Studies in Second Language Learning and Teaching
Department of English Studies, Faculty of Pedagogy and Fine Arts, Adam Mickiewicz University, Kalisz
SSLLT 15 (2). 2025. 375-399. Published online: 30.06.2025
https://doi.org/10.14746/sslt.48246
http://pressto.amu.edu.pl/index.php/sslt

Ability beliefs: Why believing in your ability matters in self-regulated language learning

Yoshiyuki Nakata ✉
Doshisha University, Kyoto, Japan
https://orcid.org/0000-0003-3309-8051
yonakata@mail.doshisha.ac.jp

Osamu Takeuchi
Kansai University, Osaka, Japan
https://orcid.org/0000-0002-5195-992X
takeuchi@kansai-u.ac.jp

Maya Sugita McEown
Waseda University, Tokyo, Japan
https://orcid.org/0000-0002-7493-7897
msugitamceown@waseda.jp

Abstract

The key to successful language learning depends on the extent to which learners are self-regulated in learning a second or foreign language (L2). In this process, learners' perceptions and beliefs about their abilities play a crucial role in predicting or controlling positive or negative emotions, motivation and the use of strategies. Therefore, it is vital to clarify the role that learners' perceived abilities play in self-regulated language learning. The present paper aims to: (1) provide a review of empirical studies related to L2 strategy use, motivation, and social regulation about ability beliefs, (2) explore the reciprocal relationship between these constructs, and (3) suggest future research directions that will help promote self-regulated language learning research. By doing so, we aim to contribute to the broadening of L2 proficiency research, provide a more comprehensive understanding of

the second language acquisition process, and ultimately support language teachers in understanding the developmental processes of L2 learners.

Keywords: mindset; motivation; self-efficacy; self-regulated learning; social regulation; strategy use

1. Introduction

To be successful in language learning, learners must learn how to control their learning process. It is imperative for learners to have a proactive attitude, understand their second or foreign language (L2) learning situation, including constraints, and adjust their learning for the better. More precisely, the key to success in language learning depends on the extent to which learners are self-regulated (Zimmerman, 1998, 2011). The process of self-regulation in learning is called self-regulated learning (SRL). SRL is "a dynamic process over time" where individuals come to "adapt learning, motivations, emotions, and behaviors when new challenges or situations arise that comprise goal attainment" (Hadwin, 2021, p. 1).

In his social cognitive theory, Bandura (1986) argues that learning occurs within a social context where the person(s) (as agents), environment, and behavior dynamically interact with and influence each other. An individual's "language" learning is likely affected by social and individual contextual factors, including the surrounding location and time constraints. This is more evident in L2 learning, where there is less contact with native speakers of English in the classroom and fewer opportunities to use English outside the classroom. In such a context, their willingness and confidence to use and learn language are strongly influenced by the language classroom milieu or conditions (Reeve, 2006).

In line with Bandura's (1986) socio-cognitive perspective, Zimmerman (2000) went on to argue that self-regulation involves "the triadic processes that are proactively as well as reactively adapted for the attainment of personal goals" (p. 15): "*forethought* (the influential processes that precede efforts to act and to set the stage for it)," "*performance or volition* (the processes that occur during motoric effort and affect attention and action)" and "*self-reflection* (the processes that occur after performance efforts and influence a person's response to that experience" (p. 16). Thus, self-regulated learners can "metacognitively (i.e., goal setting, self-monitoring, self-evaluative feedback loop), motivationally (e.g., personal initiative, perseverance, and adaptive skills), and behaviorally (e.g., record keeping, environmental structuring, and help-seeking) engage in their own learning" (Zimmerman, 2011, p. 49), in their own given learning environment. This also means that learners' beliefs inevitably play a crucial role in

predicting or controlling positive and negative emotions, motivation, goal orientations, and strategy use, all of which serve as key elements of SRL.

The concept of ability beliefs is related to learners' perceptions about capabilities. It is a domain-specific concept that should be explored in a specific domain, in this article, L2 learning. It is also closely associated with the motivational aspect, which is particularly crucial in L2 learning (Goetze & Driver, 2022). Furthermore, ability beliefs influence metacognition, strategy use, goal orientations, regulation of efforts, all of which are inextricably linked to the process of L2 learning, thus exerting a significant influence on its outcomes (Graham, 2022; Lou & Noels, 2017; Mills, 2014). Ability beliefs also situate L2 learners as agents of their own learning, thus having a close relationship with the SRL framework described above (Graham, 2022; Ryan & Mercer, 2012b). The concept of ability beliefs is therefore of considerable importance in L2 learning and teaching (Chen, 2022; Goetze & Driver, 2022).

Ability beliefs consist of such elements as self-efficacy and mindsets. The former refers to "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391) and is related to their beliefs about expectations they have for future achievement (Graham, 2007; Mills, 2014). The concept of ability beliefs is formed and nurtured through a learner's personal experiences in similar tasks in L2 learning, which can be those in the classroom or outside (Diseth, 2011; Oh, 2022; Raoofi et al., 2012). The latter element (i.e., mindsets) involves learners' current beliefs regarding the relative roles of effort and natural talent in the learning process, suggesting a close connection with the concept of L2 learning aptitude (Lou & Noels, 2016; Ryan & Mercer, 2012a). Though these two concepts may seem similar at first glance, they are conceived differently and accordingly treated separately in L2 research (Bai & Wang, 2023; Lou & Noels, 2019), although a positive association between them has been noted (Zarrinabadi et al., 2023).

The concept of ability beliefs is relatively new to L2 research and thus has the potential to broaden the scope of L2-learner or learning-related issues. However, when discussing ability beliefs, a theoretical framework is essential so that evidence from different domains in L2 research (i.e., ability beliefs, learning strategies, motivation, and social regulation) can be better integrated (see Rose et al., 2018, for a similar discussion). The SRL framework (Hadwin et al., 2018; Zimmerman, 2000) can be adopted as a theoretical basis for discussing the relationship between SRL and ability beliefs. This allows us to clarify the role of perceived ability beliefs in self-regulated learning. To achieve this goal, based on the theoretical framework, we provide an overview of the relationship between SRL and ability beliefs in terms of second language strategy use, second language motivation, and social regulation. Furthermore, we also explain the relationship

between environmental factors (i.e., regulation patterns, classroom conditions) and learner factors (i.e., proficiency beliefs and strategy use), all of which form a reciprocal relationship with L2 learner development. We conclude by discussing future directions for SRL studies in L2 with a focus on ability beliefs.

2. Ability beliefs and L2 strategy use

Within the SRL framework outlined above, this section now focuses on two components that directly impact learners' self-regulatory processes: ability beliefs and L2 strategy use. While ability beliefs shape how learners perceive their language learning capabilities, strategy use represents the concrete actions they employ to manage their learning effectively. These elements merit particular attention as they function as key mediators in the dynamic relationship among learner factors and L2 learning outcomes within the SRL framework.

2.1. Strategic learning

Considering various debates regarding definition, measurement, and theoretical underpinnings (see Takeuchi, 2019, for a review), Dörnyei and his colleagues suggested abandoning the concept of the L2 learning strategy and replacing it with that of self-regulation (Dörnyei, 2005; Tseng et al., 2006). This change has resulted in shifting the focus of research from concrete language learning strategies to the underlying capacity behind their use. Dörnyei (2005) notes that "what makes strategic learners special is not so much what they do as the fact that they choose to put creative effort into improving their own learning and that they have the capacity to do so" (p. 190).

