

# **Psychological Interventions to Foster Growth Mindsets among Japanese University EFL Learners**

**Leung, Ricky Chi Yan**

## **Abstract**

This article explores the psychological concept of implicit theories or “learning mindsets” in the domain of second language (L2) learning. Through the examination of previous psychological research studies on academic and L2 learning mindsets, recommendations for fostering growth mindsets with psychological interventions are provided in relation to Japanese University EFL learners.

## **Introduction**

People generally have a wide range of beliefs in regards to L2 learning. One particularly important belief is whether the ability to learn a new language is fixed or malleable. A fixed language learning mindset presupposes that a natural disposition or innate ability is responsible for successful L2 learning. In contrast, a growth language learning mindset takes the belief that L2 learning is a malleable ability with the capacity to change through varying degrees of effort, learning strategies, and resilience. One of the most important characteristics of learning mindsets is their potential for change in which previous research on psychological interventions in educational environments have shown to directly affect learning outcomes through fostering growth mindsets (Ryan & Mercer, 2012b).

## **Implicit Theories of Intelligence**

Dweck and Leggett’s (1988) research on individual learners’ beliefs led to the conceptualization of “implicit theories” for academic mindsets and the nature of intelligence. Implicit theories are defined as the malleability of personal qualities, serving as a lay theory in reference to peoples’ commonsense

explanation for everyday events (Yeager & Dweck, 2012). People possess implicit theories about the nature of intelligence in a manner that represents an entity or incremental theory. A description of the theories, goals, and behavior patterns in achievement situations are presented in Table 1 (Dweck & Leggett, 1988).

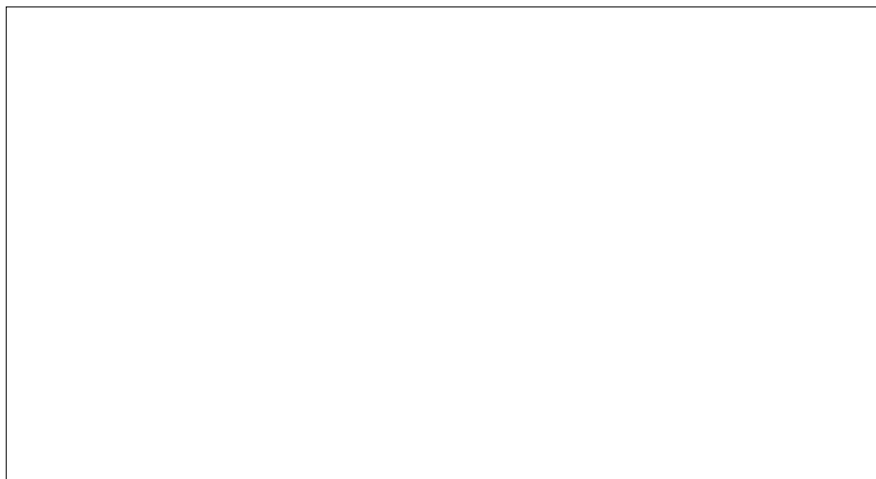


Table 1. Theories Goals and Behavior Patterns in Achievement Situations

Implicit theories of learning and the nature of intelligence have significant implications on how individuals set goals, behave, and react to adversity (Dweck, 2006). The implicit theories framework connects aspects of learner behavior and motivation to the decisions people make regarding self-regulation, learner beliefs, and goal-orientations (Dweck, 2006).

### **Language Learning Mindsets**

A language learning mindset is based on an individual's beliefs on whether L2 learning is dependent on a natural disposition, known as a fixed mindset, or is the result of malleable factors such as conscious effort, known as a growth mindset. L2 learners with fixed mindsets are more likely to engage in maladaptive learning behavior such as avoiding challenges which risk failure, setting themselves lower goals, and being discouraged to continue learning due to mistakes and failure (Mercer & Ryan, 2010). Individuals with growth mindsets are likely to be more open to critical feedback, learn from and adapt to past mistakes and failures, as well as display resilience when faced with learning challenges (Mercer & Ryan, 2010). These individuals tend to view failure as an opportunity to grow by abandoning unsuccessful actions and strategies from previous attempts. Therefore, a true growth mindset represents more than a belief in the value of effort or persistence; there also needs to be a strategic element in which learners possess a willingness to change their behavior (Ryan & Mercer, 2012b).

