

## Mindsets of High School Students in English Language Learning

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### **Abstract**

High school students' beliefs toward their abilities could be fixed or malleable, and mindset may differ between boys and girls. The aim of this article is three-fold: to examine the beliefs of students as to whether their abilities are fixed or malleable in the context of English language learning, to know if mindsets of boys and girls are significantly different, and to provide an understanding of what difficulties students face in English language learning. Using a modified mindset survey, data from 467 students enrolled in regular programs in public schools in Bangkok was analyzed quantitatively. Findings indicated that students have a growth mindset on their own ability, others' success, criticisms, obstacles, and challenges. However, they tend to have a fixed mindset about putting effort into learning English. Similar to previous studies, there was no significant difference found between girls' and boys' mindsets. Concerning difficulties faced by students in an EFL setting, cognitive, affective challenges, and other challenges were coded. Cognitive challenges cover difficulties in remembering grammar rules and vocabulary, difficulties in understanding some words and accented speech, difficulty in translating from L2 to L1, difficulty in selecting words to use in a specific context, difficulties in listening, reading, and writing, lack of vocabulary knowledge and knowledge about basic English, lack of ability to speak English and practice to speak English, and slow cognitive processing. Meanwhile, affective challenges include fear of

making mistakes, high anxiety, lack of interest in studying grammar rules, and lack of self-confidence and attentiveness. Other codes include negative peer influence and perceived negative teacher acts. Teaching and research implications are discussed to help students build a growth mindset because challenges are ubiquitous in English language learning.

**Keywords:** *Fixed Mindset, Growth Mindset, High School Students, English Language Learning*

## Introduction

*“I’m not smart. I don’t have any courage. I can’t speak.”*

*“I am not that smart. Can’t catch what I just heard. Can’t speak.”*

The above utterances may be expected in English language learning among high school students, specifically in EFL settings. It is somehow heartbreaking to some teachers to listen to such utterances when students experience difficulty in English language learning. Added to that, high school students, who are in their teenage life, may suffer from lack of confidence, lack of engagement, and other undesirable behaviors (e.g., Blackwell, Trzesniewski & Dweck, 2007; Eccles, 2004; Watt, 2004).

*“I’m not smart”* or *“I’m not that smart”* could be attributed to “mindsets,” “implicit theories of intelligence,” or “self-theories of ability” (Dweck, 1986). Dweck’s theory posits a continuum of mindset – from a fixed (an entity theory of ability) to a growth mindset (an incremental theory of ability). At one end of the continuum, students ascribed that intellectual ability “as something of which people have a fixed, unchangeable amount.” They dislike challenges, avoid obstacles, depreciate effort, dislike feedback, threatened by the success of others, and keep proving and showing their ability (Dweck, 2006; Sudnawa et al., 2019; Zeng et al., 2016). On the one hand, students with malleable or growth mindsets “see intellectual ability as something that can be grown or developed overtime” (Yeager & Dweck, 2012, p. 303). In the academe, they use setbacks and challenges to keep learning and developing their own ability (Degol et al., 2018; Dweck, 1986; Zeng et al., 2016).

## Literature review

Research shows growth mindset can lead to better cognitive and affective states in learning (Aronson et al., 2002; Costa et al., Good et al., 2003; Blackwell et al., 2007). Zeng et al. (2016) found a positive impact of growth mindset on Chinese students' ( $n=1279$ ) psychological well-being and school engagement. Other studies have shown that students with incremental view earned significantly higher grades or greater academic performance (Aronson, Fried, & Good, 2002; Blackwell et al., 2007; Good, Aronson, & Inzlicht, 2003; Henderson & Dweck, 1990; Romero, Master, Paunesku, Dweck, & Gross, 2014; Yeager & Dweck, 2012), deeper perceptual level (Grant & Dweck, 2003), higher task value (Degol, Wang, Zhang, & Allerton, 2018), more adaptive to learning (Yeager & Dweck, 2012), greater interest in classroom activities (Aronson et al., 2002; Hidi & Renninger, 2006), boost self-confidence (Abdullah, 2008; Dweck, 2007; Kamins & Dweck, 1999), higher psychological well-being and engagement (Zeng, Hou, & Peng, 2016), higher happiness (Costa, 2018; Sudnawa, Theeranate & Yailaibang, 2019), resilience (Dweck, Chiu, & Hong, 1995) and higher motivation in writing (Truax, 2017).