However, as Gao (2007) and Rose (2012) argue, self-regulation and strategy use are complementary or go together because they measure the "beginning" (initial driving forces) and "end product" (outcome of these forces) of the same event, respectively (Rose, 2012, p. 95), which together constitute strategic L2 learning. Strategy use has since been examined within the framework of self-regulation (Oxford, 2017), in which the self/agent plays an active role "in regulating one's thoughts, feelings, and actions in accordance with the social context" (Wang, 2021, p. 219). Accordingly, ability beliefs, which include agents' perceptions of their abilities, such as self-efficacy and mindsets, are deemed vital in L2 strategic learning. In the sections that follow, we thus review studies on the role of ability beliefs, especially self-efficacy, in L2 strategic learning, and suggest directions for future research.

L2 strategic learning tends to emphasize the importance of metacognition (i.e., goal setting, planning, monitoring, and reflection) as well as that of learning

strategy use (Gao, 2010; Ryan & Mercer, 2009). In fact, metacognition and other learning strategy uses are at the core of Oxford's (2017) strategic learning model. However, the motivational role played by ability beliefs cannot be underestimated either, as they are the ones that initiate and then sustain the process of strategic learning (Chen, 2022; Oxford, 2017).

2.2. Ability beliefs in SRL

Strategic learning (i.e., metacognition and learning strategy use), together with ability beliefs, constitute the process of SRL (Zimmerman, 2000), in which thoughts, behaviors, and emotions are important elements. In the SRL framework, ability beliefs essentially reflect self-assessment of one's abilities and are associated with the motivational aspect of learning (hence known as motivational beliefs). Among them, self-efficacy is "a self-evaluation of how able you feel to carry out a specific task in a specific situation" (Irie, 2022, p.100) and is deemed central to the SRL framework (Bandura, 1999; Graham, 2022; Raoofi et al., 2012). It is a domain- and skill-specific concept (Bai & Wang, 2023; Goetze & Driver, 2022). Therefore, for example, the level of self-efficacy for L2 learning is different from that for mathematics (e.g., a learner's high self-evaluation with respect to L2 presentation does not necessarily ensure the same level in differential and integral calculus). Furthermore, self-efficacy for L2 speaking may be different from that for L2 reading, which is common in an EFL context where learners' four skills tend to be unbalanced (e.g., Negishi, 2017). Nonetheless, Goetze and Driver (2022) suggest that each type of L2 skill-specific self-efficacy is somewhat correlated with other types. In this relation, the influence of self-efficacy is affected by the learning environments or cultural contexts in which L2 learners are placed (Magogwe & Oliver, 2007; Wang & Sun, 2020), suggesting that it is also a context-specific concept.

Self-efficacy is also a future-oriented construct of the self as it is a strong predictor of subsequent L2 achievement or learning outcomes (Graham, 2022; Mills, 2014). In fact, it is claimed that the influence of self-efficacy on L2 learning outcomes is much stronger than that of the ideal L2 self or the ought-to L2 self (Al-Hoorie, 2018). Moreover, self-efficacy exists independently of L2 learners' actual abilities. Therefore, those with a high level of L2 self-efficacy may not necessarily have a high level of L2 proficiency. Some researchers argue that learners' self-efficacy and actual abilities have a different effect on the way L2 learners learn, and that self-efficacy could even compensate for learners' limited actual abilities (Bandura, 1997; Mori, 1999). Additionally, self-efficacy may be malleable and nurtured over time (Chen, 2022; Oh, 2022; Wang & Sun, 2020). It is also closely related to intrinsic value, another motivational belief related to SRL (Graham, 2022). Self-

efficacy has been a focus of empirical studies in educational psychology (Bandura, 1997, Pajares, 2003) and subsequently in L2 learning research (Mills, 2014; Mills & Péron, 2009; Raoofi et al., 2012). Accordingly, the relationship between self-efficacy and L2 learning strategy use in SRL is the main topic of the subsequent discussion.

2.3. Self-efficacy and L2 strategy use in SRL: A theoretical perspective

In educational psychology, various SRL models have been proposed (e.g., Pintrich, 2000; Winne, 2001). However, Zimmerman's (2000) model is widely regarded as one of the most influential and has been extensively applied in L2 research. In this model, three cyclical phases, which involve forethought, performance (or volitional control), and self-reflection, are at its center. Self-efficacy is considered to play an important role in relation to strategy use at all phases in this model. The forethought phase involves goal setting and planning to meet the goals set (e.g., writing a 3,000-word essay in L2), which ultimately leads to the selection of learning strategies (e.g., using the first language and background knowledge in planning) as tools to help learners achieve these goals. Goal setting, planning, and selection of strategies are all influenced by self-efficacy regarding the possible outcomes of taking on the specific task at hand (e.g., writing the first rough draft for an essay in L2). The level of self-efficacy often depends on learners' assessment of past performance on similar tasks (i.e., prior experience) during the self-reflection phase. In this phase, learners evaluate their performance including strategy use and offer explanations for the outcomes achieved (e.g., the first draft of an L2 essay). Identifying the level of success achieved and how learners attribute it to their strategy use (Graham, 2022) influences the formation of self-efficacy for completing similar tasks in the future. Evaluation and subsequent attribution rely on the information provided by learners' monitoring or self-observation during the performance phase, where they track "their own performance, the conditions that surround it, and the effects that it produces" (Zimmerman, 2000, p. 19). In this phase, learners monitor their progress in completing tasks, manage the application of learning strategies to facilitate task execution, and regulate their emotional states to help them focus on the task at hand (such as drafting an L2 essay). In this way, self-efficacy and strategy use at different levels (i.e., metacognitive, cognitive, and affective) are closely connected in each phase of the SRL model in L2 learning.

2.4. Self-efficacy and L2 strategy use in SRL: An empirical perspective

Metacognitive and learning strategies in the SRL framework are often combined under the term SRL strategies (e.g., Chen, 2022; Oxford, 2017; Wang & Bai, 2017).

The close relationship between self-efficacy and SRL strategy use in L2 is supported by both empirical studies (e.g., Du & Man, 2022; Graham et al., 2020; Li & Wang, 2010, Yabukoshi, 2021) and meta-analytic studies (e.g., Chen, 2022; Goetze & Driver, 2022). These studies point to the importance of considering self-efficacy and learning strategy use together, rather than treating them in isolation. For example, Chen (2022) argues that "a prerequisite to the active employment of SRL strategies is learners' self-efficacy. Self-regulatory skills are of limited value if one does not possess a strong sense of self-efficacy to engage and persist in the learning activity" (p. 2). Anam and Stracke (2016) also argue that "possessing strategic knowledge does not help much if the learners lack a sense of self-efficacy" (p. 8). These arguments are congruent with the theoretical assumption that SRL strategy use, to be effective, needs to be "motivated" by ability beliefs such as self-efficacy (Irie, 2022). This means that, through the mediation of strategy use, the effect of self-efficacy is embodied or achieved in L2 learning outcomes.

