledge of new vocabulary items are strategies contributed significantly to the vocabulary skills among tertiary students in Indonesia that have been explored by (Susanto et al., 2019). Meanwhile (Gorgoz, Seda, 2020) in the research revealed that self-regulation skills and strategies for learning vocabulary in foreign languages from middle students showed moderate, positive, and significant correlations. There is a positive correlation between integrative motivation and vocabulary knowledge among English students in Spanish (Gardner, 2020). However (Susanto et al., 2019) revealed slightly different results where integrative motivation was an intermediary between VLSs and vocabulary skills but does not eliminate the importance of the relationship between strategy, motivation and vocabulary skills variables in the perspective of language proficiency. Meanwhile, (Alamer, 2021) considered effort as an intermediary variable between BPN and vocabulary achievement.

In some studies, autonomous motivation (AM) is often associated with various language acquisitions e.g vocabulary skills (VSs), hence the relationship between the two variables is indirect (Alamer, 2021; Ryan & Deci, 2020). There is an intermediary factor between the two, such as learning strategies. Drawing upon the fact that in the context of FL learning, the opportunities to acquire the target language in most cases restricted input, output, and interaction. Having a learning strategy that encourage motivation, is something that seems very necessary in language learning (Lee, 2020; Susanto et al., 2019).

Assisting language learners to achieve a wide range of vocabulary skills is a fundamental issue for developing their language proficiency generally, and no less, yet in teaching English as a FL. The importance of vocabulary skills to FL has been well recorded (Susanto et al., 2022). The vocabulary learning studies have been a large parts of scholars time to remove a veil from the secrets of learner differences in vocabulary skills with several investigating the role of motivation (Li, 2021; Susanto et al., 2022). Identifying learning strategies is then a crucial factor in predicting the vocabulary skills as the base of language proficiency (Li, 2021; Susanto et al., 2019). It remains unclear how these complex relationships can be understood through plausible mediators, such as orientation and motivational effort. In general, the empirical studies that underlie the research on BPN in relation to vocabulary knowledge is still scarce (Alamer, 2021). Lack of evidence for the structure of the underlying factors of BPN is a problem that may arise in looking at this variable about SDT, learning strategies, and vocabulary skills.

Learning a language can be very emotional, as anyone who has ever tried to learn another language will attest (Plonsky et al., 2022; Wang et al., 2023). The encroachment of vocabulary in measuring language proficiency has been widely discussed, but sometimes there is still a separation into the learners' psychological factors and learning strategies (Alamer, 2021; Karbakhsh & Ahmadi Safa, 2020). The individual differences of language learner that influence the overall trajectory of the acquisition process has attracted the attention of numerous researchers (Susanto et al., 2019).

Learning strategies can be defined as deliberate actions that learners select and control to achieve academic objectives and desired goals. Those refer to some urgent concepts of operations, steps, or plans employed by learners to facilitate the accession, storage, regaining, and use of information to reach the goals (Gorgoz, Seda,

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2020; Susanto et al., 2019). To sum up, the proficient use of a variety of vocabulary learning strategies contributes to vocabulary skills (Ernie Zaenab Musa et al., 2022; Susanto et al., 2019).

