

Costa Rican Students' Mindsets Toward Studying English¹

(Mentalidades de estudiantes costarricenses
para el estudio del inglés)

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Resumen

Esta investigación consiste en un estudio cuantitativo que compara los tipos de mentalidad demostrados por estudiantes de colegio de tres regiones de Costa Rica. Su objetivo es dar con los tipos de mentalidad idóneos para el aprendizaje del inglés. Además, se exploran diferencias entre las tres regiones geográficas estudiadas. Los resultados muestran que los estudiantes de las tres regiones manifiestan una tendencia hacia una mentalidad de crecimiento para el estudio del inglés. No se encuentran diferencias significativas al respecto para aprender inglés en las tres regiones analizadas. Se analizan las razones de estos hallazgos y sus implicaciones pedagógicas son discutidas.

AbstrAct

This study consists of a quantitative analysis comparing the mindsets of high school students from three different regions of Costa Rica. The objective is to identify students' mindsets for English learning.

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Possible differences between the three geographical areas are explored. The results suggest that the students in all three regions appear to tend toward the growth mindset for studying English. No salient differences regarding students' mindsets toward learning English were found among the three regions. The reasons for these results and pedagogical implications are also discussed.

Palabras clave: mentalidad de crecimiento, educación secundaria, aprendizaje de un idioma extranjero

Keywords: growth mindset, secondary education, foreign language learning

Introduction

Over the last few decades, motivation has been pointed out as one of the main elements for success in second language (L2) and foreign language (FL) learning. Thus, a considerable amount of research has been conducted on its nature and its role in second language acquisition (SLA).⁴ As mentioned by Pintrich,⁵ motivation should be considered as one of the key components that determines why some students thrive, while some others struggle to fit in the academic system. Recently, it has moved from being a peripheral component in psychology and education research to be a dominant subject of investigation in a wide variety of fields.⁶

Within the field of motivation, many perspectives and theories are related to what drives students to learn. In investigations conducted in SLA, the concept of mindsets⁷ has recently started to gain much

4 For example: Zoltán Dörnyei, "Motivation and Motivating in the Foreign Language Classroom," *The Modern Language Journal* 78, 3 (1994): 273-284. DOI: 10.2307/330107; y Zoltán Dörnyei and Ema Ushioda, *Motivation, Language Identity and the L2 Self* (Bristol, UK: Multilingual Matters, 2009).

5 Paul Pintrich, "A Motivational Science Perspective on the Role of Student Motivation in Learning and Teaching Contexts," *Journal of Educational Psychology* 95, 4 (2003): 667-686. DOI: 10.1037/0022-0663.95.4.667.

6 Pintrich, 667.

7 Carol Dweck, *Mindset, The New Psychology of Success* (New York, NY: Random House, 2006) 6-9.

interest.⁸ Mindsets play a key role in understanding language learners' motivation⁹ and can affect individuals' beliefs about the challenges they face when studying second and foreign languages. With it being commonly accepted that taking calculated risks and facing challenges by studying at a level slightly higher than one's current ability is an efficient way of learning,¹⁰ it is imperative for language students to view mistakes as being beneficial for their progress in language learning. Understanding students' mindsets may be one way of encouraging them to have this attitude. In this study, the authors look at the mindsets of high school students in three regions of Costa Rica. Because there has been little, if any, previous research conducted with mindsets in the Costa Rican setting, the objective of the present paper is to gain an initial understanding of the mindsets of Costa Rican students and to determine whether salient differences occur among the students in three different geographical regions.

Defining Mindsets

Stemming from implicit theories,¹¹ the concept of *mindsets*¹² points to the beliefs that individuals have about the innateness of intelligence, especially whether humans are born intelligent or one's skills come through effort and practice. The principles of the implicit theories

8 For example: Sarah Mercer and Stephen Ryan, "A Mindset for EFL: Learners' Beliefs about the Role of Natural Talent," *ELT Journal* 64, 4 (2009): 436-444. DOI: 10.1093/elt/ccp083; y Laurel Waller and Mostafa Papi, "Motivation and Feedback: How Implicit Theories of Intelligence Predict L2 Writers' Motivation and Feedback Orientation," *Journal of Second Language Writing* 35 (2017): 54-65. DOI: 10.1016/j.jslw.2017.01.004.

9 Nigel Lou and Kimberly Noels, "Changing Language Mindsets: Implications for Goal Orientations and Responses to Failure In and Outside the Second Language Classroom," *Contemporary Educational Psychology* 46 (2016): 22-33. DOI: 10.1016/j.cedpsych.2016.03.004.

10 Stephen Krashen, *The Input hypothesis: Issues and Implications* (Beverly Hills, CA: Laredo, 1985) 80.

11 Carol Dweck, Chi-yue Chiu, and Ying-yi Hong, "Implicit Theories and Their Role in Judgments and Reactions: A Word from Two Perspectives," *Psychological Inquiry* 6, 4(1995): 267-285. DOI: 10.1207/s15327965pli0604_1.

12 Dweck (2006) 6-9.

stem from decades of research pertaining to helplessness,¹³ how humans react to situations in which they feel they may fail,¹⁴ and attributions for success and failure in various tasks.¹⁵ Dweck and Legget¹⁶ explain that within the implicit theories, humans' beliefs regarding intelligence and ability fall into two general categories: the *entity theory* (i.e., a belief that humans are born “smart” or “not smart”) and the *incremental theory* (i.e., a belief that intelligence is changeable).

To make the terminology of implicit theories more accessible to those beyond researchers and experts in the field of psychology, Dweck¹⁷ simplified the terminology of implicit theories to *mindsets*, with the entity theory being coined as *fixed mindset* and incremental theory being referred to as the *growth mindset*. One with a fixed mindset believes that intelligence is unchangeable and regardless of how hard he or she may work or study, academic performance will not improve. On the other hand, someone who has a growth mindset feels a sense of agency in his or her learning and that effort leads to higher academic performance. Although the concepts of mindsets and the implicit theories have received much attention in the fields of psychology and education, their effects on language students are only recently gaining interest among SLA researchers.