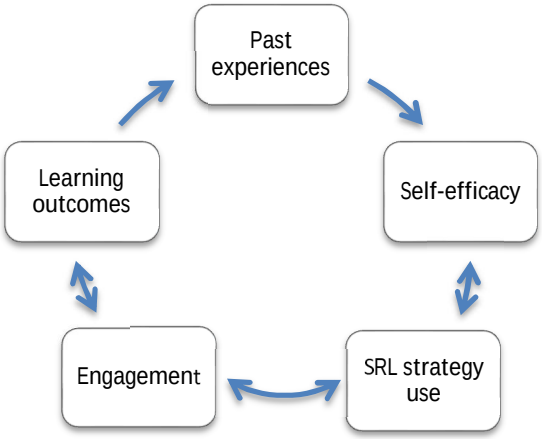

Figure 1 A schematic representation explaining the loop of success

Some researchers argue that more steps of mediation are involved before self-efficacy impacts learning outcomes. For example, Diseth (2011) demonstrated that prior achievement influences self-efficacy formation, which in turn affects goal orientations (i.e., mastery, performance-approach, or performance-avoidance goals: Elliot, 1999) and strategy use aligned with them, ultimately influencing learning outcomes. Learner engagement is also indicated in several L2 studies (Graham, 2022; Irie, 2022; Wang & Sun, 2020). Strategy use motivated by self-efficacy increases the level of learner engagement in relation to its different dimensions: agentic, behavioral, cognitive, and emotional (Reeve & Tseng, 2011), which leads to better L2 learning outcomes (e.g., Cai & Xing, 2023; Khajavy,

2021). Other researchers (e.g., Graham et al., 2020) also claim that the relationships between self-efficacy, strategy use, and learning outcomes are cyclical and reciprocal rather than linear and unidirectional. For instance, improved L2 learning outcomes, if properly attributed to strategy use, lead to increased self-efficacy, which in turn encourages further improvement in strategy use. This then leads to even better learning outcomes; thus, the loop continues (see Figure 1). It is also possible that increased self-efficacy promotes strategy use, and the resulting strategy use further enhances the level of self-efficacy (hence the bidirectional arrow between the two in Figure 1).

2.5. Self-efficacy and L2 strategy use in SRL: A pedagogical perspective

Another point worth mentioning is that self-efficacy can be enhanced through strategy instruction. Strategy use is known to be susceptible to pedagogical interventions in L2 learning. Plonsky (2019)'s meta-analysis, for example, revealed that the overall effect of strategy instruction is medium, which means that the strategy instruction for L2 learners is worth providing. Plonsky (2019) also found moderate to large effect sizes in strategy instruction for speaking, reading, vocabulary, and writing, respectively. Other meta-analytic studies (Chen, 2022; Wang & Sun, 2020) have also found that strategy instruction aimed at improving strategy use improves L2 learners' self-efficacy as well. Chen (2022), for example, reported that the effect of L2 strategy instruction on improving self-efficacy is as strong as its effect on improving target strategy use (g = 0.45 for self-efficacy; g = 0.40 for L2 strategy use). This is probably because the improvement in strategy use brought about by the instruction leads to better learning outcomes, which in turn contributes to the improvement in L2 self-efficacy.

2.6. Implications for a deeper understanding of the role of self-efficacy and strategy use in L2 learners' SRL

From the discussion above, the following implications for future research can be drawn. First, self-efficacy and strategy use are inseparable in the SRL context. Together they have a facilitating effect on L2 learning. Searching for a direct or one-to-one relationship between self-efficacy and learning outcomes or strategy use and achievement may therefore not yield fruitful results. Second, strategy use mediates the relationship between self-efficacy and L2 learning outcomes by increasing student engagement in learning. This suggests that without strategy use, ability beliefs such as self-efficacy are of limited value in promoting L2 learning.

Engagement (i.e., time, energy, and efforts expended), enhanced by the combination of self-efficacy and strategy use, is also considered a key element for L2 learning success (Mercer & Dörnyei, 2020). Third, the relationships among self-efficacy, strategy use, and L2 learning outcomes are not unidirectional but cyclical, creating a virtuous cycle of success. Future research should therefore focus on the nature of this relationship. Fourth, although self-efficacy can be increased through direct interventions (Bai & Wang, 2023; Bandura, 1997; Kim et al., 2015; Mills & Péron, 2009), working on strategy use is yet another way to increase the self-efficacy level in L2.

3. Ability beliefs and motivation

Among the diverse beliefs held by language learners, the two beliefs that language learning ability can be developed or is fixed are called "language mindset" (e.g., Lou & Noels, 2019). They may influence SLR, but unlike self-efficacy, they are not viewed as part of the SRL component. Therefore, this section discusses the extent to which the two types of mindsets (growth mindset and fixed mindset) may be involved in the key psychological factors (i.e., goal orientation, task value, attribution) in the SRL models while exploring possible applications to language learning contexts.

3.1. Mindsets and goal orientation

Implicit theories of intelligence, established in the field of psychology and potentially applicable to applied linguistics, explain a meaning system that directs individuals toward a specific goal in an achievement situation (Hong et al., 1999). Thus, numerous studies, primarily experimental studies conducted with children in the 1980s, have consistently shown that an implicit theory of intelligence predicts an individual's goal orientation (e.g., Dweck & Leggett, 1988; Elliott & Dweck, 1988). Those studies have shown that learners who believe that ability can be developed (growth mindset) tend to choose a mastery goal approach, whereas learners who believe ability cannot be developed (fixed mindset) tend to choose a performance goal approach. The reasons for this have been discussed by many researchers (e.g., Robins & Pals, 2002). Incremental learners (i.e., learners who view their ability as malleable) are motivated to learn and wish to improve their abilities because of their belief that ability can be developed. In contrast, entity learners (i.e., learners who view their ability as fixed) are motivated by their belief that their abilities are not something that can be developed. Therefore, entity theorists need to show how one's ability can be affirmed (the goal is to prove one's ability).

Dweck and Leggett (1988) presented data from their past study on the relations between three types of goal orientation and mindsets, including challenge-seeking performance, challenge-avoidant performance, and learning goals. Specifically, the percentage of entity learners with challenge-avoidant performance goals was quite high, followed by challenge-seeking performance goals and learning goals. In contrast, incremental learners had the highest proportion of learning goals, followed by challenge-seeking performance goals, while the proportion of challenge-avoidant performance goals was considerably low. Similarly, based on research with undergraduate language learners, Lou and Noels (2016) show that when the performance-approach goal orientation was examined in terms of the approach/avoidance distinction, those entity learners who were confident in their abilities, tended to choose the performance-approach goal orientation. Thus, past studies have successfully shown a consistent relationship between goal orientations and mindsets, supporting ideas that these mindsets influence an individual's choice of a particular goal in a given situation.

3.2. Mindsets and task value

There have been many studies on mindsets, where task value is discussed in a way that task is tied to each goal orientation. In those studies, learners who believed ability can be developed tended to prefer tasks that were set with the goal of learning (to develop their abilities) compared with learners who believed ability is fixed (e.g., Elliott & Dweck, 1988). Dweck and Leggett (1988) claimed that entity learners tended to choose tasks that guaranteed positive evaluation of their abilities. In the context of learning, learners with fixed mindsets tend to persist in obtaining positive evaluations of their abilities and avoid negative evaluations.