The model concept of the present research is formulated in Figure 1, where BPN as an exogenous variable can be seen its contribution to the variables of motivation, VLSs and vocabulary skills. The objectives are: 1) to determine the level of BPN, AM, CM, VLSs and VSs of the students; 2) to examine the impact of the BPN on AM; 3) BPN on CM; 4) BPN on VLSs; 5) AM on VLSs; 6) CM on VLSs; 7) AM on VSs; 8) CM on VSs; 9) BPN on AM; and 10) BPN on VSs.
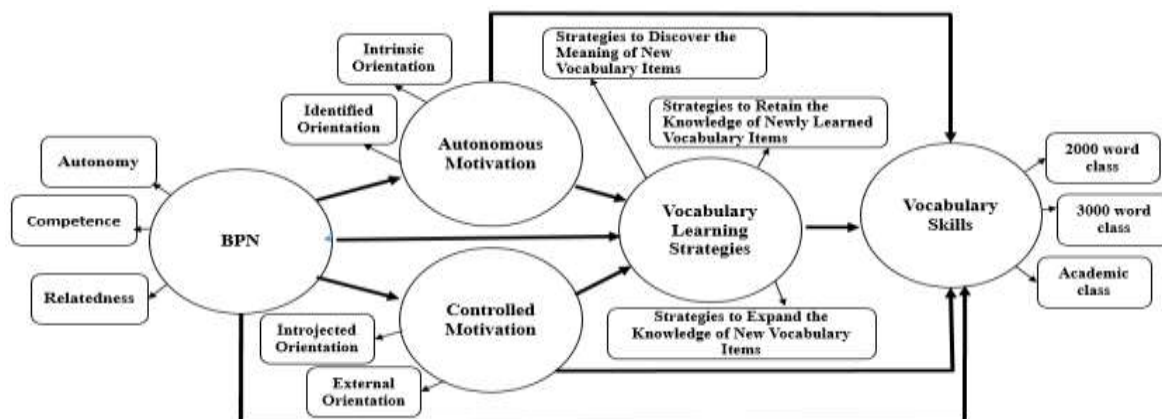

Fig. 1 - The conceptual model of the present study

2. METHOD

The present study determined the level of BPN as independent variables, meanwhile the autonomous and controlled motivation as an intermediary variable between BPN, VLSs, and VSs. There are 5 main variables in this study which consisted of 2 types of data; questionnaire and test, to measure vocabulary skills. 186 students participated in this study. The population is homogeneous, no characteristics of gender, social background, economy, nor other stratified characteristics (Shukla, 2020).

The Basic Psychological Needs of Second Language Scale (BPNSLS) was employed to assess the BPN, meanwhile the Self-Determination Theory of Second Language Scale (SDTSLS) was to assess the autonomous and controlled motivation adopted and adapted from (Alamer, 2021). A total of 12 statements were employed for BPN and 20 statements for AM and CM. The questionnaire to assess the VLSs employs 51 items refers to (Susanto et al., 2019). The fourth research instrument was Vocabulary Level Test (VLT) version b to assess vocabulary skills (Susanto et al., 2019, 2022). The participants of this study were Indonesians who did not speak English. Therefore, the questionnaire used to measure the level of BPN and SDT was first translated into Indonesian. 3 linguists confirmed the translation of the questionnaire. The BPN assessment which consists of 3 indicators shows composite reliability of .82, .89, and .87 in the previous study (Alamer, 2021). Meanwhile, composite reliability on SDT is in the range of 0.90, 0.83, 0.80, and 0.84 indicated a high category value.

The VLT as a tool to measure students' vocabulary mastery in terms of academic and general words. The test refer to the word-class: 2000, 3000, 5000, 10000, and academic. These word classes are vocabulary skill measurement. However, some expert opinions declared the exception, if the respondent are not able to do the >5000 word classes, then the word group can be abandoned, and only use the below (Susanto et al., 2019).

The Partial Least Square (PLS) flow showed in the table 1 shows the sequence of data analysis steps and criteria (Marin-Garcia & Alfalla-Luque, 2019; Ringle et al., 2023). The analysis is multiple linear regression as a prediction of dependent from the independent variable and vice versa. The model test includes two types: the outer model (test indicators) and inner model (test hypotheses). In terms of validity, reliability, the range of scores 1.00-1.79 is as very low, 1.80-2.59 low, 2.60-3.39 sufficient, 3.40-4.19 good, and 4.20-5.00 very good (Padulo et al., 2020; Sürücü & Maslakçi, 2020).

This research consists of ordinal and numeric data types. Ordinal data were measured by questionnaire of measuring BPN, SDT, and VLSs on a 5-point rating scale. That is 1=strongly disagree, 2=agree, 3=undecided, 4=agree, and 5=strongly agree. The data from the VLT test is numeric with the highest score of 30 out of 90 items.