13 For example: Martin Seligman, Steven Maier and James Geer, “Alleviation of Learned Helplessness in the Dog,” *Journal of Abnormal Psychology* 73, 3 (1968): 256-262. DOI: 10.1037/h0025831.

14 For example: Carol Dweck and Dickon Reppucci, “Learned Helplessness and Reinforcement Responsibility in Children,” *Journal of Personality and Social Psychology* 25, 1(1973): 109-116. DOI: 10.1037/h0034248.

15 Carol Dweck, “The Role of Expectations and Attributions in the Alleviation of Learned Helplessness,” *Journal of Personality and Social Psychology* 31, 4 (1975): 674-685. DOI: 10.1037/h0077149.

16 Carol Dweck and Ellen Leggett, “A Social-Cognitive Approach to Motivation and Personality,” *Psychological Review* 95, 2 (1988): 256-273. DOI: 10.1037//0033-295x.95.2.256.

17 Dweck (2006), 6.

Literature Review

Studies of Mindsets in Psychology

The study of humans' reactions toward situations that can be perceived as beneficial or where failure is likely have been investigated for many decades. However, as stated by Dörnyei and Ushioda,¹⁸ due to the complexity of the field of motivation, researchers tend to be selective in their focus; it is unrealistic to attempt to cover all the possible motives in one single theory.

Conclusions from studies like the one conducted by Seligman, Maier, and Geer¹⁹ suggest that all animals, including humans, perceive the degree of control over a situation and the amount of control they have affects the response behavior of the individual. They added that the feeling of helplessness regarding an event can block the acquisition of a new skill. In a study about learned helplessness and reinforcement responsibility, Dweck and Reppucci²⁰ found that even motivated children can show a tendency to attribute failure to the influence of external factors (e.g., luck, difficulty of task) and ignore the role of motivation if they believe they have no control over the results of an activity. In other words, their results suggested that the effect of motivation can be nullified in cases where the children feel they have no control over the outcomes of events. They also suggested that less persistent learners tend to take less personal responsibility for outcomes. Dweck²¹ has argued that children can be alleviated from a state of learned helplessness if they are taught to attribute failure to a lack of effort rather than to low aptitude.

Atkinson and Raynor²² proposed the achievement motivation and need for achievement theory. The authors explained the correlation

¹⁸ Zoltán Dörnyei and Ema Ushioda, *Teaching and Researching Motivation* (Harlow, UK: Pearson, 2011) 4.

¹⁹ Seligman, Maier and Geer, 256-262.

²⁰ Dweck and Reppucci, 109-116.

²¹ Dweck (1975), 674-685.

²² John Atkinson and Joel Raynor, *Motivation and Achievement* (Washington, DC: Winston & Sons, 1974) 1-479.

between the need of personal achievement and the avoidance of failure situations, and their impact on the individual's overall performance. Whereas the need for achievement serves as a stimulus to face failure, fear of failure is one of the main reasons to avoid adventuring into new fields of knowledge.

More recently, Covington²³ stated that people tend to maintain a high sense of personal value. Therefore, any situation that might lead to failure is considered as a threat and in some cases, this can lead to an intentional mediocre performance. The author stated people will prefer to attribute failure to a lack of effort, rather than to a lack of ability. Thus, some students will intentionally make little or no effort on a task so that they can be considered lazy, rather than make an effort, get a low grade and be exposed as incompetent.

A study by Dweck, Chiu, and Hong²⁴ confirmed the concept of the implicit theories. The authors claimed that humans' understanding of their intelligence and capacities can be categorized in two main groups: the entity theory and the incremental theory. The first includes those individuals who believe that intelligence and capacities are fixed and innate; and that effort has little or nothing to do with the skills one can achieve in a certain field. On the other hand, people within the incremental theory, believe intelligence is flexible and skills can be cultivated through practice and effort. Although the authors clarify that they do not see implicit theories as strictly determining people's behavior, and neither of the theories can be pointed to as right or wrong, each of these concepts has a significant impact on the judgment and reactions of individuals as well as on the way they confront the challenges of their surroundings. Each has its advantages and disadvantages. Chiu, Dweck, Tong, and Fu²⁵ stated that an individual's

²³ Martin Covington, *Making the Grade: A Self-Worth Perspective on Motivation and School Reform* (New York, NY: Cambridge University Press, 1992) 16-17.

²⁴ , Dweck, Chiu, and Hong, 268.

²⁵ Chi-yue Chiu, Carol Dweck, Jennifer Tong and Jeanne Fu, "Implicit Theories and Conceptions of Morality," *Journal of Personality and Social Psychology*, 73, 5 (1997): 923-940. DOI: 10.1037//0022-3514.73.5.923.

moral beliefs are also linked to the implicit theories; individuals who conceive people's moral character as fixed (i.e., entity theory) tend to have a stronger preference for duty-based moral beliefs whereas individuals who believe in a malleable reality (i.e., incremental theory) have a stronger preference for rights-based moral beliefs.

In addition, Dweck²⁶ clarifies that someone cannot be classified categorically within an entity theory or an incremental theory, since individuals are more likely to have a different tendency toward each one of the theories in a different degree depending on the subject matter. Hence, a person can clearly display entity theory behavior for certain areas such as sports, while being more likely to display incremental theory for other areas, like language learning.

In another approach, Duckworth²⁷ argues that mindsets affect both how people deal with the learning process and also how they perceive others' individual capacities. He added that people who are said to be gifted have advantages over those who have worked hard to achieve success especially when it comes to getting a job or being considered as suitable applicant for a business opportunity. This occurs because people tend to perceive that talent guarantees success even when they do not openly express that belief.