The task value of Zimmerman's (2000) and Pintrich's (2000) SRL models focuses on the perception of task difficulty and intrinsic interest. According to Elliott and Dweck (1988), with respect to task difficulty, incremental learners tend to choose challenging tasks regardless of their ability; conversely, entity learners, who are not confident in their abilities, tend to choose easier tasks not to downgrade their abilities. Regarding intrinsic value, Liu's (2021) study shows that the growth mindset influences intrinsic motivation in a way mediated by a mastery goal orientation. A series of studies mentioned above suggest that task value is deeply related to goal orientation derived from mindset in education, which may also be a precondition that influences the sequence of self-regulated language learning.

3.3. Mindsets and attribution

Attribution theory (Weiner, 1985) is a theoretical framework that explains how we perceive, attribute, and react to success and failure experiences. It is believed that differences in these attribution factors can lead to differences in subsequent outcomes. Hong et al. (1999), however, criticized attribution theory from the following point of view: The motivational process of attribution theory begins after a success or failure experience occurs and does not take into account the potential beliefs of the individual that should influence the interpretation of these experiences.

Implicit theory is a system that begins with the implicit belief of how an individual perceives ability, which determines goal orientation, explains the reasoning (attribution) and reactions about failure and success, and then explains the individual's subsequent behavior. Implicit theory is thought to deeply influence the interpretation of success and failure experiences, and the relationship between mindsets and attribution theory has been the subject of much discussion to date. Of course, both incremental and entity learners may attribute their experiences to either ability or effort, but persons with incremental views place more weight on effort, and those with entity views place more weight on the evaluation of ability (Hong et al., 1999). In other words, learners with a growth mindset are more likely to attribute it to their own efforts, and after a failure experience, they tend to work even harder with more effective strategy use toward their goals. By contrast, learners with a fixed mindset attribute their failure experiences to inability rather than effort and attribute success to luck (Robins & Pals, 2002).

Reactions from these attributional patterns may lead to situations in which people do not resist failure (i.e., helpless behavioral responses). The reason for this, according to Hong et al. (1999), is that, for the entity learner, poor performance is not a reflection of a lack of effort but a lack of ability, which cannot be changed by remedial measures (prompting helpless responses), or because he or she believes that trying harder will further demonstrate a lack of ability. Furthermore, the relationship between fixed mindset and helpless response tends to be observed not only in failure but also in success. In other words, according to Robins and Pals (2002), entity learners blame failure on their inability but do not take credit for success. Thus, like in the relationship between mindsets, goal orientation and task value, mindsets have been found to produce systematic patterns with respect to attribution and reaction.

3.4. Implications for applying language mindsets to explain SLT

Some studies have examined a systematized model of mindsets, goal orientations, and attribution in achievement settings (e.g., Blackwell et al., 2007; Smiley

et al., 2016). Smiley et al. (2016) found that learners with a growth mindset have mastery goals, attribute achievement to effort, and after a setback are more likely to have a plan to improve their performance. Similarly, Blackwell et al. (2007) demonstrated that learners with a growth mindset were more likely to believe that effort is necessary and effective for achievement and, when faced with setbacks, tended to attribute less to competence. The same tendency was found by Lou and Noels (2016) with L2 learners. Specifically, incremental learners were found to have a stronger mastery goal orientation and continue learning further when faced with failure. In contrast, entity learners who were confident in their language skills had performance-approach goals and showed more helpless-oriented reactions. On the basis of these studies, we can say that motivational/emotional factors (i.e., goal orientation, task value, causal attribution) in the SRL models can be better systematically patterned by demonstrating a high level of a growth mindset in diverse educational settings including the L2 learning context (see Figure 2).

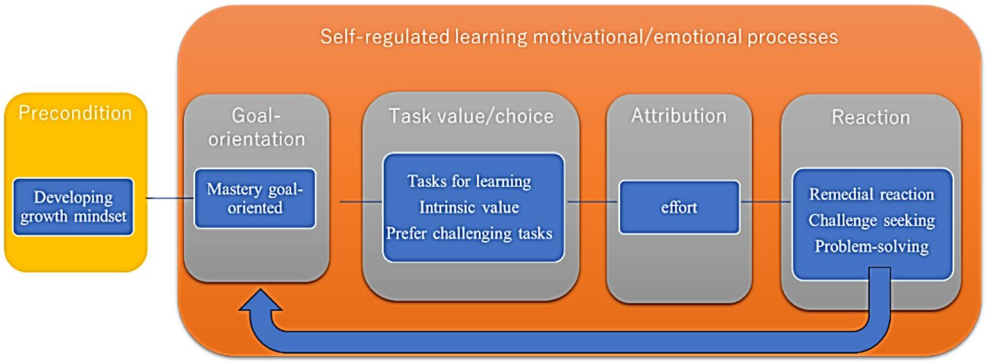

Figure 2 SRL motivational/emotional processes with a growth mindset

4. Ability beliefs and social regulation

In the previous sections, we focused on learner variables within the framework of ability beliefs, discussing learner strategies and motivation. This section focuses on the interaction between learner variables and the learning environment within this framework.

4.1. Self-regulation and social regulation

Despite the long tradition of SRL research in educational psychology and applied linguistics, the major interest of which is to explore how an individual learner processes

one's internal learning process (e.g., Pintrich, 2000; Zimmmernn, 2000; also see Rose et al., 2018, for a review), there is a growing interest in the "socially situated" nature of self-regulation (Hadwin et al., 2018). An individual's learning and motivation occur as "a process of engagement and participation in a social activity, which is an interaction of a mental state within a situation" (Järvelä & Järvenoja, 2011, p. 354). While it is true that self-regulation is an individual's internal mental or cognitive process, this individual regulation as a "self-regulating agent" is also shared with other learners in collaborative learning in the classroom (Malmberg et al., 2017, p. 160).

The SRL process involves a dynamic and reciprocal interaction between individuals' ability beliefs and the learning environment over time. Learners become self-regulated to the extent that they are given feedback by the teacher and classmates, feel secure and autonomy-supported and are thus willing to take risks in learning to produce a foreign language in the classroom (in front of other students). In the "autonomy-supportive" classroom environment (Reeve, 2006), they come to believe in themselves in carrying out the given task, find the challenge worth the time and effort, in other words, the ability beliefs in the face of task difficulty, and endeavor to complete it. In an autonomy-supportive classroom environment (Reeve, 2006), students believe in themselves as they complete assigned tasks, recognize that the tasks are worth the time and effort, and ultimately strive to complete the tasks because they believe in their ability to overcome the challenges. This is, however, not likely to happen in the classroom where command and control are the mainstream of instruction. This echoes Zimmerman's (1989, p. 330; also Zimmerman, 2000) theoretical assertion that SRL ([internal] "covert self-regulation") occurs not merely within one's internal "personal processes" but also by interacting with "environmental and behavioral events in a reciprocal fashion." This is the interaction between the social environment (support and feedback from teachers and classmates, as well as the classroom atmosphere) and the learner's experiences (both positive and negative experiences, such as small successes and failures in public settings). In such an autonomy-supportive environment, learners feel *encouraged* to use L2 as a means of communication without fear of making mistakes (Reeve, 2006).