Table 1.
Smart PLS data analysis

Model Test	Output	Criteria
Outer Model (Indicator or test)	a. Convergent validity	a. Loading factor >0.7
	b. Dicriminant validity	b. Cross loading with latent variable must be higher compared to the corr. value of other latent variables.
	c. Average Variance Extracted (AVE)	c. AVE, criteria >0.5
	d. Compiste reliability	d. Composite reliability is acceptable if ≥ 0.7
Inner model (Hypothesis)	a. R^2 of endogen latent variable	a. R^2 in 0.67; 0.30; 0,19 indicates that the model is good; moderate; weak.
	b. Q^2 of endogen latent variable	

c. Coefficient parameter and t-statistics	b. $Q^2 > 0$ indicates the mode has predictive relevance. The effect side Q^2: 0.02; 0.15; 0.35 as small; medium; large effect.
	c. Estimation value of path analysis is the structure model must be significant. This is done through the boothstraping procedure, t-statistics > t-table (Sig. level 0.05, two tailed test)

3. RESULTS AND DISCUSSION

The first research objective is intended to determine the level of BPN, AM, CM, VLSs and VSs of the students. The average result of the variable BPN was 3.7, AM was 3.8, CM was 3.8, VLSs was 3.7, and VSs was 14.47. Most of respondents answered the questionnaire in the range of 3.7 to 3.8. Meanwhile, the VSs was in the range of 14.47. All scores of VSs was still far below the master category, 24 versus maximum score 30.

The values listed in the outer model indicate the level of each indicator used for each variable. Table 2 consists of outer model and inner model. All latent variable fulfilled validity and reliability above the minimum criteria. The value of loading factors indicated more than 0.70, as well as the cross-loading were more than the correlation value of other latent variables. In term of the convergent validity and discriminant validity, all items are considered reliable and valid. The R^2 values of all endogenous latent variables are in the good category, except one variable 'controlled motivation' as moderate. From the value of Q^2, all endogenous latent variables indicate that this model has predictive relevance and large effect.

The further research objectives are to examine the correlation between BPN and AM; BPN and CM; BPN and VLSs; AM and VLSs; CM and VLSs; AM and VSs; CM and VSs; BPN and AM; and between BPN and VSs. Depicted in figure 2 is an illustration of the model of this study run in PLS. The present research adopted a motivational process based on the SDT framework to assess the relationship between BPN, SDT orientation (Autonomous and Controlled motivation), VLSs, and VSs. The structural model was redrawn to show a causal flow that is easier to see. BPN is defined as an exogenous variable in the model because it has been confirmed as an antecedent of the type of autonomous motivation (Noels et al., 2019). BPN can also be linked directly to VLSs and vocabulary skills to get to which model is ideal. Furthermore, two types of motivation: autonomous motivation and controlled motivation were determined as mediators in relation to BPN, VLSs, and vocabulary skills as comparators in the language achievement motivation model. Similar to BPN, two general motivational orientations (autonomous and controlled motivation) were allowed to be directly related to vocabulary skills to assess their ability to predict variance in outcome variables over their influence, which can also be explained by VLSs (Noels et al., 2019).

The result of the present study, the two variables autonomous and controlled motivation have no significant impact toward the VSs. The AM on VSs has 0.17 cronbach alpha, meanwhile the CM on VSs as 0.8. Move forward on the hypothesis analysis, Estimation value of path analysis in the structural model through the bothstraping procedure BPN on AM has t-statistics 18.85638 > t-table 1.96 (significant level 0.05, two tailed test). BPN on CM has 12.027275, AM on VLSs 2.964918, BPN on VLSs 2.8927559, CM on VLSs 3.943724. These mean HA 'altenative hypotheses' acceptable (there is impact exogen to endogen), meanwhile H0: rejected (there is no impact exogen to endogen). But the the variabel AM on VSs has t-statistics 1.124, CM on VSs 1.37 which less than t-table 1.96, mean H0 accepted, Ha: rejected.

