# **Feature Article**

## Language Learning Mindsets Across Cultural Settings: English Learners in Austria and Japan

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This paper argues the need for greater integration of insights from mainstream educational psychology into language education and considers the application of one established concept—mindsets—from psychology. Two basic language learning mindsets are conceptualised: a fixed mindset, which regards language learning success as a function of pre-existing natural talent, and a growth mindset, which values effort over talent. These mindsets are regarded as being fundamental to how individual learners approach learning, affecting the setting of goals, the use of strategies and the regulation of effort.

The paper goes on to consider the application of the concept across two contrasting cultural settings and the relevance or applicability of a psychological construct developed in the West to other learning contexts. It reports on a small-scale exploratory study with first-year language learners in Austria and Japan. Analysis of the data found clear differences between the two cultural settings. The Austrian learners showed a clear tendency towards a fixed mindset for language learning that was distinct from their overall beliefs about intelligence and language learning; the Japanese learners tended towards a strong growth mindset, which appeared to be integrated with their overall beliefs about intelligence and language learning. However, further analysis of the Japanese data suggested a more complex system of sometimes conflicting beliefs, which often seemed rooted in a scripted social discourse.

本論では、マインドセット (=mindset)と言う概念を通して、教育心理学の 理論と方法を言語教育に取り入れるべきであると主張する。基本となる2タ イプの言語学習に対するマインドセットが概念化されている。 固定的マイ ンドセットは言語習得は生まれつきの才能によって決定され、一方、拡張的 マインドセットは才能よりも努力を重視すると考えられている。マインドセ ットは、個々の言語学習の取り組み方を方向づけ、目標設定をはじめ学習方 略の使用や努力の維持に影響を及ぼす。この西欧圏で開発されたマインドセ ット概念の妥当性、適性を2つの対照的な異文化圏の学習環境において検討 した。オーストリアと日本の大学1年生を対象とした小規模な予備的研究の 結果は対照的なものであった。オーストリア人学習者は全体的な知能と言語 学習に対する考え方とは一線を画す言語学習に対する固定的マインドセット を有し、日本人学習者は全体的な知能や言語学習に対する考え方と同調する 言語学習に対する拡張的マインドセットの傾向が見受けられた。しかし詳し い分析をすすめると、日本人学習者の言語学習に対するマインドセットはよ り複雑で、社会的に構築された言語学習に対する建て前的な考え方と時に 対立するものであることが示唆された。

### Introduction

The origins of this paper lie in an ongoing series of studies (Mercer & Ryan, 2010, 2011; Ryan & Mercer, in press) that attempts to apply an established concept from educational psychology—mindsets—to the field of language learning. Foreign language education has traditionally maintained a somewhat mixed relationship with mainstream educational psychology (see Dörnyei, 2001, 2009; Mercer, Ryan, & Williams, in press), often preferring to use constructs and concepts developed within the specific context of language education at the expense of others more widely recognised in other domains. With this in mind, in this paper we make a conscious effort to look beyond research specific to language learning and remain aware of our need to keep "apace with significant developments in mainstream psychology" (Ushioda, in press).

We focus on exploring how the concept of mindsets manifests itself in two very different language learning contexts. The mindsets construct is largely a product of research conducted within the Western, or more specifically North American, context. We are interested in how such a construct can be applied in other socio-educational contexts, and in order to do this, we look at the language learning mindsets of English learners in Japan and in Austria.

## Theoretical background

The mindsets construct can be traced back to Kelly's (1955) ideas about the role of lay theories in how individuals perceive the self and others. In more recent educational psychology literature, these ideas have been developed through the concept of implicit theories, which represent the deeply held beliefs or assumptions about various aspects of the human condition that we all have. In the field of educational psychology, the concept of implicit theories of intelligence is most closely associated with the work of Carol Dweck (Dweck, Chiu, & Hong, 1995; Chiu, Hong, & Dweck, 1997; Hong, Chiu, Dweck, Lin, & Wan, 1999; Dweck, 2000, 2006; Dweck & Molden, 2007; Blackwell, Trzesniewski, & Dweck, 2007). Within SLA literature, this concept relates most closely to the rich body of theoretical and empirical work (Horwitz, 1987, 1998, 1999; Cotterall, 1995, 1999; Benson & Lor, 1999; Barcelos, 2003; White, 2008) investigating the relationships between beliefs and language learning behaviour. While this body of research has contributed much to understandings of learners' belief systems, as we stated in our introduction, one of our primary objectives in this paper is to orient towards mainstream educational psychology. Therefore, we have chosen to concentrate primarily on the implicit theories literature while recognising the potential connections to the beliefs literature, especially in terms of methodological approaches.