On the one hand, students who have more of an entity view may have reduced expectancies for future success (Burnette, O'Boyle, VanEpps, Pollack, & Finkel, 2013; Komarraju & Nadler, 2013), a downward trajectory in grades (Aronson, Fried, & Good, 2002; Blackwell et al., 2007; Rattan, Savani, Chugh & Dweck, 2015), and low growth in self-efficacy (Jourden, Bandura, & Banfield, 1991; Wood & Bandura, 1989). Moreover, they blame or make excuses when repairing their self-esteem after experiencing failure (Stoycheva & Ruskov, 2015).

Among university students, 81 percent of Japanese university students with computer major were found to have a fixed mindset (Ocampo, 2017). Findings revealed that Japanese students "believed that the only thing preventing them from being fluent in English is because of their own lack of effort" (p. 1198). From a fixed mindset viewpoint, those students who put effort into learning have intellectual deficiencies (Dweck, 2006).

Mindset can be a predictor of cognitive and affect in language learning. In the cognitive domain, Rui and Muthukrishnan (2019) investigated the mindset of Chinese high school students and teacher feedback as a predictor of language performance. Findings have shown that growth

mindset, together with process and self-regulation types of feedback, help improve high school EFL students' language performance. Among elementary students, Sudnawa et al. (2019) performed a cross-sectional analytic study about 441 grade 6 pupils' mindsets. Except for English, the high mindset was found to predict O-NET (annual national proficiency examination for grades 6, 9, and 12) in Thai, Math, and Science. Concerning affect, in Hong Kong, Bai and Wang (2020) reported that growth mindset among primary school students predicted self-regulated learning as compared with self-efficacy and intrinsic value. Lou and Noels (2020) found that a growth mindset is significant and moderately associated with language anxiety among thousands of foreign-born university students in Canada.

Denworth (2019) noted some pushbacks in the current scholarship wherein “little,” “weak,” and “no effect” was reported concerning the relationship of growth mindset and student outcomes. In one study, Sisk et al. (2018) conducted two meta-analyses of the relationship between growth mindset and achievement, and the effectiveness of growth mindset interventions. In the first study, findings suggested a low and non-significant relationship between growth mindset and achievement. In the second study, however, those students with a high chance of failing benefited from growth mindset intervention. Like study 1 results, Brooks (2017) reported a very minimal change in the overall mindset of 17-second grade students in Colombia after repeated measures.

In another criticism, Kohn (2015) argued that developing ability through effort is akin to blind obedience by the students instead of questioning what is taught or how the lesson is taught. He further pointed out that praise itself is a form of manipulation that reduces interest in learning. While excessive praise may be problematic, Dweck (2006) suggested limiting the use of praise for their effort – “doing what it takes to succeed” (p. 72). In their study, 90 percent of the students who had their effort praised wanted another challenging task, while those who were praised for their ability thought they were not smart at all.

Mindset seemed to be a complex concept in English language learning (Lou, 2019; Lou and Noels, 2019). Thus, a unitary interpretation of mindset becomes problematic, for example, when considering some factors of challenges, obstacles, effort, criticism, and others' success (Dweck, 2006). For example, Puvacharonkul and Wilang (2020) reported that graduate students studying

English foundation courses viewed challenges, obstacles, and others' success toward growth mindset conditions. Moreover, students who had a *neutral* mindset on other factors, including effort, criticisms, and perceptions of their own ability, tended to fixed mindset condition or otherwise. Lou and Noels (2017) posit that language learners endorse different degrees of fixed or growth mindset conditions, and mindset should not be viewed as categorical or unidimensional construct. As mindset seemed to be a complex construct (Dweck; 2006; Lou, 2019), perhaps, contextualizing studies to aid in the interpretation of findings as well as identifying specific factor(s) of mindset (i.e., challenges, obstacles, effort, criticisms, success of others, and general viewpoint on own ability) could provide meaningful results to further research on this topic.