Mindsets in SLA

Over the last couple of decades, the concept of mindsets has become a popular research topic in the field of psychology. However, little research has been conducted in SLA. One of the earliest contributions in this field was that of Mercer and Ryan,²⁸ who conducted a comparative study between Japanese and Austrian students in tertiary-level EFL contexts. As suggested by Dweck,²⁹ the authors pointed out the importance of clarifying that students should not be labelled

²⁶ Dweck (1999), 2-4.

²⁷ Angela Duckworth, *Grit* (London: Vermilion, 2017) 24.

²⁸ Mercer and Ryan, 436-444

²⁹ Dweck (1999), 2-4.

as having a fixed mindset or a growth mindset; they are more likely to have a tendency toward different mindsets depending on the area of knowledge they are working with. They stated that even within a specific area of learning, like FL, students might display different mindset tendencies. For example, students who have a growth mindset when practicing writing, may believe that regardless of how hard they practice speaking, their pronunciation will not improve significantly (a trait of the fixed mindset). The same student, however, might see the value in practicing writing diligently, believing that practice will lead to higher writing skills (a trait of the growth mindset).

Mercer and Ryan³⁰ also pointed out the importance of cultivating students' growth mindset, as data suggested that learners with this mindset tend to cope better with setbacks or failure, and develop a more positive learning attitude. But at the same time, they clarify that although a growth mindset can encourage a learner to work actively to improve his or her own abilities, this may be effective only if the individual also feels equipped with the skills and tools for the task. Consequently, as suggested by Braten and Olaussen,³¹ it is essential to engage learners in instructional practices that equip them with the necessary strategies and skills to guarantee that their efforts lead to actual improvement. Finally, in Mercer and Ryan's study, it was suggested that Japanese people tend to have a more uniformed growth mindset for language learning in comparison with Austrians. However, as explained by these authors, their findings are not conclusive since the participants might have been responding to rooted cultural scripts and not to their own beliefs.

More recently, Lou and Noels³² conducted a study in a Canadian university with a group of students in an ESL class. The authors wanted

³⁰ Mercer and Ryan, 436-444.

³¹ Ivar Braten and Bodil Olaussen, "The Relationship between Motivational Beliefs and Learning Strategy Use among Norwegian College Students," *Contemporary Educational Psychology* 23, 2 (1998): 182-194. DOI: 10.1006/ceps.1997.0963.

³² Nigel Lou and Kimberly Noels, "Changing Language Mindsets: Implications for Goal Orientations and Responses to Failure In and Outside the Second Language Classroom," *Contemporary Educational Psychology* 46 (2016): 22-33. doi: 10.1016/j.cedpsych.2016.03.004

to identify the effect of mindsets on the L2 learning process and determine whether a learner's mindset can be modified. The results showed that learners with a growth mindset, regardless of how they perceived their language competence, reported a more mastery-oriented response in failure situations and a stronger intention to continue learning the target language. In contrast, those students that were primed to have a tendency toward a fixed mindset, reported more helpless-oriented responses and fear of failure. The authors stated that by manipulating the students' mindsets, it is possible to change how they think about the nature of language intelligence and thereby influence their motivation for learning a language.

A cultural and educational system that shapes students' mindsets can influence their motivation and school achievement.³³ According to Moser, Schroder, Heeter, Moran, and Lee,³⁴ people who believe intelligence is malleable (i.e., an aspect characterizing someone with a growth mindset) are better able to recover from failures than those who believe intelligence is immutable. Furthermore, children with a growth mindset view errors as more motivationally relevant than their counterpart and at the same time use more cognitive resources in processing and correcting mistakes.

Unfortunately, even though the impact of mindsets has been vastly studied across different academic domains like music, sports, math, and science, there is a lack of systematic research on mindsets on language learning.³⁵ Authors like Mercer and Ryan³⁶ and Leis (in review) have studied mindsets and their effect in the EFL learning process. However, there is still much work that needs to be done in the field.

33 David Yeager and Carol Dweck, "Mindsets That Promote Resilience: When Students Believe That Personal Characteristics Can Be Developed," *Educational Psychologist* 47, 4 (2012): 302-314. doi: 10.1080/00461520.2012.722805

34 Jason Moser, Hans Schroder, Carrie Heeter, Tim Moran and Yu-Hao Lee, "Mind Your Errors: Evidence for a Neural Mechanism Linking Growth Mind-set to Adaptive Posterror Adjustments," *Psychological Science* 22, 12 (2011): 1484-1489. DOI: 10.1177/0956797611419520

35 Lou and Noels, 23.

36 Mercer and Ryan, 437-438.

In the case of Central America, there is little background in the study of mindsets and their effects on EFL as far as the authors have found. Leis and Barquero³⁷ conducted a quantitative study comparing the mindsets toward English of high school students in Costa Rica and Japan. Among their results, they found Costa Rican students appeared to have a stronger tendency toward the growth mindset in the field of EFL. Beyond this small study, the amount of research related to the mindsets of students studying in EFL environments is limited, and there are even fewer studies discussing the possible variables regional differences within a country might cause. This paper intends help fill that void and contribute to the understanding of young Costa Rican EFL learners' mindsets, as well as taking a small step forward in the process of gaining a better understanding of the implications regional particularities can have on young learners' mindsets.

Influence of Culture on Mindsets

Relatively few investigations have been conducted on the influence of culture on one's mindsets. However, as suggested by Mercer and Ryan³⁸ the influence social scripts have over people's mindsets should not be underestimated, and to what extent they affect learners' self-reported mindsets is still not clear. They suggested that it is important to explore the role of various other factors and processes which may contribute to mindset formation, form part of the social comparison process, and affect other people's beliefs and learners' experiences in other subjects.

In an effort to fill the gap on comparative studies on mindsets, the authors of this paper, carried out previous research on the differences and similarities high school students from two vastly different countries, Costa Rica and Japan, had on their mindsets in the EFL

³⁷ Adrian Leis and Luis Barquero, "Mindsets for Learning English: A Comparison of Costa Rica and Japan," *Bulletin of Miyagi University of Education* 52 (2018): 229-242.