Dweck identifies two principal sets of implicit theories relating to learning and intelligence: an 'entity theory' and an 'incremental theory'. A person holding an entity theory regards an individual's intelligence and capacity to learn as being fixed. In contrast, a person subscribing to an incremental theory believes that everybody has the capacity to develop their intelligence as it is like any other muscle that can be built up through purposeful exercise and practice. We have chosen to employ the more accessible and easily understood term 'mindsets' (Dweck, 2006) when referring to the implicit theories framework. Using the mindsets terminology, a fixed mindset is equivalent to an entity theory and a growth mindset corresponds to an incremental theory. There is general agreement in the literature (Henderson & Dweck, 1990; Good, Aronson, & Inzlicht, 2003; Blackwell et al., 2007) that a growth mindset tends to facilitate academic achievement and that learners may benefit from interventions designed to encourage growth mindsets.

Mindsets represent a set of core beliefs about the nature of ability and its role in successful learning within a specific domain, and this core underpins the formation of "a larger system of allied beliefs and goals" (Molden & Dweck, 2006, p. 201). These beliefs are seen as part of a constant background informing the decisions learners make, connecting to and shaping a wide range of variables which "work together as a motivational self-regulatory system" (Robins & Pals, 2002, p. 315). The mindsets framework links aspects of learner behaviour and motivation that have often been investigated in isolation, such as self-regulation, learner beliefs, and goal-setting, and suggests ways in which they may interact.

#### Language learning mindsets

Two basic language learning mindsets are proposed: a fixed language learning mindset and a growth language learning mindset. A brief outline of our conceptualisation and how the framework could affect other aspects of learner behaviour is presented in Figure 1.

Based on our consideration of the mindsets literature, we hypothesise that a fixed language learning mindset, constructed around a view of language learning in which success is largely determined by one's innate talent for languages, is likely to lead to largely maladaptive learning behaviour, such as avoiding challenges, giving up easily and being discouraged by mistakes. In contrast, a growth mindset that situates learners as agents of their own learning is likely to produce effective language learners in classroom settings given that they are likely to welcome feedback, be willing to learn from mistakes and persist in the face of difficulties (Ryan & Mercer, 2011, in press).

	Core beliefs about language learning	Language learning behaviour
		avoid challenges
	a successful language learner has	
Fixed	an innate talent	give up easily
language		
learning	successful language learning occurs	regard effort as pointless
mindset	naturally, without conscious effort	to a second day of the first the second
	the learner is a passive vessel	ignore or avoid negative feedback
		easily discouraged by mistakes
		seek challenges
	anybody can learn a language if they	Seek on an enges
	work hard at it	persist in the face of difficulties
Growth		
language learning	language learning requires long-term purposeful/strategic effort	regard effort as intrinsically rewarding
mindset		welcome and learn from feedback
	learners are active agents in their	
	learning	admit mistakes and work to overcome them

Figure 1. Language learning mindsets and their behavioural consequences

#### Language learning mindsets across cultures

An additional dimension of the mindsets framework that gives cause for both great excitement and caution is how the concept of language learning mindsets can be applied across different cultural settings. To what extent can ideas developed in one particular context be adapted and made relevant to others? Cultural differences pose a unique set of problems for any psychologybased theory of language learning behaviour. There is a powerful argument, articulated most vociferously by the indigenous psychology movement, that "The generation of psychological knowledge is culture dependent: Both the conceptualisation of psychological phenomena and the methodology employed to study them are informed by cultural values and presuppositions" (Ho, Peng, Lai, & Chan, 2001, p. 931).

