



VIETNAMESE HIGH SCHOOL EFL LEARNERS' LANGUAGE MINDSETS: EXPLORING THE IMPACT OF DEMOGRAPHIC FACTORS

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Abstract:

This research employed a quantitative research design targeting (1) investigating Vietnamese high-school students' patterns of language mindset; and (2) examining the relationship between students' mindsets and demographic variables, including genders, school groups, and grade groups. The data was collected through the language mindset inventory with 18 items, using a 6-Likert scale. The questionnaire was delivered to EFL students in public high schools via online forms. With 248 valid responses, statistical analysis was conducted to answer the research questions. The findings show that the EFL high-school students endorse a growth mindset, and there was no difference found in the relation between students' language mindsets and their demographic features.

Keywords: mindset, growth mindset, fixed mindset, demographic variables

1. Introduction

To explain human motives behind courses of action, scholarly attention has been drawn to the study of motivational psychology since the 1930s (Lamb et al., 2019). Research on motivation has ever since generated a comprehensive body of literature (Ushioda, 2012), including established works on motivation for learning another language apart from one's native language (Dörnyei & Ushioda, 2011; Lamb, 2019). In second language learning, motivation seems to be the most prominent predictor of learners' learning achievements (Dörnyei & Ushioda, 2011), which attracted extensive research since the induction of Garner and Lambert's (1972) work (Coleman, Galczi & Astruc, 2007; Lamb et al., 2019; Molway & Mutton, 2020). However, a recent related psychological construct - mindset, has drawn educational researchers' attention in attempts to explain one's behaviors and orientations (Lamb et al., 2019).

Lou and Noels (2019a, 2019b) discussed mindsets through the lens of beliefs related to personal characteristics such as the malleability of intelligence in learning,

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which is predicted to have a certain influence on learning success. In their proposals, Lou and Noels (1996 & 2006) suggested that a certain type of mindset indicates one's meaning-making system unpinning and predisposing motivation. To explain how individuals make sense of their L2 learning experiences based on mindset orientations, Lou and Noels (2019a) introduced a learning meaning-making system (LMMS). They indicated that a growth mindset is associated with positive values such as self-confidence, mastery-goals efforts, controllable attributions, and self-improvement strategies, while a fixed mindset makes a premise for negative psychological features such as negative beliefs about effort, self-defensive strategies, and language anxiety.

Strongly related to students' grit and perseverance in language courses, language mindsets appear to be a significant factor in need of further investigation (Burnette, O'Boyle, VanEpps, Pollack, & Finkel, 2013; Yeager & Dweck, 2012). Understanding learners' language mindsets could contribute to interpreting their motivational beliefs and predicting their corresponding courses of action in the learning process. Mindsets can suggest students' corresponding behaviors, attribution, goal orientations, and learning strategies, from which educational stakeholders could anticipate possible dropouts and amend unsatisfactory learning outcomes.

Nevertheless, the relationship between learners' mindsets and learning outcomes is complex. Various studies have proposed that self-regulated learning, time and effort investments, and learners' willingness to participate can induce students' learning outcomes, which are strongly predicted by learners' motivational beliefs or types of mindsets (Fredricks, Blumenfeld, & Paris, 2004; Wigfield et al., 2015; Bai & Wang, 2020). However, Zhang et al. (2017) in their synthesis of studies on the relationship between mindsets and learning achievement found no correlation. It could be that the relationship between mindsets and learning is domain-specific. Lou and Noels (2019) also made a notice that when considering the impacts of language mindsets on the individual's goals orientations and other psychological interpretations of their language learning experiences, it would be more adequate to align learners' socio-cultural contexts with the whole setting of language learning in their culture. Clearly, the studies reviewed were conducted in Western countries; and just a few were done in other geographical contexts (Bai & Wang, 2020).

In the context of the present study, Vietnamese students are characterized as Asians who follow and are profoundly influenced by Confucian values. A widely acknowledged value is that the Vietnamese culture generally acknowledges and highlights the importance of effort, grit, and perseverance as well as "*maintaining social harmony with authority and external social environment*" (Lou & Noels, 2019b). This adds complexity when educators utilize the LMMS to interpret or predict students' beliefs in language learning and determine their students' pattern of L2 motivation. Hypothetically, they could hold positive beliefs and controllable attributions to their failure, which belong to the growth-mindset oriented subsystem. On the other hand, in terms of language learning, there are neither theories nor evidence to conclude the consistency among the L2 motivational constructs. One of the most reasonable

explanations for this paradox is that students may hold a mixture of both growth and fixed mindsets; and language mindset is a continuum (Murphy & Dweck, 2010; Lou & Noels, 2019).