Social context (e.g., scaffolding and mentoring from others such as teachers or more capable peers) plays a crucial role in SRL development (Perry et al., 2008), and SRL studies incorporating social regulation are on the rise (e.g., Hadwin & Oshige, 2011; Volet et al., 2009). The most notable conceptualization relevant to language learning and teaching is that of the three different modes of regulation in collaboration (Hadwin et al., 2018): (1) SRL (an individual learner's internal learning process including planning, reflection, and adaptation to the environment), (2) co-regulated learning (learners' cooperative, interactive working, and mutual scaffolding in a given social context), and (3) socially shared learning (group members' socially constructed learning and endeavor as a social classroom unit toward the shared goal).

Therefore, we need to capture SRL within the framework of "the social context–self-regulation link" or "the link between social aspect learning and self-regulation" (Boekaerts, 2011, p. 375). One line of inquiry is to uncover the process of how individual learners come to be more self-regulated through interaction with others (e.g., see Panadero et al., 2015, for the effect of socially shared learning on SRL development, and Volet et al., 2009, for the impact of co-regulation on SRL development). This trend can also be seen in some L2 studies. In their quantitative questionnaire survey of university students, McEown and Sugita-McEown (2018) determined the impact of autonomy support from teachers and parents on the maintenance of individual levels of L2 self-regulation processes. In his multiple case studies of L2 university students and student teachers (employing questionnaires, interviews, and observation), Nakata (2016, 2019a, 2019b) identified the effect of co-regulation on learner SRL development based on Zimmerman's (2011) *three phases of self-regulation* and *self-regulatory subprocesses of naïve and skillful learners* (1998). In both cases, the focus is placed more on the development of individual learners, which inevitably involves the perceptual change in one's ability beliefs.

Another line of inquiry is to examine the role of social context in developing SRL, that is, socially shared learning (Järvelä et al., 2007; Järvenoja et al., 2017). Nakata et al. (2022) conducted a mixed-methods study and, drawing on quantitative and qualitative data (i.e., questionnaires, interviews, observation), identified three different classroom modes of regulation: (1) solo-regulation (i.e., the classroom mode where teachers concentrate on high achievers or particular groups or students having few connections with other classmates), (2) co-regulation, and (3) socially shared learning. They found the language classroom mode of socially shared learning most ideal for creating an autonomy-supportive classroom climate where students (regardless of ability) are encouraged to use L2 without the worry of making mistakes, thus influencing and motivating each other.

We have not yet fully captured how individual L2 learners come to regulate their learning by interacting with others in the social context. Exploring this process, when also paying attention to ability beliefs, helps us better understand the importance of monitoring students and consider how individual learners can be better supported.

4.2. Ability beliefs in the social environment: A pedagogical perspective

What is the role of ability beliefs in the three modes of regulation, and how are they related? Ability beliefs play a significant role in SRL development, which becomes more apparent when focusing on the individual learner's internal developmental process. In contrast to skillful learners who reflect on their learning,

learn from mistakes, and make appropriate adjustments for improvement, naïve or poor learners who have accumulated negative learning experiences are likely to use self-handicapping strategies (i.e., giving up the task easily) and avoid self-evaluation, neither asking the appropriate person for appropriate help (i.e., non-adaptive help seeker; Newman, 2008) nor making a proper judgment of their ability (Zimmerman, 1998, 2011). This aligns with the empirical evidence of SRL studies in L2 learning (Nakata, 2016, 2019a, 2019b). Whereas naïve language learners tend to exhibit low self-efficacy in the forethought stage and avoidance of self-evaluations and self-handicapping strategies in their self-refection stage, self-regulators show a deeper understanding of the multifaceted nature of L2 proficiency and their typical characteristics (i.e., they reflect on their weaknesses and strengths, seek appropriate help for their development, and revise their L2 learning strategies).

Within the framework of co-regulation, more capable and less capable peers or more and less skillful learners are learning, teaching, and scaffolding each other. In such a zone of proximal development (Vygotsky, 1978), more capable peers monitor the latter's readiness (including their ability beliefs) and provide those less capable with appropriate support (Nakata, 2016, 2019a). As communication in daily life often occurs between speakers with different backgrounds (including experiences and proficiencies), this is a great opportunity not only for less capable but also (or even more so) for more capable peers to develop the quality communication skills required. However, having seen this mode from the classroom perspective, there are those members in some groups or pairs with co-regulation mode who work together toward the shared task goal. In contrast, there are also those in other groups with solo-regulation who are reluctant to do pair or group work, and pursue their self-development that is performance-goal rather than mastery goal orientation (Nakata, 2022; see Mercer, 2015, for structural holes of the classroom such as those groups with little actual interaction).

In the socially shared regulation classroom mode, co-regulation is prevalent throughout the classroom; thus, structural holes can barely be observed there (Nakata, 2022). It is a classroom environment that supports autonomy (Reeve, 2006), where teachers scaffold or elicit individual students with different backgrounds and abilities. In this environment, learners feel safe and willing to take challenges and risks, regardless of their experience and ability, and to work together towards common goals (e.g., encouragement such as "You can do it!" for low achievers who are giving a presentation). In such a safe classroom environment, not only learners but also teachers are supported in cultivating positive attitudes and increasing self-efficacy. This leads to an increase in self-regulation in language learning and teaching. Provided with social support in the classroom mode of socially shared regulation, even naïve learners (i.e., non-adaptive help-seeker with low self-efficacy, risk avoidance, performance-goal

orientation) have more chances of becoming skillful learners (i.e., adaptive help-seeker with positive outcome expectations, risk-taking, mastery goal orientation; Zimmerman, 1998). Likewise, it is the environment where the teacher is supported by students and feels secure, thus being willing to take on challenges. The mode of socially shared regulation is the learning and teaching environment where the teacher and students as *learners* (of language learning and teaching) have a sense of class togetherness or class belonging (Nakata et al., 2022). Hence, a reciprocal or interactive relationship between the teacher's and students' self-efficacy is likely to be nurtured within this classroom mode.

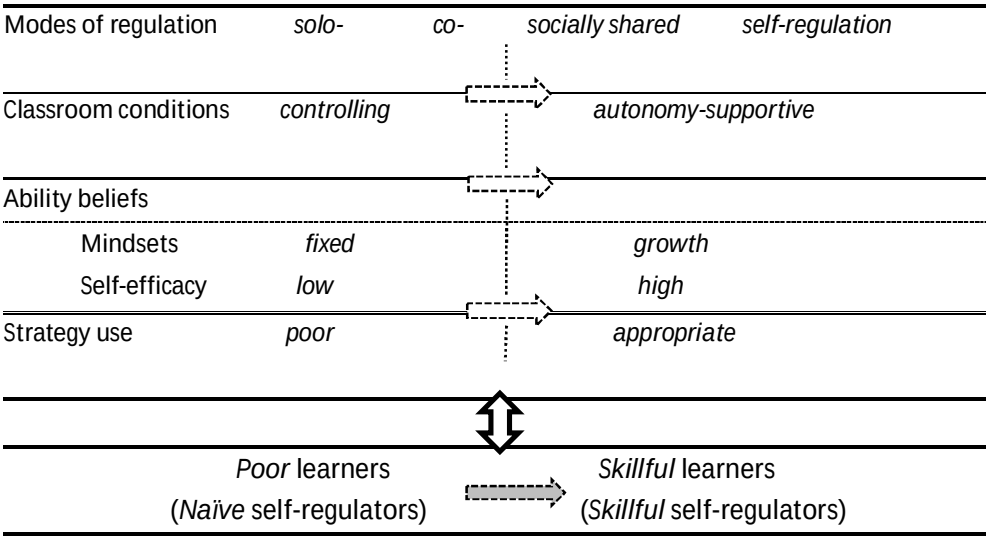

Figure 3 A framework for L2 learner development and developmental processes of regulation, classroom modes, ability beliefs, self-efficacy, and strategy use