Cross-cultural psychology research has highlighted differing notions of intelligence across cultures (Sternberg, 2004, 2007) and different culturally constructed concepts of the self (Markus & Kitayama, 1991, 1999; Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997). However, some mindsets research (see Lim, Plucker, & Im, 2002) suggests a high degree of similarity between the implicit theories of Asian learners and those from the US. Our aim is to explore the possibilities suggested by this research to develop a language learning mindsets framework that is supported by the robust foundations of concepts fundamental and common to all language learners, such as aptitude and effort, yet remains flexible and sensitive enough to reflect and explain local variations.

## Methods Participants

This paper reports on a small-scale exploratory study conducted amongst English learners in Austria and Japan. A total of 81 university students participated. The participants were all first-year language majors. The decision to focus on first-year students was informed by our evaluation of the relative educational contexts and a judgement that both sets of learners were at a similar transitional stage in their language learning careers. It was also felt that the common transitional experience of moving from secondary to tertiary education may reveal participants as being open to reflection upon both themselves and their language learning.

Table 1Participants in the Questionnaire

	Australia	Japan	Both	
Male	7 (17.5%)	9 (22%)	16 (19.8%)	
Female	33 (82.5%)	32 (78%)	65 (81.1%)	
Total	40	41	81	

#### Instrument

The questionnaire consisted of two parts: closed items and open-ended items. The closed items reported on in this paper were adapted from the Implicit Theories of Intelligence scale (Dweck et al., 1995; Dweck, 2000). All of these items were measured with six-point Likert scales. Two threeitem scales were constructed to measure how far students concurred with a fixed mindset or a growth mindset. The scales and their internal reliability coefficients are given below.

#### Table 2

Theories of Intelligence Questionnaire Items and Reliability Coefficients

Theories of intelligence (FIXED) <b>a</b> = .86	Theories of intelligence (GROWTH) a = .69			
Your intelligence is something that	It is possible to change even your basic			
you can't change very much.	intelligence level considerably.			
To be honest, you can't really change	No matter who you are, you can change your			
how intelligent you are.	intelligence a lot.			
You can learn new things, but you can't	You can always greatly change how			
really change your basic intelligence.	intelligent you are			

Following on from studies such as Chen and Pajares (2009), we adapted the Implicit Theories of Intelligence items to specific domains of learning. The first task was to develop items that looked specifically at language learning. At this exploratory stage of the research, single items were used to investigate fixed and growth mindsets for language learning.

 Table 3

 Language Learning Questionnaire Items

Language Learning (FIXED)	Language Learning (GROWTH)			
There is no point to trying to learn a	Effort is the secret to success for language			
foreign language if you don't have a	learners.			
talent for languages.				

A further dimension to the questionnaire concerned how these beliefs about language learning related to beliefs about other domains of learning. In the questionnaire, we decided to look at two other domains of learning; one area was athleticism, which is non-academic and often associated with natural ability, and the second was geography, chosen as it is a classroom-based subject not typically identified with any natural ability or talent.

The open-ended items in the questionnaire were included to offer learners the opportunity to express their own ideas about their beliefs relating to language learning and the origins of those beliefs. These questionnaires were then supplemented by a series of semi-structured interviews based on the questionnaire items. These interviews were recorded, transcribed and coded using the Atlas.ti data management software package (Mercer and Ryan, 2010).

FIXED **GROWTH** Athleticism In order to become a great Effort is much more important athlete it is necessary to be than natural ability if you want to become a successful athlete. born with athletic ability. People who are successful at **Geography Learning** People who are good at geography have a natural talent geography have usually worked for the subject hard for their success.

 Table 4

 Athleticism and Geography Questionnaire Items

## Results

### The cultural base of language learning mindsets

When we compare the two national groups shown in Table 5, the picture is highly revealing. If we isolate the figures referring to general intelligence, it is possible to observe a significantly stronger tendency towards beliefs in the power of effort, beliefs indicative of a growth mindset, over beliefs in the value of natural talent (i.e., beliefs typical for a fixed mindset) within the Japanese group. In the Austrian sample, there is no significant difference between the two sets of beliefs for general intelligence. However, when we move to the specific domain of language learning, the discrepancy between the two national samples becomes more evident. The Austrian learners display a marked tendency to believe in the value of natural talent, whereas the Japanese group appears to set little value on natural talent, strongly favouring a belief in effort as the key factor.