³⁸ Mercer and Ryan, 443.

learning process.³⁹ The results obtained show that Costa Rican students have a higher tendency toward the growth mindset when it comes to English learning. The authors suggest that this can be related to the influence of the United States on this Central American country due to its proximity, as well as to the influence of tourism developed and the high number of native English speakers that visit. The authors suggest having a higher number of possibilities to interact with English speakers serves to motivate learners to work on their English skills and see the benefits of taking calculated risks in their learning (i.e., the growth mindset).

Another factor that has not yet been studied sufficiently is the influence that geographical areas and demographic characteristics can have on learners' mindsets and the motivation to study a L2. Focusing on the concept of L2 selves, Lamb⁴⁰ carried out research with Indonesian L2 learners from three distinct contexts: a metropolitan city, a provincial town, and a rural district. The study examined the motivation to learn English within these three groups of Indonesian junior high school students. His results suggest that there is a common pattern in which the results for the metropolitan and provincial schools were similar, but clearly different from those of the rural schools. For Lamb, it is not surprising for students in more remote areas to show less motivation to learn English, as they also showed less international posture (the feeling that one belongs to the international community).⁴¹ At the same time, he also suggested that their families had less influence on their motivation. In addition, students from the metropolitan and provincial areas had more positive attitudes toward learning the L2 outside of the school, since they had greater opportunities and resources to do so in comparison with those from rural areas. In the

³⁹ Leis and Barqueró, 229-242.

⁴⁰ Martin Lamb, "A Self System Perspective on Young Adolescents' Motivation to Learn English in Urban and Rural Settings," *Language Learning* 62, 4 (2012) 997-1023. DOI: 10.1111/j.1467-9922.2012.00719.x.

⁴¹ Tomoko Yashima, "International Posture and the Ideal L2 Self in the Japanese EFL Context," Dörnyei and Ushioda (eds.) 144-163.

present study, the authors aim to conduct an investigation similar to Lamb's, but focusing on mindsets and looking at students in the Costa Rican context.

The Study

Research questions

In this study, the authors aimed to answer the following re-search questions:

1. Do Costa Rican students generally possess a growth mindset in their English studies?
2. Are there any significant differences in the mindsets of students toward studying English, according to the region where they live?

Methodology

The authors used a questionnaire created by Leis (in review) based on the work of Crandall, Katkovsky, and Crandall.⁴² The questionnaire attempts to gather information on the mindsets of the participants in six separate categories: English, Mathematics, Spanish, Physical Education, General, and Metacognitive Skills (i.e., self-reflection). The first four were chosen to gain a general understanding of the participants' overall mindsets as well as making a comparison of some of the basic subjects in the Costa Rican school curriculum. The category General was added to cover items that did not belong to the other categories and it does not necessarily refer to aspects related to the academic field. The final category of Metacognitive Skills was included due to the authors' interest, but was not taken into account in the statistical analyses in this study.

⁴² Virginia Crandall, "Walter Katkovsky and Vaughn Crandall, Children's Beliefs in Their Own Control of Reinforcements in Intellectual-Academic Achievement Situations," *Child Development* 36, 1 (1965): 91-109. DOI: 10.2307/112678

As in Leis and Barquero,⁴³ the items in the questionnaire inquire into the participants' understanding of the importance of having control over one's learning and performance, (i.e., the features of a person with a tendency toward a growth mindset, actually behaving in a way that reflects those traits). The reliability of the categories within the questionnaire was admittedly low ($\alpha < .70$), reflecting the hypothesis of Mercer and Ryan⁴⁴ that one does not necessarily hold only a growth mindset or only a fixed mindset in all language skills. Because the authors of the present study aimed to simply gain general knowledge on Costa Rican students' mindsets, the reliability of each category was not considered to be detrimental to the results. See Appendices A and B for the English and Spanish versions of the questionnaire.

The Participants

A total of 157 high school students from three different regions of Costa Rica participated in this study. The first sample was taken from a high school in Sabalito (i.e., Group SB), a community at the south of the country. A total of 47 participants (22 females, 25 males) with an average age of 16.93 from this institution completed the questionnaire. The second sample was taken from a high school located in San Ramón (i.e., Group SR), a town in the northwest of the country. From this second institution, a total of 59 participants (25 females and 34 males) with an average age of 16.13 completed the questionnaire. Finally, a third sample was taken from a high school in Las Juntas de Abangares (i.e., Group LJ), a city located in the north. A total of 51 participants (28 female and 23 male) completed the questionnaire, with the average age of this sample being 17.05 years.

All three communities analyzed have certain demographical similarities. According to the estimations provided by Costa Rican national institute of surveys and census (INEC, 2011), the population of the three districts is similar in numbers: Sabalito has some 13,000

⁴³ Leis and Barquero, 229-242.

⁴⁴ Mercer and Ryan, 437-438.

inhabitants, San Ramón has a population of approximately 9,000 inhabitants, and Las Juntas de Abangares an estimated number of 10,000 inhabitants. In addition, these three communities are considered as semi-rural areas and their human development index (HDI) numbers are similar as well. The estimated HDI in the year 2009 was 0.72 for Sabalito, 0.73 for San Ramón, and 0.74 for Las Junta de Abangares. These numbers indicated that all three districts have a mid- to low HDI (PNUD, 2011). In addition, their economy is also similar inasmuch as they all depend on both agricultural and business activities.

Results

The first research question in this study looks at whether Costa Rican students generally possess growth mindsets in their English studies. To measure this, using SPSS Version 23, a one-way analysis of variance (ANOVA), followed by post-hoc Tukey tests, was conducted to evaluate whether differences occurred among the categories measured and between English and other subjects. One point was given to each answer that indicated a fixed mindset; two points were given to responses that indicated growth mindsets.

The results suggested that statistically significant differences did occur among the five categories being measured, $F(4, 780) = 31.44$, $p < .001$. The post-hoc Tukey tests revealed that English was significantly higher than all other categories ($p < .001$). Table 1 displays the descriptive statistics, including mean scores, standard deviations, and 95% confidence intervals for each category.