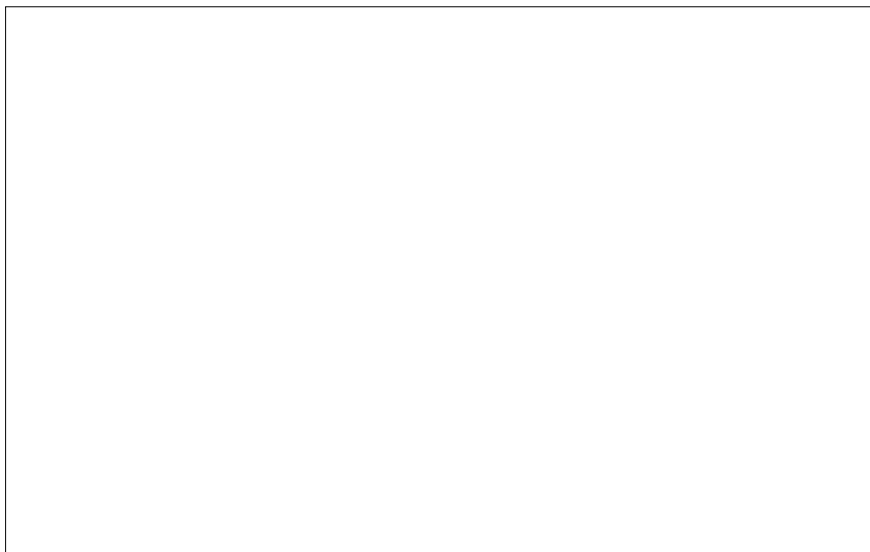


Figure 1. Language Learning Mindsets and Their Behavioral Consequences

### **Research on Language Learning Mindsets**

Research in the field of language learning mindsets are relatively few. “Despite the widespread perception of a natural, innate aptitude for language learning, very little attention has been paid to the role of implicit theories within the field of applied linguistics” (Ryan & Mercer, 2012a, p.78). Dweck (2006) stated that people generally find both entity and incremental views of intelligence plausible, personally endorsing one theory more than the other.

Ryan and Mercer (2012a) examined the concept of innate ability as an expression of a fixed mindset by asking 23 university students (14 students from an Austrian university, 9 students from a Japanese university) to write reflective responses about their beliefs on the role of natural ability in L2 learning. Based on the written responses from the students, the conclusion was that learners may possess fixed or growth mindsets to various degrees and it would be much better to conceive of L2 learning mindsets on a continuum rather than dichotomous categories (Ryan & Mercer, 2012a).

Noels and Lou (2015) asked 180 university students registered in language courses to respond to a Language Mindset Index (LMI) consisting of 18 items. Six items respectively measured the constructs of: fixed and growth beliefs related to general language intelligence; L2 learning beliefs, and age sensitivity of L2 learning. Participants were presented with statements such as “Your language intelligence is something about you that you cannot change much” and answered each item on a six-point Likert scale from “strongly disagree” to “strongly agree”. The participants also answered an additional open-ended question regarding their beliefs about language intelligence. The results revealed a strong correlation between the students’ LMI scores and their written responses. Participants with LMI scores

within the areas of fixed, growth, or between both mindsets, respectively had written responses that matched the same construct areas of their LMI scores. Therefore, the LMI reliably represented the participants' expressed beliefs by differentiating participants who endorsed fixed, growth, or an area between both mindsets.

In another study by Noels and Lou (2015), they asked 150 university students enrolled in a language course to read a mock magazine article which reported scientific findings supporting either a fixed or growth perspective on language ability. The researchers were interested in seeing whether or not they could convince students to think in a more fixed- or growth-orientated manner, and therefore potentially influencing their goal orientations and responses to failure situations. One fixed mindset-inducing article and one growth mindset-inducing article were given to participants. After reading the articles, participants completed indices of their self-perceived language competence, goal orientations, fear of failure, responses to failure situations, and the LMI. The results revealed that participants who read the growth-mindset-inducing article had stronger growth beliefs than participants who read the fixed-mindset-inducing article, indicating that even with a small intervention (a mock magazine article), was able to shift the participants' L2 learning mindsets (Noels & Lou, 2015).