Reports on the difference between boys' and girls' mindsets remain inconclusive. Sudnawa et al. (2019) found no difference in mindset based on gender, parental education, and socioeconomic status among Thai elementary students. However, in math achievement, research suggests girls with lower self-concepts, lower competence, and lower expectations of success than boys (Else-Quest, Mineo, & Higgins, 2013; Herbert & Stipek, 2005; Sadler, Sonnert, Hazari, & Tai, 2012). Girls with a growth mindset may express greater interest in taking additional math courses (Good et al., 2012) and higher math achievement (Degol et al., 2018). Boys with a growth mindset predicted mathematics self-efficacy (Huang, Zhang, & Hudson, 2019). Like in mathematics, it is hypothesized that boys' and girls' mindsets may differ in English language learning.

In EFL settings, numerous challenges persist, which could be attributed to affective and cognitive factors. For example, anxiety remains pervasive and had adverse effects on language learning (Al-ahdal & Abduh, 2020; Rehelmi, 2020; Zemni & Alrefaee, 2020). Apart from inaccurate written outputs, anxious students suffer from low self-esteem or lack of confidence (Al-ahdal & Abduh, 2021; Rehelmi, 2020). In reading, students were anxious due to unknown vocabulary, new words, unfamiliar topics, fear of making errors, and difficult pronunciation (Zemni & Alrefaee, 2020). Similar sources were also found to provoke anxiety in speaking and listening (Horwitz, Horwitz, & Cope, 1986; Elkhafafi, 2005; Woodrow, 2006; Zhang, 2013). Previous research has identified other challenges such as interference L1, lack of opportunity to practice English daily, lack of lexical resource, lack of motivation to study, lack of self-confidence to speak, being passive in class, low range of grammatical and vocabulary, and lack of responsibility to improve themselves

(Noom-ura, 2013; Tanmongkol et al., 2020). Thus, it is essential to know the difficulties students face in Thai high school EFL settings, affecting their learning English mindset.

### **Research objectives and questions of the present study**

How students perceived their abilities in English language learning has implications for their language goals and future self. So, the present research hopes to answer the following objectives. As research on mindset in the context of English language learning in Thailand is limited, the first objective would be to examine the beliefs of high school students as to whether their abilities are fixed or malleable (growth). Also, because previous research in other subjects have shown differences in how girls and boys view their own ability (Degol et al., 2018; Good et al., 2012; Huang et al., 2019), the next objective is to know if mindsets based on gender are significantly different in English language learning. Moreover, since challenges are ubiquitous in language learning, the last objective is to understand the difficulties high school students face in an EFL context.

Three research questions are posed in the present study.

- (1) What are the mindsets of high school students toward English language learning?
- (2) Are there differences in the mindsets of high school students based on gender?
- (3) What are the difficulties faced by high school students in English language learning?

## **Methodology**

### **Context of the study**

The schools in the study are government high schools in Bangkok offering regular programs only. A regular program in a government high school typically offers four periods (at least 50 minutes per period) of English in a week. A Thai teacher usually teaches three periods of general English focusing on grammar, and a non-Thai teacher teaches another period of conversational English.

## Participants and procedure

The data was collected from 467 high school students enrolled in public schools in Bangkok by using convenience sampling. To increase the number of participants in the study, teachers were asked to administer the online survey to their students regardless of year level, language proficiency, ethnicity, among others. Only gender was required to help answer the question if the mindsets of girls and boys differ. In total, there were 160 boys and 307 girls who voluntarily responded to the survey.