4.3. Implications for creating learning environments enhancing L2 learners' SRL

The literature review of recent SRL research provides qualitative evidence of the developmental process of SRL, which focuses more on individual L2 learners' becoming more self-regulated and changing their ability beliefs through interaction with others. This must be further supported by quantitative empirical evidence in the sequential explanatory approach from qualitative to quantitative research (Cresswell, 2014). The question of how individual L2 learners (both skillful and naïve) get more self-regulated as they become significant members of the social or classroom community should also be answered with empirical evidence. Language learners need a classroom environment where they feel comfortable using

L2 as a means of self-expression and communication as language use is essential to L2 development. Therefore, we need to delve deeper into the process of how they come to feel secure, develop their self-efficacy, become more willing to take risks in learning (particularly in speaking), critically reflect on their learning, appropriately evaluate their strengths and weaknesses, learn and teach with others, and regulate their learning for the better in the socially shared regulation-classroom mode. As a summary of our discussion, Figure 3 provides a schematic representation that broadly explains the development and interactive relationship between environmental aspects (i.e., modes of regulation, classroom conditions), ability beliefs (including self-efficacy), and strategy use, all of which are in a reciprocal relationship with L2 learner development.

5. Conclusion and future directions

In this paper, we presented theoretical and empirical studies from educational psychology to encourage readers to consider their application to each L2 teaching and research context, with a specific focus on the role of learners' ability beliefs in SRL. More specifically, we explored the role of ability beliefs in SRL from three different perspectives: (1) strategic learning, (2) motivation and mindsets, and (3) social regulation. Though space did not permit a full review of the research literature in these areas, we still found many intriguing but unsubstantiated insights into the role of ability beliefs in self-regulated L2 learning that merit further investigation.

Regarding ability beliefs, a number of studies have examined their relations, not as a one-to-one relationship but in conjunction with other factors such as goal orientation, intrinsic value, engagement, strategy use, motivation, and learning outcomes, all of which are within the SRL framework. These are most welcome trends that should be further developed since ability beliefs do not operate in isolation; rather, they work together with a host of other variables and are intertwined in a larger meaning system that navigates L2 learners in comprehending and responding to diverse learning situations (see Figures 1 and 3).

SRL studies in L2 research should further examine the interactions among the variables in relation to the environments in which L2 learners are placed. We expect considerable differences in mindset depending on the educational context and subject matter that each culture values (e.g., Ryan & Mercer, 2012b). In certain contexts (typically learning a foreign language in school), having a growth mindset may be a precondition for a better SRL developmental process in language learning (see Figures 2 and 3). Creating a better learning environment or condition for learners in the L2 educational setting (i.e., co-regulation and socially shared regulation in the classroom) must be a key to accelerating their SRL process as it would help

develop their growth mindset (see Figure 3). Studies in this area could help unravel some of the complex issues of under what circumstances and how learners gain confidence, change their ability beliefs, and become more engaged in their self-regulated language learning. All these important inquiries need to be further addressed through empirical evidence with multimodal data.

References

Al-Hoorie, A. H. (2018). The L2 motivational self-system: A meta-analysis. *Studies Second Language Learning and Teaching*, *8*(4), 721-754. https://doi.org/10.14746/ssllt.2018.8.4.2

Anam, S., & Stracke, E. (2016). Language learning strategies of Indonesian primary school students: In relation to self-efficacy beliefs. *System, 60*, 1-10. https://doi.org/10.1016/j.system.2016.05.001

Bai, B., & Wang, J. (2023). The role of growth mindset, self-efficacy and intrinsic value in self-regulated learning and English language learning achievements. *Language Teaching Research, 27*(1), 207-228. https://doi.org/10.1177/1362168820933

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.

Bandura, A. (1999). Social cognitive theory: An agentic perspective. *Asian Journal of Social Psychology 2*(1), 21-41. https://doi.org/10.1111/1467-839x.00024

Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development, 78*(1), 246-263. https://doi.org/10.1111/j.1467-8624.2007.00995.x

Boekaerts, M. (2011). What have we learned about the social-student engagement link? *Teachers College Record*, *113*(2), 375-393. https://doi.org/10.1177/016146811111300

Cai, Y., & Xing, K. (2023). Examining the mediation of engagement between self-efficacy and language achievement. *Journal of Multilingual and Multicultural Development.* https://doi.org/10.1080/01434632.2023.2217801

Chen, J. (2022). The effectiveness of self-regulated learning (SRL) interventions on L2 learning achievement, strategy employment and self-efficacy: A meta-analytic study. *Frontiers in Psychology, 13*, 1021101. https://doi.org/10.3389/fpsyg.2022.1021101

Cresswell, J. W. (2014). *Research design: Qualitative, quantitative & mixed methods approach* (4th ed.). Sage.

Diseth, A. (2011). Self-efficacy, goal orientations and learning strategies as mediators between preceding and subsequent academic achievement. *Learning and Individual Differences, 21*(2), 191-195. https://doi.org/10.1016/j.lindif.2011.01.003

Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Lawrence Erlbaum.

Du, G., & Man, D. (2022). Person factors and strategic processing in L2 listening comprehension: Examining the role of vocabulary size, metacognitive knowledge, self-efficacy, and strategy use. *System, 107*, 102801. https://doi.org/10.1016/j.system.2022.102801

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95*(2), 256-273. https://doi.org/10.1037/0033-295X.95.2.256

Elliot, A. J. (1999). Approach and avoidance achievement motivation and achievement goals. *Educational Psychologist, 34*(3), 169-189. https://doi.org/10.1207/s15326985ep3403_3

Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology, 54*(1), 5-12. https://doi.org/10.1037/0022-3514.54.1.5

Gao, X. (2007). Has language learning strategy research come to an end? A response to Tseng et al. (2006). *Applied Linguistics, 28*(4), 615-620. https://doi.org/10.1093/applin/amm034

Gao, X. (2010). *Strategic language learning: The role of agency and context*. Multilingual Matters.