Table 1. Descriptive Statistics of Mindsets toward Various School Subjects

Subject	Mean	SD	95% CI
English	1.84	.21	[1.80, 1.87]
Math	1.58	.30	[1.54, 1.63]
Spanish	1.63	.25	[1.59, 1.67]
Sports	1.57	.19	[1.54, 1.60]
General	1.69	.24	[1.65, 1.72]

Note: Growth Mindset: 2; Fixed Mindset: 1; $n = 157$; SD: Standard Deviation; CI: Confidence intervals.

Through the second research question, the authors hoped to gain insight as to whether there were any significant differences occurring in the mindsets of students toward studying English according to the region where they lived. First, a one-way ANOVA was conducted to compare the categories within each region. Within Group LJ, the ANOVA showed significant differences occurred among the categories, $F(4, 250) = 7.95, p < .001$. The post-hoc Tukey test showed that students appeared to have significantly stronger growth mindsets toward English in comparison to Math, Spanish, and Sports ($p < .001$), but not in comparison to General ($p = .06$). Table 2 displays the descriptive statistics for Group LJ.

Table 2. Descriptive Statistics of Mindsets toward Various School Subjects for Group LJ

Subject	Mean	SD	95% CI
English	1.78	.28	[1.71, 1.87]
Math	1.54	.34	[1.45, 1.64]
Spanish	1.55	.29	[1.47, 1.64]
Sports	1.51	.19	[1.46, 1.57]
General	1.64	.26	[1.57, 1.64]

Note: Growth Mindset: 2; Fixed Mindset: 1; $n = 51$.

Within Group SB, the one-way ANOVA showed significant differences occurring among the categories, $F(4, 230) = 12.89$, $p < .001$. The post-hoc Tukey test showed that students appeared to have significantly stronger growth mindsets toward English in comparison to all the other categories ($p < .001$). Table 3 displays the descriptive statistics for Group SB.

Table 3. Descriptive Statistics of Mindsets toward Various School Subjects for Group SB

Subject	Mean	SD	95% CI
English	1.87	.17	[1.82, 1.92]
Math	1.56	.33	[1.47, 1.66]
Spanish	1.70	.18	[1.64, 1.75]
Sports	1.65	.16	[1.60, 1.70]
General	1.65	.21	[1.59, 1.71]

Note: Growth Mindset: 2; Fixed Mindset: 1; $n = 47$.

Within Group SR, the statistical analysis showed significant differences occurring among the categories, $F(4, 290) = 17.36$, $p < .001$. The post-hoc Tukey test showed that students appeared to have significantly stronger growth mindsets toward English in comparison to Math, Spanish, and Sports ($p < .001$), but not in comparison to General ($p = .10$). Table 4 displays the descriptive statistics for Group SR.

Table 4. Descriptive Statistics of Mindsets toward Various School Subjects for Group SR

Subject	Mean	SD	95% CI
English	1.85	.16	[1.81, 1.89]
Math	1.64	.23	[1.57, 1.70]
Spanish	1.64	.25	[1.58, 1.70]
Sports	1.56	.19	[1.51, 1.60]
General	1.75	.23	[1.69, 1.81]

Note: Growth Mindset: 2; Fixed Mindset: 1; $n = 59$.

Finally, a one-way ANOVA and post-hoc Tukey test were conducted to compare the scores for English among the three regions. The results suggested that no significant differences had occurred among the groups, $F(2, 154) = 2.42, p = .09$. Thus, based on the analyses, it can be concluded that regardless of the region Costa Rican students in which live, they have a stronger growth mindset for English in comparison to other subjects. Furthermore, these strong growth mindsets remain stable regardless of where the students live. Reasons for these results will be discussed in the next section.

Discussion

The first research question looks at whether Costa Rican high school students tend to have growth mindsets in their studies of English as a foreign language. The results of this study suggested that students in the three samples do indeed have a tendency toward a growth mindset for studying English especially in comparison to the rest of the areas analyzed. The second research question aimed to discover whether any significant differences in the mindsets of students toward English existed depending on the region they lived.

Regarding the second question, no significant differences on students' mindsets for learning English were found among the three regions examined. However, differences in other areas like Spanish and sports were found. In this section, the authors discuss possible reasons for these. Because it was not possible to conduct interviews with the subjects, the results are based only on responses to the questionnaires. Consequently, as also mentioned by Mercer and Ryan,⁴⁵ the authors admit that it is hard to identify whether the meaning behind a response is an echo of a social script, or actually reflects students' personal beliefs. Nevertheless, it is possible to speculate about some of the possible reasons for these differences, giving special attention to English.

⁴⁵ Mercer and Ryan, 440.

As explained by Leis and Barquero,⁴⁶ one of the reasons for the stronger growth mindsets among the participants for English learning may be related to the geographical proximity of Costa Rica to the United States and the considerable influence this country has on Costa Rican culture, ways of thinking, fashion, and especially business partnerships. The tourism activity between these two countries increases the possibilities for students to interact with native speakers of English and view having high English language proficiency as indispensable for future employment. As reported by the national institute of tourism, in their statistical yearbook for 2016, of the 2,925,128 visitors Costa Rica had during that year, 42.16% (i.e., 1,233,277) came from the United States.⁴⁷ This considerable number of native speakers of English added to the number of visitors from other latitudes, including those from the countries defined by Kachru⁴⁸ as Expanding Circle countries, using English as a Lingua Franca to communicate with the locals, may have consequently increased the chances for students to produce the language through hands-on, face-to-face experiences. This may have enabled students to experience the benefits of taking risks and making mistakes, a trait of the growth mindset (Leis, in review). It is also important to point out that the Costa Rican educational system makes use of a standardized curriculum. Therefore, even when the way English is taught at schools often changes according to the modality of the school, the number of hours and the teachers' overall academic goals for teaching remain the same. This standardized national curriculum may have a similar impact on the way students perceive learning English.