The Austrian learners appear to tend neither towards a growth mindset nor a fixed mindset, yet they report a strong tendency towards a fixed mindset for language learning and a growth mindset for geography learning. The pattern observed in the Austrian data is consistent with much of the psychology literature, which indicates that mindsets tend to be domain-specific, that mindsets about specific domains of learning exist independently of each other. However, an examination of the Japanese results reveals a more unusual and somewhat unexpected pattern that requires further investigation and for which additional qualitative data may be necessary. In the remainder of this paper, we will focus on the Japanese data as this appears to present the biggest challenge to our goal of applying the concept of mindsets to the field of language learning.

		Fixed mindset		Growth mindset				
		Mean	SD	Mean	SD	t	df	Effect Size†
AUSTRIA	Language learning	4.77	0.87	2.62	1.21	-8.89**	38	0.67
	General Intelligence	3.31	1.78	3.84	0.89	-1.82	39	0.08
	Athleticism	3.77	1.27	3.85	1.82	-0.22	38	0.00
	Geography	2.78	1.10	3.63	1.26	2.73*	39	0.16
JAPAN	Language learning	1.62	0.85	5.03	0.97	14.92**	40	0.84
	General Intelligence	2.47	0.88	4.53	0.91	-9.98**	40	0.71
	Athleticism	3.76	1.22	4.59	1.10	4.14**	38	0.30
	Geography	2.22	1.24	3.98	1.37	6.25**	40	0.49

 Table 5

 A Comparison of Overall and Domain-specific Mindsets for the Two National Groups

\* p < 0.01; \*\* p < 0.001; <sup>†</sup> eta squared

#### Japanese learners and a socially scripted discourse

One of the great challenges of researching implicit theories is that, by definition, individuals struggle to articulate them. It is conceivable that individuals may consciously articulate explicit beliefs that contradict other deeply held implicit beliefs. In the Japanese data, there was an overwhelmingly strong reference to a belief in the importance of hard work and purposeful effort suggesting a sense of personal agency, an apparently strong growth mindset throughout the data and across domains. This was most succinctly expressed by one questionnaire respondent thus: "Effort is everything" (written in English by respondent).

Only one person in the Japanese data implied a potential role for natural

talent, and yet she also claimed that its absence could be overcome by hard work: "Even if you don't have a natural sense for languages, if you work hard and use the language every day you are sure to improve" (translation from Japanese questionnaire).

The literature on Japanese educational values tends to highlight the central role of a *ganbaru* (effort/persistence) theory of learning (Singleton, 1989) therefore perhaps these results should not be surprising. The data indicate that the Japanese participants are applying their general theories of learning to the specific field of language learning to a much greater degree than would be suggested by a reading of the psychology literature. We need to consider why this is occurring and to what extent it challenges our attempts to apply the concept of mindsets to the field of language learning.

One possible explanation may relate to the nature of much language education in Japan, which is still largely based around teacher-fronted grammar-translation methodologies valuing the acquisition of vocabulary and structure through perseverance and painstaking practice. Furthermore, learner experiences of language education tend to be centred around examinations that are used to assess one's overall academic abilities (Brown & Yamashita, 1995); therefore, it is perhaps unsurprising that in the Japanese context language learning mindsets are much closer to mindsets for general intelligence than those observed in the Austrian data. This suggests that the nature of the local educational culture appears to be a possible factor in the construction of mindsets.

The strong faith in the efficacy of effort was supported by an initial analysis of the qualitative data. However, the qualitative investigation gave us the opportunity to explore the issues in greater depth and with more sophistication. We were particularly keen to pursue our interest (Mercer & Ryan, 2010) in the possibility of sub-domains with different beliefs within skill-specific domains of language learning. In the following excerpt from an interview with one of the Japanese learners, the almost monolithic, uniform picture of a strong belief in the power of effort appears less secure.