Goetze, J., & Driver, M. (2022). Is learning really just believing? A meta-analysis of self-efficacy and achievement in SLA. *Studies in Second Language Learning and Teaching, 12*(2), 233-259. https://doi.org/10.14746/ssllt.2022.12.2.4

Graham, S. (2007). Learner strategies and self-efficacy: Making the connection. *The Language Learning Journal, 35*(1), 81-93. https://doi.org/10.1080/09571730701315832

Graham, S. (2022). SE and language learning: What it is and what it isn't. *The Language Learning Journal, 50*(2), 186-207. https://doi.org/10.1080/09571736.2022.2045679

Graham, S., Woore, R., Porter, A., Courtney, L., & Savory, C. (2020). Navigating the challenges of L2 reading: Self-efficacy, self-regulatory reading strategies, and learner profiles. *Modern Language Journal, 104*(4), 693-714. https://doi.org/10.1111/modl.12670

Hadwin, A. (2021). Commentary and future directions: What can multi-modal data reveal about temporal and adaptive processes in self-regulated learning. *Learning and Instruction*, *72*, 101287. https://doi.org/10.1016/j.learninstruc.2019.101287

Hadwin, A., Järvelä., & Miller, M. (2018). Self-regulation, co-regulation, and socially shared regulation in collaborative learning environment. In D. Schunk & J. A. Greene (Eds.), *Handbook of self-regulation of learning and performance* (pp. 83-106). Routledge.

Hadwin, A., & Oshige, M. (2011). Self-regulation, co-regulation, and socially-shared regulation: Exploring perspectives of social in self-regulated learning theory. *Teachers College Record*, *113*, 240-264. https://doi.org/10.1177/016146811111300204

Hong, Y. Y., Chiu, C. Y., Dweck, C. S., Lin, D. M. S., & Wan, W. (1999). Implicit theories, attributions, and coping: A meaning system approach. *Journal of Personality and Social Psychology, 77*(3), 588-599. https://doi.org/10.1037/0022-3514.77.3.588

Irie, K. (2022). Self-efficacy. In T. Gregersen & S. Mercer (Eds.)., *The Routledge handbook of the psychology of language learning and teaching* (pp. 100-111). Routledge.

Järvelä, S., & Järvenoja, H. (2011). Socially constructed self-regulated learning and motivation regulation in collaborative learning groups. *Teachers College Record, 113*(2), 350-374. https://doi.org/10.1177/016146811111300205

Järvelä, S., Järvenoja, H., & Veermans, M. (2007). Understanding the dynamics of motivation in socially shared learning. *International Journal of Educational Research*, *47*, 122-135. https://doi.org/10.1016/j.ijer.2007.11.012

Järvenoja, H., Järvelä, S., & Malmberg, J. (2017). Supporting groups' emotion and motivation regulation during collaborative learning. *Learning and Instruction*, *70*, 101090. https://doi.org/10.1016/j.learninstruc.2017.11.004

Khajavy, G. H. (2021). Modeling the relations between foreign language engagement, emotions, grit and reading achievement. In P. Hiver, A. H. Al-Hoorie, & S. Mercer (Eds.), *Student engagement in the language classroom* (pp. 241-259). Multilingual Matters.

Kim, D.-H., Wang, C., Ahn, H. S., & Bong, M. (2015). English language learners' self-efficacy profiles and relationship with self-regulated learning strategies. *Learning and Individual Differences, 38*, 136-142. https://doi.org/10.1016/j.lindif.2015.01.016

Li, Y., & Wang, C. (2010). An empirical study of reading self-efficacy and the use of reading strategies in the Chinese EFL context. *The Asian EFL Journal, 12*(2), 144-162.

Liu, W. C. (2021). Implicit theories of intelligence and achievement goals: A look at students' intrinsic motivation and achievement in mathematics. *Frontiers in Psychology, 12*, 593715. https://doi.org/10.3389/fpsyg.2021.593715

Lou, N. M., & Noels, K. A. (2016). Changing language mindsets: Implications for goal orientations and responses to failure in and outside the second language classroom. *Contemporary Educational Psychology, 46,* 22-33. https://doi.org/10.1016/j.cedpsych.2016.03.004

Lou, N. M., & Noels, K. A. (2017). Measuring language mindsets and modeling their relations with goal orientations and emotional and behavioral responses in failure situations. *Modern Language Journal, 101*(1), 214-243. https://doi.org/10.1111/modl.12380

Lou, N. M., & Noels, K. A. (2019). Language mindsets, meaning-making, and motivation. In M. Lamb, K. Csizér, A. Henry, & S. Ryan (Eds.), *The Palgrave handbook of motivation for language learning* (pp. 537-559). Palgrave Macmillan.

Magogwe, J. M., & Oliver, R. (2007). The relationship between language learning strategies, proficiency, age and self-efficacy beliefs: A study of language learners in Botswana. *System, 35*(3), 338-352. https://doi.org/10.1016/j.system.2007.01.003

Malmberg, J., Järvelä, S., & Järvenoja, H. (2017). Capturing temporal and sequential patterns of self-, co-, and socially shared regulation in the context of collaborative learning. *Contemporary Educational Psychology*, *49*, 160-174. https://doi.org/10.1016/j.cedpsych.2017.01.009

McEown, K., & Sugita-McEown, K. (2018). Individual, parental and teacher support factors of self-regulation in Japanese students. *Innovation in Language Learning and Teaching, 14*(4), 389-401. https://doi.org/10.1080/17501229.2018.1468761

Mercer, S. (2015). Social network analysis and complex dynamic systems. In Z. Dörnyei, P. D. MacIntyre., & A. Henry (Eds.), *Motivational dynamics in language learning* (pp. 73-82). Multilingual Matters.

Mercer, S., & Dörnyei, Z. (2020). *Engaging language learners in contemporary classrooms.* Cambridge University Press.

Mills, N. A. (2014). Self-efficacy in second language acquisition. In S. Mercer & M. Williams (Eds.)., *Multiple perspectives on the self in SLA* (pp. 6-22). Multilingual Matters.

Mills, N. A., & Péron, M. (2009). Global simulation and writing self-beliefs of college intermediate French students. *ITL – International Journal of Applied Linguistics*, *156*(1), 239-273. https://doi.org/10.1075/itl.156.21mil

Mori, Y. (1999). Epistemological beliefs and language learning beliefs: What do language learners believe about their learning? *Language Learning,49*(3), 377-415. https://doi.org/10.1111/0023-8333.00094

Nakata, Y. (2016). Promoting self-regulation through collaborative work: Insights from a multiple case study of foreign language learners. *EUROSLA Yearbook*, *16*, 59-84. https://doi.org/10.1075/eurosla.16.03nak

Nakata, Y. (2019a). Encouraging student teachers to support self-regulated learning: A multiple case study on prospective language teachers. *International Journal of Educational Research*, *95*, 200-211. https://doi.org/10.1016/j.ijer.2019.01.007

Nakata, Y. (2019b). Promoting self-regulation in low achievers: A case study of Japanese university EFL students. *International Journal of Applied Linguistics*, *30*(1), 110-126. https://doi.org/10.1111/ijal.12269

Nakata, Y. (2022). Crossing boundaries between teacher autonomy and classroom: Sharing the concept of socially shared regulation. In Y. Kimura., L.

Yang., T-Y. Kim., & Y. Nakata (Eds.), *Language teacher motivation, autonomy and development in East Asia* (pp. 35-54). Springer.

Nakata, Y., Nitta, R., & Tsuda, A. (2022). Understanding motivation and classroom modes of regulation in collaborative learning: An exploratory study. *Innovation in Language Learning and Teaching, 16*(1), 14-28. https://doi.org/10.1080/175012 29.2020.1846040

Negishi, M. (2017). Eigoryoku wo nobashiteiru gakko no youin wo saguru [Exploring factors contributing to the improvement of English proficiency at school]. *English Teachers' Magazine, 66*(5), 32-34.