The magnitude of the percentile effect of exogenous variables on endogenous variables: BPN on autonomous motivation was 75%, BPN on controlled motivation was 68%, BPN on VLSs was 24%, BPN on VSs was 19%, autonomous motivation on VLSs was 30%, autonomous motivation on VSs was 17%, controlled motivation on VLSs was 42%, and VLSs on VSs was 31%. The magnitude of the exogenous influence to the endogenous variable indicated that the BPN variable on the autonomous motivation and controlled motivation (BPT) were the highest compared to the influence of other variables, but all exogenous variables on the vocabulary skills variable indicate that the intervening variable of VLSs played a larger role.
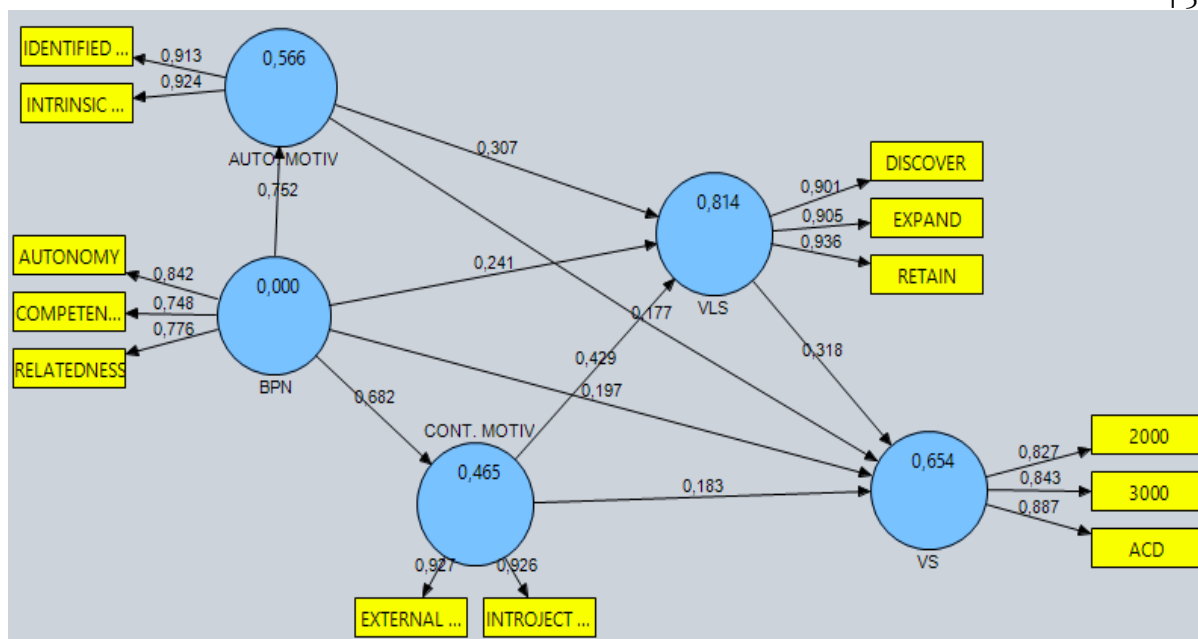
Fig. 2 - Structural model