Regarding the second research question, one probable reason for the overall growth mindset found in all three areas for English, might be related to the similarities between the areas studied. As

⁴⁶ Leis and Barquero, 233-234.

⁴⁷ Instituto Costarricense de Turismo, Informes estadísticos, Instituto Costarricense de Turismo, 6 de febrero, 2018, <<http://www.ict.go.cr/es/estadisticas/informes-estadisticos.html>>.

⁴⁸ Braj Kachru, "World Englishes: Approaches, Issues and Resources," *Language Teaching* 25, 1 (1992): 1-14. DOI:10.1017/S0261444800006583.

explained by Lamb,⁴⁹ the stimulus given by the family and immediate surroundings has a significant impact on the perceptions learners have for different given subjects. Sevilla and Gamboa, referring to Tudor, explained how context is a complex matrix integrated by the immediate geographical and psychological elements of the learner's reality.⁵⁰ Thus, learners' beliefs, expectations, ethos of learning, and what society expects from them in the long run are factors that play key roles in the dynamics of the learning process. In case analyzed here, even though there is a significant geographical distance among the areas studied, the three areas show similarities on factors like demography, human development index, and economical activities. It could be argued, therefore, that the incentives and expectations developed by the students from their families and surroundings, as well as their own ethos for language learning, have much in common and appear to have a similar positive impact on the learners' mindsets for studying English.

The idea behind including English and four other areas in the questionnaire used to gather the data for this study was to gain a broader understanding of the subjects' mindsets. This provides a solid basis for researchers interested in future work on increasing Costa Rican students' drive to study. However, it was not the authors' intention to analyze each area in depth. It is believed that due to complexity of the dynamics of motivation in the learning process, further research is required to investigate each of the factors touched upon here.

While the results for English showed a stable high tendency toward the growth mindset throughout the three regions studied, the rest of the subjects analyzed showed results in less standard, predictable ways. It is particularly interesting that even the mindset for the proficiency in students' first language is less regular than that of

⁴⁹ Lamb, 1011.

⁵⁰ Ian Tudor, *The Dynamics of the Language Classroom* (Cambridge, UK: Cambridge University Press, 2001) 19; Henry Sevilla and Roy Gamboa, "Student Self-Evaluation and Autonomy Development in EFL Learning," *Revista de Lenguas Modernas* 25 (2016): 199-222. DOI: 10.15517/rlm.v0i25.27695.

English. Perhaps the changes implemented in the national curriculum for the subjects of mathematics and Spanish in 2013 and 2014 respectively, and the adaptation to these changes destabilized teachers and students' perceptions toward the subjects, hence impacting their motivation and mindsets.

In the case of sports, the variances found might be the result of differences on the effort and support the high schools investigated in this study put on their sports activities. This includes physical education classes, sport clubs, and the participation the schools have in different disciplines within the national student sport games (*Juegos deportivos estudiantiles*) carried out by the ministry of education at three levels: institutional, regional, and national.

In the case of the general category, the questions used to collect the data for this category were not related to any specific subject, but rather to students' perceptions of some overall aspects in their academic lives. Thus, as suggested by Lamb,⁵¹ differences in the immediate surroundings, both at high school and within the community, might have shaped students' different perceptions about learning in these regions. However, further research would be required to identify those particular regional differences clearly.

Pedagogical Implications

As for the academic benefits, having a robust growth mindset implies learners deal with setbacks, feedback, and challenges much better in comparison with those students with a tendency toward the fixed mindset.⁵² The results obtained in this research suggest that Costa Rican students have a tendency toward the former mindset for English learning and some other areas of the academic spectrum.

Based on this, the authors argue that more work toward a growth mindset can still be achieved through the implementation of ideas

⁵¹ Lamb, 1019.

⁵² Dweck (2006), 9.

from researchers such as Leis (in review) and Leis and Wilson,⁵³ who describe the benefits of considering the growth mindset as part of assessment through the *idio-comparative marking system* and *growth mindset marking system*. Furthermore, literature regarding the effects of language used in the classroom⁵⁴ can help teachers increase the belief among their students that effort will bring about positive outcomes on a daily basis. Actions and language focused on increasing students' motivation, such as increasing of students' autonomy and responsibility for learning outcomes, the chances for self-reflection during the classes, feedback activities that focus on students' improvement and not on error-correction should be integrated as common practices within the classes, as a way to strengthen the current growth mindset among learners.

Furthermore, even though this is the first study of its kind conducted in this country, to the best understanding of the authors, the results indicate that regardless of the area where Costa Rican learners live, they have a positive affinity toward English learning. This gives us an encouraging scenario for language teachers as the data suggest that students are willing to carry on with the task even if it becomes challenging. At the same time, it is important to increase the awareness of both teachers and students about the benefits having a growth mindset to represent a way to facilitate the adaption to any of the curricular, social, or inner-personal changes and challenges they might face without compromising their motivation and willingness to learn.

Conclusions

The present study has addressed the language-learning mindsets of students in Costa Rica, while comparing the tendencies of those

⁵³ Adrian Leis and Matthew Wilson, "Giving Class Averages: Is It Worth It?," *Eurasian Journal of Applied Linguistics* 3, 1 (2017): 35-47. DOI: 10.32601/ejal.461030.

⁵⁴ For example: Peter Johnston, *Opening Minds: Using Language to Change Lives* (Portland: Stenhouse, 2012).

mindsets among students in three different regions of the country. This study, however, does have some limitations.

First, the discussion in this study is based on the results of just one questionnaire. Factors such as the time allotted to complete the questionnaires, various events at the schools on the day the questionnaire was conducted, and the students' moods that day may have affected the results. In future investigations, it would be beneficial to conduct the questionnaire several times to look at possible changes over a certain period of time and focus on events or circumstances that affect students' mindsets positively and negatively.