Newman, R. (2008). The motivational role of adaptive help seeking in self-regulated learning. In D. Schunk & B. Zimmermann (Eds.), *Motivation and self-regulated learning: Theory, research, and applications* (pp. 315-337). Lawrence Erlbaum.

Oh, Y.-K. (2022). The growth trajectories of L2 self-efficacy and its effects on L2 learning: Using a curve-of-factors model. *Applied Linguistics, 43*(1), 147-167. https://doi.org/10.1093/applin/amab005

Oxford, R. (2017). *Teaching and researching language learning strategies: Self-regulation in context* (2nd ed.). Routledge.

Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading and Writing Quarterly, 19*(2), 139-158. https://doi.org/10.1080/10573560308222

Panadero, E., Kirschner, P. A., Järvelä, S., Malmberg, J., & Järvenoja, H. (2015). How individual self-regulation affects group regulation and performance: A shared regulation intervention. *Small Group Research*, *46*(4), 431-454. https://doi.org/10.1177/1046496415591219

Perry, N. E., Hutchinson, L., & Thauberger, C. (2008). Talking about teaching self-regulated learning: Scaffolding student teachers' development and use of practices that promote self-regulated learning. *International Journal of Educational Research*, *47*(2), 97-108. https://doi.org/10.1016/j.ijer.2007.11.010

Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 451-502). Academic Press. https://doi.org/10.1037/0022-0663.82.1.33

Plonsky, L. (2019). Language learning strategy instruction: Recent research and future directions. In A. U. Chamot & V. Harris (Eds.), *Learning strategy instruction in the language classroom: Issues and implementation* (pp. 3-21). Multilingual Matters.

Raoofi, S., Tan, B. H., & Chan, S. H. (2012). Self-efficacy in second/foreign language learning contexts. *English Language Teaching, 5*(11), 60-73. https://doi.org/10.5539/elt.v5n11p60

Reeve, J. (2006). Teachers as facilitators: What autonomy-supportive teachers do and why their students benefit? *The Elementary School Journal*, *106*(3), 225-226. https://doi.org/10.1086/501484

Reeve, J., & Tseng, C.-M. (2011). Agency as a fourth aspect of students' engagement during learning activities. *Contemporary Educational Psychology, 36*(4), 257-267. https://doi.org/10.1016/j.cedpsych.2011.05.002

Robins, R. W., & Pals, J. L. (2002). Implicit self-theories in the academic domain: Implications for goal orientation, attributions, affect, and self-esteem change. *Self and Identity, 1*(4), 313-336. https://doi.org/10.1080/15298860290106805

Rose, H. (2012). Reconceptualizing strategic learning in the face of self-regulation: Throwing language learning strategies out with the bathwater. *Applied Linguistics, 33*(1), 92-98. https://doi.org/10.1093/applin/amr045

Rose, H., Briggs, J. G., Boggs, J. A., Sergio, L., & Ivanova-Slavianskaia, N. (2018). A systematic review of language learner strategy in the face of self-regulation. *System*, *72*, 151-163. https://doi.org/10.1016/j.system.2017.12.002

Ryan, S., & Mercer, S. (2009). Language learning mindsets and strategic learning behavior. *Bulletin of Shotoku University, 20*, 73-80.

Ryan, S., & Mercer, S. (2012a). Implicit theories: Language learning mindsets. In S. Mercer, S. Ryan, & M. Williams (Eds.), *Psychology for language learning: Insights from research, theory and practice* (pp. 74-89). Palgrave Macmillan.

Ryan, S., & Mercer, S. (2012b). Language learning mindsets across cultural settings: English learners in Austria and Japan. *OnCUE Journal, 6*(1), 6-22. https://jalt-cue.org/files/OnCUE/OCJ6-1/OCJ61%20pp%2006-22%20Ryan.pdf

Smiley, P. A., Buttitta, K. V., Chung, S. Y., Dubon, V. X., & Chang, L. K. (2016). Mediation models of implicit theories and achievement goals predict planning and withdrawal after failure. *Motivation and Emotion, 40,* 878-894. https://doi.org/10.1007/s11031-016-9575-5

Takeuchi, O. (2019). Language learning strategies: Insights from the past and directions for the future. In X. Gao (Ed.), *Second handbook of English language teaching* (pp. 683-702). Springer. https://doi.org/10.1007/978-3-030-02899-2_37

Tseng W.-T., Dörnyei, Z., & Schmitt, N. (2006). A new approach to assessing strategic learning: The case of self-regulation in vocabulary acquisition. *Applied Linguistics, 27*(1), 78-102. https://doi.org/10.1093/applin/ami046

Volet, S., Summers, M., & Thurman, J. (2009). High-level co-regulation in collaborative learning: How does it emerge and how is it sustained? *Learning and Instruction*, *19*(2), 128-143. https://doi.org/10.1016/j.learninstruc.2008.03.001

Volet, S., Vauras., & Salonen, P. (2009). Self- and social regulation in learning contexts: An integrative View. *Educational Psychologist, 44*(4), 215-226. https://doi.org/10.1080/00461520903213584

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Harvard University Press.

Wang, C., & Bai, B. (2017). Validating the instruments to measure ESL/EFL learners' self-efficacy beliefs and self-regulated learning strategies. *TESOL Quarterly*, *51*(4), 931-947. https://doi.org/10.1002/tesq.355

Wang, C., & Sun, T. (2020). Relationship between self-efficacy and language proficiency: A meta-analysis. *System, 95*, 102366. https://doi.org/10.1016/j.system.2020.102366

Wang, I. (2021). Self-regulation in psychology. In T. Gregersen & S. Mercer (Eds.), The *Routledge handbook of psychology of language learning and teaching* (pp. 218-230). Routledge. https://doi.org/10.4324/9780429321498-20

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92*(4), 548-573. https://doi.org/10.1037/0033-295X.92.4.548

Winne, P. H. (2001). Self-regulated learning viewed from models of information processing. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives* (pp. 153-189). Lawrence Erlbaum.

Yabukoshi, T. (2021). Self-regulation and self-efficacy for the improvement of listening proficiency outside the classroom. *The Language Learning Journal, 49*(1), 27-40. https://doi.org/10.1080/09571736.2018.1472626

Zarrinabadi, N., Rezazadeh, M., & Chehrazi, A. (2023). The links between grammar learning strategies and language mindsets among L2 and L3 learners: Examining the role of gender. *International Journal of Multilingualism, 20*(2), 347-364. https://doi.org/10.1080/14790718.2020.1871356

Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology, 81*(3), 329-339. https://doi.org/10.1037/0022-0663.81.3.329

Zimmerman, B. J. (1998). Developing self-fulfilling cycles of academic regulation: An analysis of exemplary instructional models. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulated learning: From teaching to self-reflective practice* (pp. 1-19). Guilford.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13-39). Academic Press.

Zimmerman, B. (2011). Motivational sources and outcomes of self-regulated learning and performance. In B. Zimmerman & D. Schunk (Eds.), *Handbook of self-regulation of learning and performance* (pp. 49-64). Routledge.