### **Japanese University EFL Learners' Language Mindsets**

It is important to consider that a learner cannot be separated from their learning context and it may be more pragmatic to view the learner and their context as an interactive co-adaptive dynamic system (Mercer, 2012). This recognizes each person's uniqueness in which abilities are constantly evolving as the learner engages in and interacts within various learning environments. Thus, it is necessary to consider the L2 learning mindsets and educational backgrounds of Japanese University EFL learners as they enter universities.

In the six years prior to university, English is a mandatory subject for junior and senior high school students. Many of these students have largely relied on memorization to give them the information they need to pass university entrance exams and as Ryan (2009) suggested, it is an English that can solely exist in the domain of the Japanese English language classroom without communicable use in the outside world. Moreover, English education in Japan is still largely based around teacher-fronted, grammar-translation methodologies valuing the acquisition of vocabulary and explicit structure through repeated practice. This allows few opportunities to freely use English in an orally communicative manner with other interlocutors. However, upon entering university, the emphasis on English communication skills is much more pronounced. Students are suddenly expected to produce large amounts of oral output and perform communicative tasks which do not directly require their previously acquired explicit language skills. Many first-year Japanese university students find themselves in such a scenario as they are ill prepared for this level of communicative output and interaction in L2. Japanese university EFL learners have opportunities to use English for reasons other than passing an entrance exam, but many

do not know to orientate themselves to deal with such difficulty, leading to possibly adopting a fixed L2 learning mindset early in their university life.

### **Fostering Growth Mindsets in Japanese University EFL Learners**

In order to foster a learning environment that promotes the adoption of L2 growth mindsets, educators first need to develop a positive learning culture surrounding themselves. Educators should confirm that they possess growth mindsets and believe in their learners to continually develop their L2 learning abilities. Educators need to evaluate their own beliefs in regards to what kinds of in-class pedagogical practices and materials can potentially impact their learners' mindsets. Dweck (1999) proposed four key areas in which educators are believed to be able to influence and enhance learning mindsets:

1. through careful use of praise and feedback on effort, not talent;
2. through positive modeling of their own and other successful individuals' growth mindsets;
3. by providing learners with strategies to actively direct and manage their own learning;
4. by using materials which enable learners to witness their own growth and thereby feel a sense of progress.

Although the following research did not directly address the learning mindset concerns of Japanese University EFL learners, their findings could potentially be applied to a wide-range of learners and educational environments in hopes of facilitating the development of growth mindsets.

### **The Use of Praise**

Praise for students should highlight effort and progress and avoid implications that successful L2 learning outcomes are the result of a person's natural "gift" for languages (Dweck, 2006). Mueller and Dweck (1998) found that praising young adolescents for their intelligence by saying they are "smart" when they performed well, created fixed mindsets as individuals felt as if they were evaluated based on their intelligence. By praising the students' progress due to effort and the adoption of learning strategies, this action led learners to focus on the process and the possibilities of learning and improvement that effort can provide (Mueller & Dweck, 1998). The emphasis on effort led learners to focus their development on the mastery of their skills, and encounters with failure were seen as temporary and due to a lack in effort rather than a lack of intelligence. Educators need to be aware of how they praise students. Despite being well-intentioned or trying to build their students' self-esteem, praising talent over effort can serve to undermine resilience in learners.

## **The Use of Interventions**

Yeager, Paunesku, Walton, and Dweck (2013) proposed that mindset interventions have three essential qualities:

1. they successfully target students' beliefs about themselves and their educational environments;
2. they are delivered in a psychologically precise and potent way;
3. they tap into recursive processes in school that sustain the effects of the initial intervention.