Table 2.
Output research data

Outer Model (Indicator Test)	
Output	**Result**
Convergent validity	* All loading factors of the indicator >0.70: - autonomy, competence, relatedness (BPN): 0.84; 0.74; 0.77 - identified orientation & intrinsic orientation (AM): 0.91; 0.92. - external & introjected (CM) : 0.92; 0.92. - retain, expand, & recover (VLSs) : 0.92; 0.9; 0.9.
Discriminant validity AVE	* All items of cross loading with latent variables were >corr. value of other latent variable.
Composite reliability	* All variables (BPN, AM, CM, VLSs, & VSs) had AVE value >0.50, they were 0.62; 0.84; 0.85; 0.83; 0.72. * All variables (BPN, AM, CM, VLSs, & VSs) had composite reliability value > 0.70. They were 0.83; 0.91; 0.92; 0.93; 0.88.
Inner Model (Hypothesis Test)	
Output	**Result**
R^2 of endogen latent variable	* R^2 of endogen latent variables, AM, CM, VLSs, VSs were 0.56; 0.46; 0.81; 0.65. Three variables indicated the model is good, uless the CM indicated moderate.
Q^2 of endogen latent variable	* Q2 of endogen latent variables: AM, CM, VLSs; VSs were 0.39; 0.35; 0.17 > 0, indicated that the model had a predictive relevance.
Coefficient parameter & t-statistics	* Estimation value of path analysis in the structural model through the boothstraping procedure BPN on AM has t-statistics 18.856382 < t-table 1.96 (sig. Level 0.05, tw-tailed test). BPN on CM: 12.027275, AM on VLSs: 2.964918, BPN on VLSs: 2.8927559, CM on VLSs: 3.943724.

The present findings show that the higher the BPN of the language learners tend to act on controlled motivation almost as high as autonomous motivation. It is slightly different from previous research conducted by (Alamer, 2021) at Saudi University that the higher the level of language learners, the more likely they are to have autonomous motivation, but rely less on controlled motivation. Whereas previous studies have drawn tentative conclusion that there was a positive correlation between controlled motivation and demotivation in language learning (Noels et al., 2019). Yet the present research indicates that controlled motivation is also expected as well as autonomous motivation. Controlled motivation tends to be considered non-adaptive and inconsistent with psychological needs, but in various situations the role of the teacher to control student learning and directing their motivation seems be necessary without thwarting them from doing something independently. The researchers noticed that modern language learners may assume controlled motivation and autonomous motivation at about the same level in terms of general language learning motivation. In the language learning context, students feel that teachers/parents as external motivators to play a role in directing students to certain achievements (Arifani et al., 2021; Bauer et al., 2019). Vocabulary skills as a predicted variable in many ways cannot be attempted independently by students, and this is a small reason why these two motivational variables have almost the same level in the case of students in Indonesia (Susanto et al., 2019, 2022).

The results of this study are linear with previous study that autonomous motivation, although closely related to the achievement of language skills such as vocabulary skills, but in some causal models, the influence is not always direct (Alamer, 2021; Noels et al., 2019; Ryan & Deci, 2020). There are additional factors as intermediaries in language achievement such as learning strategies and effort variables (Alamer & Lee, 2019). These variables mediate a causal relationship among the BPN, SDT, and vocabulary skills. Autonomous and controlled motivation are drawn from the notion that different types of orientation can be portrayed by varying degrees of self-determination or relative autonomy, expressed as personal, and impersonal (Ryan & Deci, 2020). The concept of SDT is that when learning, which is an integral part of the sense of self-learners, comes across intrinsic motivation through the assignment. SDT is put forward as the basis for the argument that students as individuals can have various orientations and reasons for being involved or not in the assignments given by the teacher. However, in normal situations, this is not seen as a choice, yet from a motivational perspective can be distinguished. The motivational orientation phenomenon seems to explain the goals of a learner, how to approach them, and what priorities should be done. The VLSs level of performace can be explained 84% by the exogen variabels: BPN, autonomous motivation, and controlled motivation.

The structural model of the relationship between BPN, SDT, VLSs, and vocabulary skills variables, determined that VLSs play a key role in looking at the effect of motivational orientation on vocabulary skills depicted in Figure 1. The goal of the present study is not to establish temporal causality of BPN on vocabulary skill level, but to assess mediation pathways that explain the complex relationship between the predictor variable i.e. BPN, and the predicted vocabulary skills. A more comprehensive analysis brings together various literature and models that have been studied (Alamer, 2021; Alamer & Lee, 2019; Noels et al., 2019; Ryan & Deci, 2020).