- I: So which is more important the natural talent or hard work?
- R: Hard work. (Laughs) Why? (Laughs) Ahh ... some people, if that person didn't... in some cases, people who study hard but they don't speak well.
- I: Ok, so what's stopping them speaking well?
- R: The brain. Their brain.

In the above exchange, the respondent (R) initially expresses an ostensibly unequivocal belief in the value of effort, indicative of a growth mindset, but when pressed to expand on this and to focus on speaking, she reveals a more complex picture. Her response that 'their brain' is preventing some language learners from becoming successful suggests that her belief in the power of effort is qualified by considerations of the innate abilities of the individual. This suggests that her superficially strong growth mindset for language learning does not extend to the sub-domain of speaking, that her core beliefs for learning to speak a language may actually be more representative of a fixed mindset.

It is also possible that learners may be responding to questionnaire items and interview questions based on a schema or scripted discourse about the nature of language learning. This scripted discourse may not be an accurate reflection of their own more complex, personal, deeply-held beliefs system. However, lacking either an awareness of their own implicit beliefs or the metalanguage to articulate them, participants appear to fall back on the socially scripted discourse which stresses the importance of hard work and effort.

## Conclusions

It is important to reiterate the point that the current discussion stems from a small-scale exploratory study. Based on a knowledge and interest in the literature from educational psychology, we were keen to explore to what extent a concept developed in that field could be successfully applied to language learning in these two different educational contexts. Our immediate goal was to explore the validity of such an approach rather than make any definitive claims.

#### **Conceptual concerns**

Although in many respects the data obtained from our questionnaire were encouraging and fulfilled the immediate exploratory aims of the research, subsequent analysis of the data suggests that our initial conceptualisation of mindsets, based on the psychology literature, may have emphasised too stark a dichotomy between effort and talent. In doing so we may have oversimplified the nature of what appears to be an extremely complex construct. A blind faith in effort or persistence could actually be more indicative of a fixed mindset, as not giving up may represent a means of avoiding any contemplation of failure, which in turn could pose a threat to the self-concept. Whereas an individual with a growth mindset would not feel threatened by failure and would be willing to abandon any unsuccessful strategies or try out fresh approaches. A true growth mindset must therefore represent more than merely a belief in the value of effort or persistence; there must also be a strategic component, a willingness on the part of learners to adapt their behaviour. This additional dimension of mindsets is an area that needs to be investigated in further research both within educational psychology and specifically SLA.

A further refinement suggested by the qualitative data is that more attention needs to be focused on differentiating between the sub-domains within language learning. Our original instrument design presented language learning as a single entity, yet the data indicate that we need to expand our conceptualisation of language learning to include various sub-domains, such as speaking and writing, if we wish to make our research more effective.

A final point suggested by our analysis is the need to develop more sophisticated, innovative research instruments that allow us to get beyond possible scripted discourses. Much of the power and potential of the mindsets construct lies in the fact that these beliefs are so deeply held that individuals may not be immediately aware of them or able to articulate them. This presents an obvious challenge for researchers and warns against a dependence on conventional self-report instruments, especially in cases where complex personal belief systems may conflict with an accepted socialised discourse.

#### Cultural context and mindsets

Our analysis of the data pointed to some clear differences between the two national samples. The Austrian group appears to hold more domain-specific beliefs, an observation consistent with the psychology literature. However, the data obtained from the Japanese group appeared to challenge some of the assumptions underlying our research, in particular the strong link that we were making between a belief in the power of effort and a growth mindset. The data point to multiple and conflicting beliefs and suggest that a more complex model is needed.

Some of the discrepancies between the Japanese and Austrian data—and the broader psychology theory—may be accounted for by specific features in the local provision of language education. This suggests that a more contextsensitive understanding of local manifestations of the mindsets framework is required, one that offers the possibility of exploiting local strengths and resources, as opposed to problematising discrepancies from the 'norm'.

The complexity of researching mindsets across different cultural settings presents researchers with considerable methodological challenges, especially the challenge of getting beyond the socially scripted discourse of language learning. Nevertheless, the strong influence of such deeply-held beliefs on language learners' behaviours and the pedagogic possibilities offered by a greater understanding of language learning mindsets mean that this is a challenge that should be high on the agenda for future SLA research.

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