## Mindset survey

Mindset in the present study means beliefs about language learners' attributes related to their abilities or intelligence, of which students with fixed mindset believed that their abilities or intelligence could not be changed while those with a growth mindset have malleable abilities or intelligence (Blackwell et al., 2007; Dweck, 2006; Bernecker & Job, 2019; Lou & Noels, 2019). In the present study, six composite factors were identified in English language learning, including challenges, obstacles, effort, criticisms, others' success, and general viewpoint on own ability (see Dweck, 2006; Puvacharonkul & Wilang, 2020).

To know students' mindsets toward English language learning (ELL), the English Language Mindset Survey (Puvacharonkul & Wilang, 2020) was used, which was adapted from Dweck's (2006) work and the well-validated Implicit Theory of Intelligence Measure (Blackwell et al., 2007). Since the students are in government high schools studying in regular programs, where students' L1 is the primary language of instruction, the survey was translated into the Thai language to aid comprehension. Students were asked to choose a response from the 12-item survey varying from Strongly Disagree (1) to Strongly Agree (2). Two items – one fixed and the other growth statement were included in each of the six factors: Challenges, Obstacles, Effort, Criticisms, Success of Others, and General Viewpoint on Own Ability. Sample growth mindset statement is "*Feeling challenged in learning English makes me want to try harder,*" and a fixed mindset statement is "*If I have to work hard during the EL class, it means I am not smart.*" Six items that fall under fixed mindset were reverse-coded and summed, then compared with items under growth mindset. A higher score in each factor represents either a fixed or growth mindset. The mindset survey was interpreted using Dweck's (2006) framework (see Table 1). In addition

to the 12 items, an open-ended question was added, “*What difficulties do you face in English language learning?*”

Table 1. Adapted Dweck's (2006) mindset framework

<b>Factor</b>	<b>Students with a growth mindset...</b>	<b>Students with a fixed mindset...</b>
<b>1. Challenges</b>	<i>like challenges in ELL</i>	dislike challenges in ELL
<b>2. Obstacles</b>	<i>confront obstacles in ELL</i>	avoid obstacles in ELL
<b>3. Effort</b>	<i>appreciate effort in ELL</i>	depreciate effort in ELL
<b>4. Criticisms</b>	<i>look for constructive criticism in ELL</i>	cannot tolerate constructive criticism in ELL
<b>5. Success of Others</b>	<i>inspired by the success of others in ELL</i>	threatened by the success of others in ELL
<b>6. General Viewpoint on Own Ability</b>	<i>try to learn and improve ability in ELL</i>	try to prove and show off ability in ELL

The reliability of the English Language Mindset Survey (ELMS) was established at 0.95 by running Ministep, a component of Rasch analysis (Puvacharonkul & Wilang, 2020).

### **Data analysis**

To examine the students' beliefs about their ability to change their level of intelligence, descriptive statistics were computed. An Independent *t*-test was used to know if the mindsets of boys and girls significantly differ. To understand the difficulties faced by high students in English language learning, their responses from the open-ended question, “*What difficulties do you face in English language learning?*” were translated, coded, and counted accordingly. Inter-rater coding was calculated at 92 percent.

### **Results**

*Question 1: What are the mindsets of high school students toward English language learning?*

Table 2 presents the mindsets of high school students in all six factors. Generally, students like challenges, confront obstacles, look for constructive criticisms, be inspired by others' success, and learn and improve their abilities. However, when students had to work hard during the English language class, they thought they were *not* smart.

Table 2: Mindsets of high school students ( $n=467$ )