Vocabulary skills were measured using a vocabulary level test (Susanto et al., 2019) show the extend of vocabulary skills at each level, whether 2000, 3000, 5000, and so on, based on width grouping. Academic word class is also included as elements in many of VLT measurements (Susanto et al., 2019, 2022). In essence, this test showed where VLSs are needed in several stages. The relevance of this type of test is to investigate the relationship of various motivational variables that can contribute to learning strategies. In the present study, the researchers has shown a new model in the context of improving VLSs and vocabulary skills level by starting from the BPN and motivation variables.

Before testing models of language learners' motivation in relation to language learning strategies and vocabulary acquisition, it is first necessary to determine the factorial structure, both the BPN scale and the constructs that shape motivation. Although the construct structures that make up BPN and SDT have been extensively examined in classroom education research, nevertheless, this study, to the authors' knowledge, is the first of its relation to vocabulary learning strategies as an intervening variable in vocabulary skills. So to test this construction dimension, the researchers have considered including the BPN → Controlled & Autonomous motivation → VLSs → VSs in linear model. This study provides evidence of construct validity and more precisely represents the BPN scale and motivation to learn language. The main objective of including BPN as a predictor variable in research has provided support for SDT's theoretical assumptions, which argue that satisfying BPN directs student motivation in the end in improving various language learning outcomes (Alamer, 2021). The motivational process in this present study seems logical, but previously it had not been linked to VLSs as an intervening variable. The controlled motivation model in several similar studies was considered unreliable as positive motivation in language learning, but in the present study, it is not something that needs to be avoided. The results of this study direct language observers that motivation increases along with increased achievement at the BPN level, but this is still something that can build a good learning strategy which ultimately improves vocabulary skills gradually.

From the pedagogical implications, the findings of this study suggest that language teachers should place the importance of the need for autonomy, relatedness, and competence which are components of BPN. Those elements of BPN are relating to VLSs through autonomous and controlled motivation. This model shows that VLSs are an important element for language learners to achieve good vocabulary skills. The level of autonomous and controlled motivation seems to have the same weight as an intermediate variable in the VLSs. This shows that the better the BPN level of a learner, the better their level of motivation. Increasing the BPN level of a language learner means increasing their motivation, both autonomous and controlled. Although in this study controlled motivation was not better than the level of autonomous motivation. And the better the motivation of a language learner, the better their strategy for learning vocabulary which in turn improves their vocabulary skills. In many studies, this has always been confirmed that strategy plays the right way of learning, and motivation is the beginning of the strategy that can work well.

Convergent validity value in this study shows positive correlation of one to another items in the same construct. The convergent validity value in the range of 0.74 - 0.92 over the minimum 0.70. The researchers saw a strong degree of association between the two motivational variables (AM & CM) and vocabulary learning strategies. Altough the previous research recommended that teachers focus more on students' autonomous motivation, to ensure the students embody the freedom of choice and reduce the control motivation approach to spur vocabulary achievement, but there is a different construct of effort vs VLSs toward vocabulary achievement/skills that the present study build the model. The format of the present study model actually shows that both types of motivations have a big role in increasing vocabulary through vocabulary learning strategies. This is possible, because several studies on the behavior of eastern people who tend to be interdependent, focus more on social, interpersonal, and relational styles (Snoder, 2019). This type of student when associated with language learning, especially vocabulary skills tends to adapt to other people's perspectives and understand others'expectations. Such tendencies can be manifested by acknowledging one's obligations or roles in certain situations and awareness of the larger role of others in influencing who they are and what they should do (Snoder,

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2019). But surely therefore external pressure and regulation may be a motivation for people in eastern cultures. This may be the reason for the cultural differences in terms of controlled motivational effects on students in the present study compared to previous one.