The aforementioned discussion would suggest a diversity in understanding mindset, and hereby language mindsets, therefore, further studies concerning the language mindsets in the EFL setting such as the Asian context are essential. The current study aims at investigating Vietnamese students' language learning mindsets in relation to their demographic traits with the research questions as follows:

- What pattern of language learning mindsets do Vietnamese high school students hold in learning English as a foreign language?
- What is the relationship between the students' language mindsets and genders, school groups, and grade groups?

2. Literature review

Kelly (1955) introduced lay theories – critically constructed with “*naïve assumptions about the self and the social reality*” (Dweck, Chiu, & Hong, 1995, p.267) – as one's motives and interpretations of information related to himself/herself and surrounding settings. Due to inadequate and poor expression of the theories themselves (Dweck et al., 1995), implicit theories were termed and employed as an enhanced replacement. Since then, “*implicit theories*” have been referred in literature and used in research (Ryan & Mercer, 2012). Working on Kelly's introduction of lay theories (1955) and Heider's (1958), Dweck et al., (1995) suggested two categorizations of implicit theories as an entity theory and an incremental theory.

2.1. Entity - incremental theories and mindsets

Advocates of an entity theory label intelligence as fixed or unchangeable, while proponents of an incremental theory believe in the possibility of developing one's intelligence (Dweck et al., 1995). Admitting implicit theories as the “*core assumptions in an individual's world view*” Dweck (1995, p.268) claimed that the introduction of incremental and entity theories could help draw a framework to explain one's judgments and reactions to events. Such labels help to construct reality systematically and predict the costs and benefits for individuals. Later, the notion of mindset was introduced by Dweck (2006) with respect to the two implicit theories – entity and incremental, namely growth and fixed mindsets. A growth mindset implies a belief about the possibility of developing a person's intelligence, while the later indicates a belief about the unchangeability of intelligence. In addition, the terminology of mindsets fully displays the “*comprehensive and pervasive nature of the construct*” (Ryan & Mercer, 2012, p.75).

The categorization of mindsets into growth and fixed domains seems to indicate two opposing extremes. However, Murphy and Dweck (2010) suggested it is possible and more productive to view mindset as a continuum. Therefore, an individual's mindset is likely to be determined by a pattern of coexistence in which the individual may more

greatly endorse one type of mindset (i.e., either growth or fixed) than the other. The continuum of mindset also entails the possibility to affect one's mindset in a certain direction – either towards the extreme of fixed or growth mindset. Nussbaum & Dweck (2008) proved that a certain type of mindset could be induced by setting people's exposure to sources of information that support the target mindset.

In the current study, the construct "mindset" is investigated with regard to English language learning. Language mindsets are thus defined as the beliefs learners hold about their ability and intelligence for learning another language, usually categorized as an entity and incremental or growth and fixed (Eren & Rakıcioğlu-Söylemez, 2020).

2.2. Correlates of mindsets and demographic features

Lou and Noels (2019) also made a notice that when considering the impacts of language mindsets on the individual's goals orientations and other psychological interpretations of their language learning experiences, it would be more adequate to align learners' socio-cultural contexts with the whole setting of language learning in their culture. This implies the critical determinant values of socio-cultural factors on one's existing mindsets.

In line with Lou & Noel's (2019) suggestions about the necessity of investigations into ones' sociocultural factors to better interpret their course of action under the umbrella term of mindsets, a considerable number of studies have been conducted to examine factors influencing mindsets, especially demographic factors (Kornilova et al., 2009; Macnamara and Rupani, 2017; Destin, 2019; İrem, 2020; Huang & Xie, 2021). However, the results were reportedly inconsistent and varied across contexts.