Statement	M, SD	Mindset
<b>General viewpoint of own ability</b>		
<i>I can do things differently in the EL class, but the important parts of who I am can't be changed.*</i>	3.12, 1.08	Growth mindset
I can always change the basic things about the kind of person I am when I learn English.	3.84, 0.83	
<b>Success of others</b>		
<i>When other students do better than me in the EL class, it makes me feel inferior.*</i>	2.79, 1.16	Growth mindset
When other students succeed in the EL class, I feel inspired.	4.07, 0.81	
<b>Challenges</b>		
<i>In the EL class, I avoid trying things that are hard.*</i>	3.67, 0.90	Growth mindset
Feeling challenged in learning English makes me want to try harder.	4.14, 0.76	
<b>Obstacles</b>		
<i>I usually quit when something gets difficult in the EL class.*</i>	2.44, 1.05	Growth mindset
I don't mind making mistakes in the EL class because I can learn.	3.93, 0.88	
<b>Effort</b>		
<i>If I have to work hard during the EL class, it means I am not smart.*</i>	2.57, 1.15	Fixed mindset
The more difficult the English task is, the more motivated I become to put in effort.	2.52, 1.00	
<b>Criticisms</b>		
<i>I dislike negative feedback on my performance in the EL class, even if it helps me improve.*</i>	2.93, 1.17	Growth mindset
In studying English, I rarely take criticisms as personal attacks.	4.23, 0.85	

Note: \* indicates a fixed mindset statement

### Question 2 Are there differences in mindsets based on gender?

Table 3 presents the descriptive results of mindsets based on gender. Girls showed to have a growth mindset in all factors. Unlike girls, boys tend to have a fixed mindset concerning their effort, “*If I have to work hard during the English class, it means I am not smart.*”

An independent sample  $t$ -test was conducted if a statistical difference between boys' and girls' mindsets exists (see Table 4). The result shows no statistically significant difference concerning girls' and boys' mindsets, with  $t(465)=.758$ ,  $p=.449$ .

Table 3: Mindsets of high school students based on gender (n=467)

Statement	Boys(n=160) M, SD	Girls (n=307) M, SD
<b>General viewpoint of own ability</b>		
<i>I can do things differently in the EL class, but the important parts of who I am can't be changed.*</i>	3.23, 1.10	3.07, 1.07
I can always change the basic things about the kind of person I am when I learn English.	3.89, 0.85 <sup>+</sup>	3.82, 0.82 <sup>+</sup>
<b>Success of others</b>		
<i>When other students do better than me in the EL class, it makes me feel inferior.*</i>	2.71, 1.18	2.83, 1.14
When other students succeed in the EL class, I feel inspired.	4.03, 0.85 <sup>+</sup>	4.09, 0.78 <sup>+</sup>
<b>Challenges</b>		
<i>In the EL class, I avoid trying things that are hard.*</i>	3.79, 0.90	3.60, 0.90
Feeling challenged in learning English makes me want to try harder.	4.11, 0.76 <sup>+</sup>	4.16, 0.76 <sup>+</sup>
<b>Obstacles</b>		
<i>I usually quit when something gets difficult in the EL class.*</i>	2.39, 1.13	2.46, 1.00
I don't mind making mistakes in the EL class because I can learn.	4.03, 0.82 <sup>+</sup>	3.88, 0.91 <sup>+</sup>
<b>Effort</b>		
<i>If I have to work hard during the EL class, it means I am not smart.*</i>	2.70, 1.24 <sup>+</sup>	2.51, 1.09
The more difficult the English task is, the more motivated I become to put in effort.	2.44, 1.00	2.57, 1.00 <sup>+</sup>
<b>Criticisms</b>		
<i>I dislike negative feedback on my performance in the EL class, even if it helps me improve.*</i>	2.70, 1.15	3.05, 1.16
In studying English, I rarely take criticisms as personal attacks.	4.09, 0.95 <sup>+</sup>	4.31, 0.78 <sup>+</sup>

Notes: \* indicates a fixed mindset statement

<sup>+</sup> indicates the mindset in each category

Table 4. Independent sample *t*-test

	Equality of variances	Levene's test for equality of variances		<i>t</i> -test for equality of means				
		F	Sig.	<i>t</i>	df	Sig. (2-tailed)	Mean diff.	Std. error diff.
Mindset	Assumed	7.666	.006	.758	465	.449	.25478	.33605
	Not assumed			.708	267.562	.480	.25478	.36005

*Question 3 What are the difficulties faced by high school students in English language learning?*

Three general codes were elicited from the responses of the students. These are Cognitive challenges, Affective challenges, and Other challenges. Moreover, specific codes, sample statements, and frequency are shown below.