Second, once again, because the present study used a questionnaire, students may have been misguided by the items, responding in ways that did not necessarily reflect their true feelings and beliefs. As mentioned by Mercer and Ryan,⁵⁵ the responses may have simply been a response to a social script. By including interviews to create a mixed-methods study, the researchers will be able to gain deeper knowledge of the students' mindsets beyond the points that appear in the questionnaire, as well as whether students who appear to have a growth mindset truly take part in the necessary reflection, or are falling into the belief that *all that matters is hard work*, a feature of a false growth mindset.⁵⁶

Third, to the researchers' knowledge of the, there are yet to be conducted studies related to the mindsets of Costa Rican students toward their English studies. Because there are no earlier similar studies to compare the results to, it is possible that the validity of the results and findings discussed within this paper might be considered weak. It is essential, therefore, that more research be conducted into the mindsets of Costa Rican students in order to increase the confidence with which results can be discussed.

With the number of studies related to mindsets within the field of SLA still relatively low, it is vital that further research be conducted

⁵⁵ Mercer and Ryan, 440.

⁵⁶ Carol Dweck, "Carol Dweck Revisits the Growth Mindset," *Education Week* 35, 5 (2015): 20-24.

in order to gain an understanding of students' beliefs about the innateness of language proficiency. Once teachers have an increased understanding of students' mindsets toward language learning, it can lead to better teaching practices, thus positively improving students' performances and attitudes toward the subjects.⁵⁷ Parallel studies that include the data from urban areas and other information on the high schools studied, including the institutional annual plan, teacher's lessons plans, and students' grades can be conducted to confirm or refute the findings presented in this paper. With an increase of such studies, the directions that language teachers in Costa Rica should follow will be clearer for years to come.

⁵⁷ Dweck (2006), 9.

Appendices

Appendix A

The English Version of the Questionnaire Used in the Study

For ease of understanding in this paper, the first choice in each item represents a fixed mindset; the second option represents a growth mindset.

Questionnaire Regarding High School Students' Study Habits

This is a questionnaire to increase understanding about the study habits of high school students. There are four parts to this questionnaire. Follow the instructions to complete each part. There are no right or wrong answers. Please answer as honestly as possible.

Part 1

Age

14 15 16 17 18 19 20+

Gender

Male Female

Part 2

Imagine the following situations. Choose the answer that best matches you.

You have trouble understanding what your English teacher is saying in class. Why is this?

- He/She is speaking too quickly.
- You are not concentrating enough.

You have a choice of two English courses at university. Which do you take?

- An easier course that you will most likely pass without much trouble.
- A challenging course that you will have to study hard for but still might not pass.

Your math teacher gives you a choice for homework, a simple problem that you will finish in about ten minutes, or a quite difficult problem that will take you an hour to complete. Which will you choose?

- The easier problems.
- The difficult problem.

Your classmate is very good at math. Why is this?

- He/She was born with great math ability.
- He/She studies math hard every day.

The person sitting next to you in your Japanese class is able to write much more neatly than you. Why is this?

- He/She has an ability to write neatly.
- You haven't practiced writing enough.

You have a choice of two books to read for your Japanese homework. Which do you choose?

- A simple book that won't take long to read.
- A classic book that is difficult, makes you think a lot, and will take time to complete.

You have trouble remembering what your teacher taught you in your Japanese class. What should happen next?

- The teacher should explain the content better.
- You should concentrate and listen more carefully.

You are going for a morning run. A person much older than you runs past you. What do you do?

- Run faster to keep up with that person.
- Keep at your own pace.

You are a member of a basketball team and are going to have a practice game. Which team do you want to play against?

- A strong team that will beat you.
- A weak team that you will beat easily.

You are a member of a soccer team. Which of the following would you prefer to be?

- The most talented player on a weak team.
- The least talented player on a strong team.

When you get a test returned, what will you do?

- Compare it to the class average.
- Compare it to your previous test.

Your teacher asks a difficult question in class. You are not confident, but think you might know the answer. What do you do?

- Wait for someone else to answer the question.
- Raise your hand and try to answer the question.

Which of the following sentences best describes the reason teachers give tests in class?

- They want to find out who the smartest students in the class are.
- They want students to find their weak and strong points in that subject.

Part 3

Imagine the following situations. Complete the sentences by choosing the way that you feel best matches you.

Your teacher gives you a good score on a speech given in English class. This is because...

- ... your teacher likes you.
- ... you practiced hard for the speech.

The person sitting next to you in English class has very good pronunciation. This is because ...

- ... he/she has lived abroad for some time.
- ... he/she practiced English pronunciation a lot.

You find a mathematical function very difficult to understand. This is because ...

- ... your teacher hasn't explained it well enough.
- ... you haven't thought about it hard enough.

Your math teacher gives you a problem to complete. You finish it quite quickly. This is because ...

- ... it was an easy problem.
- ... you worked seriously on the problem.

You are teaching Chinese characters (kanji) to elementary school students. They remember the characters very well. This is because ...

- ... you taught them well.
- ... they practiced a lot at home.

You practice skiing and become able to ski on the beginner slope without falling. Next time you go skiing with your friend, you will want to ...

- ... continue skiing on the beginner slope without falling.
- ... try the intermediate slope, where you will probably fall.

If someone wanted to become a doctor, scientist, or teacher, but couldn't, it was because ...

- ... he/she wasn't smart enough.
- ... he/she didn't study hard enough.

Part 4

Do you do the following things in your regular studies? Read the sentences and choose 1 if you never do it, and 6 if you always do it.

I reflect on my study methods.

1 2 3 4 5 6

I take notes during class in order to get better scores in tests.

1 2 3 4 5 6

If I get a low score in a test, I think how to improve my study methods.

1 2 3 4 5 6

I set a study goal in each of my subjects.

1 2 3 4 5 6

I always look for effective ways to remember class content better.

1 2 3 4 5 6

Appendix B

The Spanish Version of the Questionnaire Used in the Study

For ease of understanding in this paper, the first choice in each item represents a fixed mindset; the second option represents a growth mindset.