Dweck & Simon (2014) suggested that females tended to hold firm beliefs about the unchangeability of their capacity as well as the attributions of any failure toward restrained capacity. However, current studies reported a contradiction against the prior literature concerning the correlation between mindsets and genders (Macnamara and Rupani, 2017; Huang & Xie, 2021; Schlender, Tan, Wegmann, 2020), indicating that females greater endorse a growth mindset. While, some other studies found no significant difference in terms of mindsets between gender (Henderson et al., 2017; Sigmundsson, Guðnason, & Jóhannsdóttir, 2021)

In addition to examining the relationship between mindsets and genders, Huang & Xie (2021), in their exploration into relationships between socio-demographic traits and mindsets of Chinese citizens, generated new dimensions in understanding mindsets as well as existing differences in age groups, rural-urban gap, education, employment, and life-course events in relation to the held mindset. The research stated that the younger age group have a greater tendency to hold a growth mindset. However, at young ages, a growth mindset is more frequently found in females, and the pattern changes reversely when examined in older ages. In terms of the rural-urban gap, slight differences in terms of mindsets were also reportedly significant with the rural group endorsing a growth mindset at the lower levels.

This implies a context-specific impact of socio-cultural features on one's mindsets and their courses of action (Lou & Noels, 2019). It can be seen that understanding

learners' beliefs about their language learning may help teachers to foretell their learners' responses as well as behavioral tendencies in class; therefore, timely support can be provided. With current preliminary efforts investigating EFL learners' mindset patterns in Vietnam's context, initial understanding and prediction of learners' possible in-class responses can be drawn and further benefit different stakeholders involved in the whole process of learning and teaching.

3. Methods

This study examines Vietnamese EFL high-school students' language mindsets and any possible correlations between their language mindsets and demographic traits (genders, school groups, and grade groups). The questionnaire was the main instrument to collect data representing students' language mindsets and the targeted demographic information, and statistical analyses were used to explore the relationship.

The present study aimed at high school students studying English as a foreign language in their school curriculum. Thus, four high schools, including 2 in the suburb and 2 in the center of the capital city in the Mekong Delta of Vietnam, were approached. After collecting data, 248 responses were involved in the later process of data analysis.

Table 1: Descriptive statistics of participants (N=248)

Categorizations		Percentage
Genders	Female	58.1
	Male	41.9
Grades	Grade 10	16.9
	Grade 11	38.3
	Grade 12	44.8
School groups	Urban	60.9
	Rural	39.1

3.1 Language mindset inventory

Dweck (1995) developed a rather short and simple exploratory questionnaire including six items investigating respondents' beliefs about intelligence and morality. For each investigated domain, a mean score of individual respondents was calculated, which was then used to categorize them into incremental or entity theorists. If one's mean score in the domain of intelligence is 3 or below, he/she will be labelled as an entity theorist; and individuals with mean scores of 4 or above are entitled as incremental theorists. This dichotomous framework seemingly fails to take into account individual differences (Lou & Noels, 2019b). Dweck (2015) also cautioned that this oversimplified categorization is not advisable and beneficial. Combining beliefs about language aptitudes and the critical age period with Dweck's (1995) work on mindsets of intelligence, Lou and Noels (2017) developed a framework for understanding learners' mindsets named Language Mindsets Inventory (LMI), including three aspects (1) general language intelligence beliefs, (2) second language aptitude beliefs, and (3) age sensitivity beliefs about language learning.

The questionnaire in the current study was based on this framework. It consists of 18 statements, six statements for one factor, using a continuous scale of 6-point Likert scale (strongly disagree; moderately disagree; slightly disagree; slightly agree; moderately agree; strongly agree). This scale for measuring mindsets is logical and coherent with the perspective that growth and fixed mindsets are better understood as a continuum instead of two separate opposing extreme points. The items were adapted in accordance with the guidelines for using LMI by Lou and Noels (2019b), in which the term “new languages” was specifically re-termed as “foreign language learning”. In other words, learners’ language mindsets were the beliefs about general intelligence in learning a foreign language, language aptitude, and age sensitivity for English language learning. This adaptation reflects the domain-specific nature of mindsets.

In addition, for the applicability of the LMI in the context of the present study, the questionnaire was translated into Vietnamese to ensure the respondents’ understanding. Since Vietnamese people have well-rooted biases in the terms of intelligence or aptitude, their interpretations seem to focus on abstract values that are innate and hardly changeable. However, in the light of research, these notions represent rather different meanings and values. Therefore, we provided brief explanations in each cluster to help establish a contemporary system of values. The translation was cross-checked by another researcher in English teaching and learning, and feedback was obtained from a small group of high school students to ensure valid translations were used.