### **Cognitive challenges**

Cognitive challenges cover difficulty in remembering grammar rules “*I can't remember the grammar rules*” (57), difficulty in remembering vocabulary “*I can't remember the words*” (53), difficulty in understanding some words “*Many words I don't understand*” (47), lack of vocabulary knowledge “*There are load of vocabs I don't know*” (41), difficulty in translating from L2 to L1 “*I can't translate the words*” (38), lack of ability to speak English “*My English ability is very low compared to others*” (29), difficulty in selecting words to use in a specific context “*I don't know if the word is correct to use in my major course*” (18), difficulty in reading “*I don't understand what I'm reading*” (19), difficulty in listening “*I have a problems with listening*” (15), lack of practice to speak English “*I don't have chance to practice to express my thought*” (8), lack of knowledge about basic English “*There are so many things I don't know about English*” (7), difficulty in writing “*I don't writing and some principles*” (6), and slow cognitive processing “*The processing in my head is very slow*” (6), difficulty in understanding accented speech “*Some accents are hard to understand*” (4).

### **Affective challenges**

Affective challenges include lack of interest in studying grammar rules “*I never open my mind to learn grammar*” (25), lack of self-confidence “*My friends are better than me*” (23), fear of making

mistakes “*I’m afraid to make a mistake when I speak*” (9), high anxiety “*I’m very nervous when I am called to answer a question*” (4) and lack of attentiveness “*I don’t pay attention to the lessons*” (2).

### **Other challenges**

Other codes include negative peer influence, “*My friends don’t want to study and so am I*” (4), and perceived negative teacher acts “*The teacher looks down on me when I speak English*” (1).

### **Discussion**

This study’s objectives were to investigate whether students’ beliefs in the context of English language learning are fixed or growth. Differences in mindsets based on gender were also explored. Difficulties faced by high school students in English language learning were established. In this study, we found evidence that students’ mindsets toward the six factors were varied. Of all six factors, students tend to only have a fixed mindset on one factor, which is effort. Moreover, no statistical difference was found between boys’ and girls’ mindsets toward English language learning. Three factors of challenges were coded, including cognitive, affective, and others.

Like Japanese students, Thai high school students held a fixed mindset on their effort (see Ocampo, 2017), and such mindset toward effort could be provoked by numerous difficulties they faced in English language learning (see Noom-ura, 2013; Ocampo, 2017; Tanmongkol et al., 2020). The fixed mindset could be explained by the cultural attitudes of “*sabai sabai*” or *easy-going* and “*mai pen rai*,” or *it is okay*. Rather than putting effort to overcome cognitive and affective challenges in English language learning to attain learning goals, students may opt to feel relaxed and say *mai pen rai*. This attitude would result in a lack of responsibility to improve their ability (Noom-ura, 2013; Tanmongkol et al., 2020). Knowing that learning English has never been easy since grade 1, many high school Thai students may accept the fact that they are “*mai keng pasa angkreet*” or *not smart* in English and select some less challenging tasks. From a fixed mindset viewpoint, whether they exert effort or not in language learning, their English proficiency would not improve simply because they are *not smart*. Another practice in schools that encourages *sabai sabai* attitude in learning is the ‘no-fail’ policy initiated by the Ministry of Education (Cadias, 2008). The policy could be disadvantageous as it may dissuade high school students from attaining higher learning

goals. Instead of putting the same effort into learning other subjects, they would pay less attention to English, knowing that they would pass without putting effort into it.

Further findings found no significant difference concerning girls' and boys' mindsets. This could be explained by some learning experiences they have in common in the English language class, such as cognitive and affective challenges. For example, all are exposed to a rote-learning system (Sumter, 2019), where grammar-based teaching is prioritized, further deteriorating students' affective state, provoking fear of losing face in English language learning. In fact, mindset could be shaped by some thwarting conditions in the immediate learning environment (Lou & Noels, 2019).