Cuestionario sobre su parecer del proceso educativo

El propósito de este estudio es conocer con más profundidad el parecer de jóvenes costarricenses sobre el proceso educativo. El cuestionario consta de cuatro secciones. Lea las instrucciones cuidadosamente y responda según su parecer. Esto no es un examen. No hay respuestas correctas o incorrectas. Su respuesta no afectará su nota. Por favor sea honesto con sus respuestas puesto que las mismas serán utilizadas como parte de esta investigación. Muchas gracias por su cooperación.

Primera sección

La primera parte consiste en información personal básica. Esta información será utilizada solo en esta investigación y no será pública.

¿Qué edad tiene?

14 15 16 17 18 Mayor de 18 años

Sexo

Masculino Femenino

Segunda sección

Imagine la siguiente situación. Escoja la opción que más se acerque a su opinión.

Usted tiene problemas para entender lo que su profesor de inglés dice en clase. ¿Por qué?

- El o la profesora habla muy rápido.
- Usted no está lo suficientemente concentrado.

Si usted tiene dos opciones de curso de inglés en la universidad, ¿cuál escogería?

- Un curso fácil que aprobará sin necesidad de un gran esfuerzo.
- Un curso desafiante en que tendría que estudiar arduamente y esforzarse y aun así correr el riesgo de reprobar.

Su profesor de matemáticas le da dos opciones para la tarea, un problema simple que resolverá en diez minutos, o un problema considerablemente más difícil que le tomará una hora en resolver; ¿qué escogería?

- El problema simple.
- El problema difícil.

Su compañero es realmente bueno en matemáticas. ¿Por qué?

- Nació con una gran habilidad matemática.
- Estudia matemáticas todos los días.

La persona que se sienta a su lado en la clase de español es capaz de escribir mejor que usted; ¿a qué se debe esto?

- Tiene una habilidad para escribir.
- Usted no ha practicado redacción lo suficiente.

Usted tiene dos opciones de libros para leer; ¿cuál escoge?

- Un libro simple que no le tome tiempo leer.
- Un libro clásico que es difícil, que lo hará pensar y tomará tiempo para acabarlo.

Usted tiene problemas para recordar lo que su profesor enseñó en la clase de español. ¿Que debe de suceder después?

- El profesor debe explicar la materia de una mejor manera.
- Usted debe concentrarse y escuchar con más cuidado.

Usted sale a correr en la mañana. Una persona mucho mayor que usted lo adelanta. ¿Qué debe hacer usted?

- Correr más rápido para alcanzarla.
- Mantener su propio paso.

Usted es miembro de un equipo de baloncesto y van a tener un juego de práctica. ¿Qué equipo deben enfrentar?

- Un equipo fuerte que los derrotará.
- Un equipo débil que podrán vencer.

Usted es miembro de un equipo de fútbol. ¿Cuál de las siguientes posiciones le gustaría ocupar?

- El jugador más talentoso de un equipo débil.
- El jugador menos talentoso en un equipo fuerte.

Cuándo el profesor le devuelve un examen, ¿que hace usted?

- Comparar su nota con la de los compañeros.
- Comparar la nota con un examen anterior.

Su profesor formula una difícil pregunta en la clase. Usted no se siente del todo seguro, pero cree tener la respuesta. ¿Qué haría?

- Esperar a que alguien más responda la pregunta.
- Levantar la mano y dar su respuesta.

¿Cuál de las siguientes oraciones mejor describe la razón por la cual los profesores hacen exámenes en clase?

- Quieren identificar a los estudiantes más inteligentes de la clase.
- Quieren que los estudiantes encuentren sus debilidades y fortalezas en esas asignaturas.

Tercera sección

Imagine las siguientes situaciones. Complete la oración escogiendo la opción que mejor describa la forma en que usted se siente.

Su profesor le da una buena calificación en un discurso (speech) en inglés. Esto se debe a que ...

- Usted le agrada al profesor.
- Usted se preparó bien para exponer su discurso.

La persona que se sienta a su lado en la clase de inglés tiene muy buena pronunciación. Esto se debe a que...

- Ha vivido en el extranjero un tiempo.
- Practica mucho la pronunciación del inglés.

Usted encuentra una función matemática muy difícil de entender. Esto se debe a que...

- Su profesor no lo ha explicado con claridad.
- Usted no se ha esforzado lo suficiente en entenderlo.

Su profesor de matemática le plantea un problema por resolver. Usted lo hace rápidamente. Esto se debe a que...

- Era un problema simple.
- Usted trabajó seriamente en resolver el problema.

Usted le está explicando algunas reglas gramaticales a niños de escuela. Después de unos días ellos las recuerdan bien. Esto se debe a que...

- Usted les explicó bien.
- Ellos practicaron las reglas en casa.

Usted aprende a esquiar y logra hacerlo bien en una pista para aprendices, sin caerse. La siguiente vez que tuviera la oportunidad de esquiar con sus amigos, a usted le gustaría...

- Continuar esquiando en la pista para aprendices y reducir el riesgo de caerse
- Probar una pista de dificultad intermedia, donde probablemente llegue a caer.

Si alguien quiere estudiar para ser un médico, científico o profesor, pero no logra su objetivo, es porque...

- No es suficientemente inteligente.
- No se esforzó lo suficiente para lograrlo.

Cuarta sección

¿Hace usted las siguientes cosas en sus estudios regulares? Lea las oraciones y seleccione 1 si nunca lo hace y 6 si siempre lo hace.

Reflexiono sobre mis métodos de estudio.

1 2 3 4 5 6

Tomo apuntes durante la clase a fin de mejorar mis notas en los exámenes.

1 2 3 4 5 6

Si obtengo una mala calificación en una prueba, pienso en cómo mejorar mis métodos de estudio.

1 2 3 4 5 6

Planeo un objetivo de estudio en cada asignatura.

1 2 3 4 5 6

Siempre busco un método eficaz para recordar de mejor manera el contenido de las asignaturas.

1 2 3 4 5 6