Table 2: The structure of LMI

Subclusters	Items
Fixed-oriented general language beliefs	Item 1 – Item 3
Growth-oriented general language beliefs	Item 4 – Item 6
Fixed-oriented L2 aptitude beliefs	Item 7 – Item 9
Growth-oriented L2 aptitude beliefs	Item 10 – Item 12
Fixed-oriented age sensitivity beliefs	Item 13 – Item 15
Growth-oriented age sensitivity beliefs	Item 16 – Item 18

With the collected data, reliability tests (Cronbach’s alpha) were run to check the consistency of the data, and the results were gathered as follows:

Table 3: Reliability analyses

Components of concern	Cronbach's Alpha	No. of items
Fixed mindset	.785	9
Growth mindset	.869	9

The results indicated that the collected data was reliable and possible to be used in further statistical analyses.

Lou and Noels (2017) reported four possible 1st-order hierarchical models of language mindsets, namely one-factor (concerning language mindset as a whole), two-factor (regarding the distinction of growth and fixed mindset as two ends of a

continuum), three-factor (displaying three separate aspects of language mindsets as suggested in the previous theoretical framework), and six-factor model (indicating detailed separation of incremental and entity items in each aspect of language mindsets (e.g. incremental versus entity beliefs of GLB).

For the purpose of this study, students' language mindset patterns were explored on a continuum; therefore, the researchers found that the two-factor model would be appropriate for the study. Following Lou's & Noels' guide (2019a), the language mindset indices, means of items in both growth and fixed mindsets were respectively calculated; and in order to produce a single index displaying one's language mindset, another mean score was obtained by averaging the indexes of growth and fixed mindsets. However, the produced indexes, especially the single figure for language mindset, should not be regarded as an indicator of a concrete mindset. Rather, we based on both indexes to fully observe the language mindset.

4. Results

Language mindsets consist of two types, including growth and fixed mindsets. In order to measure learners' mindsets, Lou and Noels (2017) suggested an instrument called Language Mindsets Inventory (LMI, see Table 1). The instrument was currently adopted and used in this study for determining the pattern of language mindsets that Vietnamese EFL high school students endorse.

As shown in Table 5, students indicated moderate disagreements on the impossibility of improving ones' language intelligence and the need for a natural talent for learning a new language. Mean values of items observing students' beliefs about general language intelligence and second language aptitude range from 2.21 to 2.28. In terms of beliefs about the importance of age in language learning, students indicate a weak level of agreement as seen in Item13 and Item15. With the means of fixed-mindset-inventory items, it is predictable that an adverse trend would be found in statistics of growth-mindset-inventory.

Table 5: Means of fixed-mindset-oriented inventory items

Items	Mean	Std. Deviation
Item1	2.28	1.297
Item2	2.65	1.323
Item3	2.21	1.367
Item7	1.94	1.117
Item8	2.02	1.156
Item9	2.37	1.200
Item13	3.61	1.447
Item14	2.52	1.423
Item15	3.46	1.396

As predicted, students seemingly supported the possibility to increase one's language intelligence and denied the necessity of natural talent or a critical period to learn another language ($M > 4$).

Table 6: Means of fixed-mindset-oriented inventory items

Items	Mean	Std. Deviation
Item4	5.10	1.186
Item5	4.96	1.251
Item6	4.82	1.241
Item10	5.15	1.175
Item11	5.20	1.104
Item12	5.14	1.101
Item16	4.61	1.264
Item17	4.20	1.394
Item18	4.50	1.282

Through examining the inventory items, students obviously greater endorsed the growth mindset overall, the students in the study endorsed the growth mindset (see Table 7) with a high mean score of growth-mindset-inventory items ($M = 4.85$, $SD = .86$), and a low mean score of fixed mindset ($M = 2.56$; $SD = .79$).