Precise psychological interventions promoting growth mindsets can work to break down an existing fixed mindset, creating lasting changes in motivation and learning. Blackwell, Trzesniewski, and Dweck (2007) instructed low-income, minority 7<sup>th</sup>-graders in a math class to consider their brains as muscles that strengthen as one exercises them. The researchers presented students with neuroscientific studies describing the brain's malleability and growth potential. The learners were informed that when they encounter difficulty and confusion during a learning task, this enables the development of new neural connections in the brain and thus, they become "smarter". The treatment group received six sessions of study skills along with two sessions of neuroscience studies while the control group received eight sessions of study skills. At the end of the academic year, the results showed that the control group continued a normal decline in math grades common in middle schoolers while the students in the treatment group performed significantly better with their grades.

Another intervention comes in the form of displaying subtle messages to learners. With over 250,000 students learning math concepts on the Khan Academy website, Paunesku, Yeager, Romero, and Walton (2013) presented learners with a message promoting a growth mindset that was displayed at the top of the screen whenever learners logged onto the website. The treatment group received the message, "When you learn a new math problem, you grow your math brain!", while the control group did not receive any message. This intervention was found to increase the rate in which students in the treatment group successfully solved math problems even months after they did not see the message, compared to those in the control group. Although there could possibly have been a number of variables that contributed to a higher rate of math problems solved by the treatment group, delivering subtle interventions promoting a growth mindset message to L2 learners is a domain that needs further research, yet could potentially result in the large-scale development of growth mindsets.

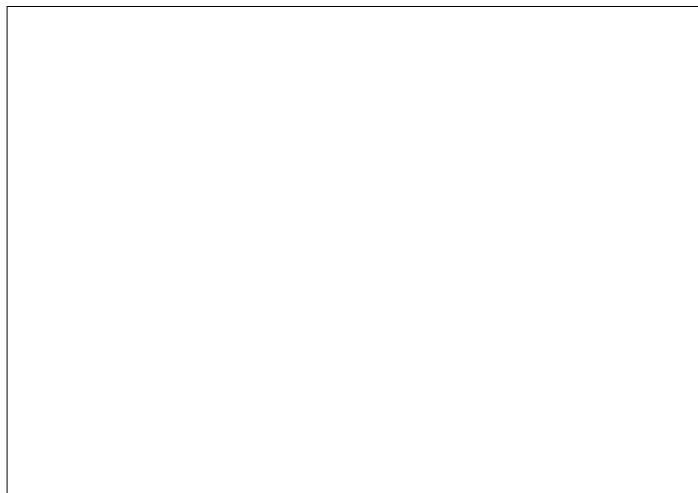


Figure 2. Example of a Growth Mindset Intervention Message

Yeager et al. (2013) also proposed a more direct intervention in which learners create written growth mindset themed messages and communicate them to others. Such an application could involve asking students to produce writing to younger students, advocating a growth mindset message such as “Tell a younger student why it is possible to learn a L2”. Encouraging students to produce a persuasive appeal and advocate for it to a receptive audience is a powerful means to self-persuasion as well (Yeager et al., 2013).

Seminars, orientations, and presentations could serve to be impactful growth mindset interventions for both educators and students. Having discussions on mindset beliefs and their implications for learning behaviors could generate more awareness and inspire individuals to a call for self-action. An explicit, open discussion is likely to be useful in dispelling inhibiting, unhelpful beliefs derived from fixed mindsets. Teacher development workshops could also allow educators to reflect upon and evaluate current curricula, lesson plans, and pedagogical approaches, in a manner that underscores the promotion of growth mindsets as one of the core values in education.

The impact of psychological interventions on learners in the domain of L2 learning is still relatively unresearched, prompting calls for more empirical studies in this area of learner development. Considerations concerning what types of interventions to choose, the appropriate length for a mindset intervention, how to embed growth mindsets in pedagogical content, and effective ways of giving critical feedback are just some of the areas that need to be taken into consideration. The objective is to provide educators with a reliable set of pedagogical and psychological tools which can be used to develop L2 learners’ growth mindsets.

## Conclusion

There is potential for learners' L2 mindsets to change. Educators must believe this and be in a position to help L2 learners develop growth mindsets about their own abilities. If learners do not believe in their potential to improve, no matter how pedagogically sound teaching materials or curricula may be, they may fail to connect and motivate learners on their core beliefs. A talent for languages is not a fixed and innate entity, but it is rather a complex, ongoing lifelong process composed of multiple abilities that every individual can further develop given effort, a supportive learning environment, motivation, and resilience.

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