Regardless of the difficulties in English language learning, like most Thai elementary pupils who held malleable mindsets (Sudnawa et al., 2019), Thai high school students were found to have positive views on other factors such as challenges and obstacles, criticisms, success of others, and viewpoint on own ability. Perhaps it would not be too demanding for teachers to raise awareness on some metacognitive strategies to counter pessimistic views on their effort as it could negatively affect their academic aspirations in life (see Burnette et al., 2013; Dweck, 1986; Komarraju & Nadler, 2013; Yeager & Dweck, 2012). As pointed out earlier, there is a significant risk if language students think of effort negatively. This finding has important implications for teaching and research in the EFL context.

### **Implications for teaching**

In light of the findings concerning numerous cognitive and affective difficulties faced by high school students in English language learning as well as their fixed mindset toward the effort, teachers “should not praise children for being ‘smart’ when they do well, but rather, to promote resilience, praise them for the process they engaged in – their effort, their strategies, their focus, or their persistence” (Yeager & Dweck, p. 311). However, teachers should be wary of using praise (Brooks, 2017; Kohn, 2015). Moreover, in the case of using critique, teachers should provide it constructively so that students would not feel “*ngoo*” or stupid.

Teachers may explore the strategic use of language to help boys or girls who tend to think that they are *mai keng* in English. When students cannot attain the expected outcomes, teachers should provide explicit feedback on what is wrong and what should be done (Stoycheva & Ruskov, 2015). Instead of giving up, teachers may scaffold students to keep doing the task to meet the expected outcome. Otherwise, students' attitudes of *sabai sabai* and *mai pen rai* will be cultivated further. When scaffolding, teachers may set up a one-on-one conversation to avoid loss of face. Teachers may ask each student about difficulties they experienced in the lesson and find other ways to explain a concept. If necessary, chunk information when cognitive load is heavy. Also, extend wait-time if the student needs more time to do the assigned task.

Teachers may explore newer concepts in education, for example, positive education, as it equips students to develop a flourishing life (see Mercer, MacIntyre, Gregersen, Talbot, 2018; Zeng et al., 2016.) When students are aware that “*working hard*” does not mean “*not being smart*,” students may develop a malleable or growth mindset, which would also cultivate the 21st-century skills along with resilience, optimism, positive relationships, and character strengths (Yeager & Dweck, 2012; Zeng et al., 2016). Among Japanese students, Ocampo (2017) recommended FEMA, a family-like classroom environment atmosphere embracing failure as part of the English grammar and reading journey and a positive attitude toward mistakes. Further, teachers may assess their own mindset and seek growth mindset pedagogy (Kuusisto, Tuominen & Tirri, 2019) or mindset methodology (Sumter, 2019).

Since there seems to have a complex interplay of difficulties attributed to cognitive and affective factors in learning, teachers may teach, encourage or raise awareness among students about self-monitoring (Ardoin & Martens, 2004; Polirstok, 2017; Margolis & Cabe, 2006). Self-talk, a form of verbal instruction, and fix-up strategies could also help students defeat negative thoughts when encountering difficulties in learning (see Polirstok, 2017).

### **Implications for research**

One of the findings was high school students' tendency to have a fixed mindset toward their effort in English language learning. With the understanding that growth mindset plays a critical role in students' performance or academic outcomes (Aronson, Fried, & Good, 2002; Blackwell et al.,

2007; Good, Aronson, & Inzlicht, 2003; Henderson & Dweck, 1990; Romero, Master, Paunesku, Dweck, & Gross, 2014; Yeager & Dweck, 2012), designing contextualized intervention studies focusing on metacognitive strategies (i.e., *How does self-talk affect the mindset of students with low, intermediate or high proficiency in English language?*) and positive education in English language studies can be promoted. Like in previous studies, those students who received the intervention showed improvements compared with students in the control group (see Blackwell et al., 2007; Yeager & Dweck, 2012). Thus, increased attention on research about high school students' mindsets in EFL settings is more necessary than ever. Future research may also consider qualitative paradigms to gain deeper insights into this scholarship.

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