Table 7: Overall students' pattern of language mindsets

	Mean	Std. Deviation
Growth mindset	2.56	.79
Fixed mindset	4.85	.86

To examine if there existed different patterns of language mindset in terms of demographic features, the independent T-tests were calculated to examine the differences with regard to gender and school groups (city center versus suburbs). The statistical results indicated that no significant differences in language mindsets were observed ($t = .537$; $p > .05$; $t = .547$; $p > .05$; $t = -.474$, $p > .05$; and $t = -.456$, $p > .05$ respectively). In terms of grade groups, the one-way ANOVA was computed to compare the language mindset patterns among 10th, 11th, and 12th graders. No significant differences were established among the grade groups either ($F = 1.127$, $p > .05$).

In short, the descriptive statistics discussed above indicated that the Vietnamese EFL high school students endorsed a growth language mindset to a greater extent than a fixed language mindset. Demographic features had no relation to the language mindset patterns.

5. Discussion

As reported, students' pattern mindset endorses greatly the growth mindset. Socio-culturally discussed, learners pre-systemize themselves with diverse cultural making meaning systems about language learning through experiences within the socio-cultural

environment (Lou & Noels, 2017). As Heine et al. (2001) pointed out, collective cultures (e.g., Asian countries) endorse external attributions, while individualistic cultures (e.g., Western or European countries) attribute their failures to internal constraints. Therefore, Asian seems to develop and demonstrate support for a growth mindset (Ryan & Mercer, 2012). Following the same trend, deeply influenced by Confucian values (Huyen & Ha, 2013), Vietnamese EFL students adhere to social emphasis on effort and persistence in the pursuit of goals. This is identical to what has been discovered in the present study in relation to the pattern of language mindset that the students endorse.

As an effect of Confucian values (Lou & Noels, 2019) on students' behaviors which are predicted to perform arduous work and preserve effort towards learning to maintain the social harmony between them and others surrounding. In addition, in Vietnam's setting, English has been contributing as one of the three main subjects for university enrollment. Therefore, students might fully perceive the subject as the instrument for admission to universities.

In addition, language mindset as a continuum entails the possibility to affect one's mindset in a certain direction – either towards the extreme of fixed or growth mindset (Nussbaum & Dweck, 2008). The practice that EFL high school learners endorsed the growth mindset in comparison with the fixed mindset is not fixed. Students' exposure to information may change the pattern of their language learning beliefs. Also noticed in the data set, students' growth mindset could be greater in one area (e.g., GLB – general language intelligence beliefs) and weaker in the other(s).

5. Limitations & recommendations

The current study cannot avoid certain limitations during the research process. First, the current research should have also included an interview to gain qualitative data on language mindsets. In relation to data collection, it could have been more perfect for the present study if the researcher had been allowed to collect data face-to-face with the students so that possible miscomprehension of the questionnaire items was minimized. Last but not least, although the sample size was sufficient, attempts could not be made to collect random representative samples so that the results could be better generalized.

Language mindset is a rather novel and under-researched construct in the context of Vietnam. Therefore, there may be fruitful results and discoveries in the field of language teaching and learning in the light of mindsets. As shown in the present study, mindset is a rather complicated but interesting construct to study. For future potential research, it is suggested that both quantitative and qualitative data be combined to gain a more insightful understanding. In addition, for further studies concerning the use of LMI to model language mindsets in relation to other variables, it is advisable that a better representative sample be involved. Due to unique socio-cultural features that may impact one's mindsets, future studies should consider socio-cultural variables and their contribution to or interactions with language mindsets.

In the trend for educational reforms towards the enhancement of learners' autonomy and life-long learning, it is rewarding to stimulate students' development of growth mindset that helps them seek further gaps for improvements. This is one of the theoretically positive attributions of growth mindset. In high school contexts, teachers should help students realize the significance of holding a growth mindset patterns as well as integrating reading materials to highlight the values of growth mindset or discussion on the contribution of growth mindset to their students' learning, so that they can gradually understand the values of incremental beliefs towards language learning. This might remedy the situations of students' resistance to English language learning for the belief that the lack of natural talent or intelligence for English language learning is the main cause of their inability to learn the language.

The effect of a growth language mindset may retain later in students' life as Lou's and Noels (2017) reported that growth language mindset subscribers register for further language classes to improve their competence.

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About the Author(s)

Nguyen Trong Nguyen (M.A.) is an English language teacher to a variety of groups of learners. His major research interest has been autonomy; mindsets; ICT in language teaching & learning; & self-regulated learning.

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