The component of autonomy refers to the sense of control and freedom that a language learner develops independently when he can choose to be engaged invaluable or interesting activities (Prentice et al., 2019) . The social learning context should conserve the learner autonomy to choose language activities that are relevant. The new competence can be done when the learner feels that learning is competent. To maintain a good learning environment, clear provisions must be provided from the beginning of their language learning activities. The linkage refers to the social relationship between the language learner and the language teacher. Some recommendations from scholars that the psychological need for connection is important as for internalizing the learning process as well as for taking ownership of learning and natural engagement. From this study, autonomous and controlled motivation variables have no significant effect on vocabulary skills, but through VLSs. This study confirms previous research that motivation needs an intermediary to achieve the best level of foreign language mastery. In many research cases this happens even though there are several studies that may give different results due to differences in the character of the respondents and the learning environment.

The student's vocabulary learning strategies were found to be very varied and the higher the motivation, the more significant the effect on vocabulary skills was. Why the learning strategy for students has increased was because their level of basic psychological needs was met with a level of motivation due to their strong motivational drive that boosted the desire to learn vocabulary harder. In the end the achievement of vocabulary will be achieved with more effort. This is the recommended model from the results of this study. The vocabulary test in this study has been used several times in the context of Indonesian students (Susanto et al., 2019, 2022). However, the some studies before and present only found student achievement within the range of 1000-3000 word classes and almost none of them reached 5000 nor above. Some of the results of this vocabulary test can be said to be uneven and only achieve intermediate results or minimum. In the future, researchers may need to create a valid and reliable vocabulary ability test tool that can measure English vocabulary skills which have a distribution of achievements ranging from minimum to maximum. Or the researchers need to get the results of the vocabulary competency test with a larger sample of students to compare one with the other in Indonesian students context.

The achievement of vocabulary skills is connected to those who have a high level of VLSs. This result is not surprising considering that the important role of VLSs in English has been widely confirmed in several studies (Gorgoz, Seda, 2020; Susanto et al., 2019). Mastering one target skill instantly for some students may become an entranched resistance to change. However, in terms of foreign languages, it must be different from other sciences. Autonomous and controlled motivation are not easy to define with certainty, but tendencies can be seen. Autonomous learners understand the goals of their learning program, explicitly accept responsibility for their learning, participate in setting learning goals, take the initiative in planning, carry out learning activities, review the learning process and evaluate its effectiveness. From the results of this research, the BPN factor (integrated process model of foreign language motivation based on the framework of self-determination theory (SDT) can be observed quite prominently in many reviews that attempt to synthesize and catalyze various aspects of foreign language motivation. Pathways that can be used as a model for English language learning as overall ability can be reduced from vocabulary ability, with the right learning strategy approach and supported by the right motivation for learning a foreign language. The results provide very useful advantages in theoretical and empirical trajectories in the context of foreign language learning.

4. CONCLUSION

It is important to note that although there are several variables that may be conceptualized to motivation, the present study has focused only on basic psychological need as the exogen variable toward motivation, learning strategies, and achievements as defined by many scholars (Alamer, 2021; Noels et al., 2019) The present study proposed a new model contribution by displaying more detailed research data on respondents who learn English as a foreign language, particular to VLSs as the key path to acquire the higher level of vocabulary skills.

This research is expected to be a reference model regarding the relationship of variables related to human psychology in relation to language acquisition. Several studies in the field of language learning do not pay attention to the psychological factors of students as the main element in evaluating students' language achievement processes. The learning motivation is so broad in meaning, yet the ideal point not formulated in the latest study. However, researchers have given the basic idea of the concept of language learning where vocabulary is the basis of learning, and strategies as mediation that need to be considered by researchers, English language teachers, and language learners. The level of motivation is influenced by the basic psychological needs of learners has been proven by some other researchers. That the level of motivation needs to be designed from the beginning in students before the curriculum is designed to be given to students. Seems, it is worth investigating how these two types of motivation: autonomous and controlled motivation as predictors of learning strategies in general.

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