

The Effects of Positive Psychology Education in University Foreign Language Classes: Measuring Motivational Changes in the English Learning Self Over Time

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大学外国語クラスにおけるポジティブ心理学教育の効果
—長期にわたる英語学習自己の動機づけの変化の測定—

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抄録：日本では、多くの学習者が入学試験や職場での昇進のために英語を学ぶことに対する強いプレッシャーを感じ、学習意欲を低下させている状況が存在しているが、ポジティブ心理学教育の原則を学ぶことによって、英語の学習過程において一層意欲的に取り組めると考えられる。この論文で示す研究内容は、日本のある大学で行った必修外国語科目の授業に参加した実験群 ($n = 41$) と、並行して開講されている同一の授業に参加し学習した対照参加者 ($n = 252$) を比較したものである。実験群の授業では、その主たる内容として、ポジティブ心理学と自己効力感についてであった。この授業の動機づけの効果を測るため、すべての参加者 ($N = 293$) に対して授業の前後にアンケートの回答をさせ、分析はポジティブ心理構造の3層モデルを使用して行った。結果として実験群の場合、自己効力感の測定値の増加は対照の参加者と比較して有意義な差が明らかになった。

索引語：ポジティブ心理学教育、第二言語動機づけ、明示的語彙学習、第二言語に対する自己効力感

Abstract: In Japan, where many learners are demotivated by the high pressure to learn English for entrance examinations or work promotions, principles from positive psychology education may help encourage people to feel better about the English learning process. This research is concerned with a project conducted in a required English reading class for non-majors at a Japanese university ($n = 41$), compared with control participants who studied in parallel class sections of the same course ($n = 252$). In the experimental class, principles of positive psychology and self-efficacy were taught as the main contents. In the control classes, students studied other reading materials at a similar level, but the contents varied. To deepen comprehension of the positive psychology readings, experimental participants repeatedly practiced answering text comprehension, fill-in-the-blank, and vocabulary questions using an Internet flashcard application. The effects of studying in this class were analyzed using a three-tiered model of positive psychology constructs to analyze responses to questionnaires given to all participants ($N = 293$) before and after participating in the class. Positive L2-self and L2 Self-efficacy measures correlated significantly with L2 proficiency, and participants in the experimental class made significantly higher gains on the L2 Self-efficacy than those of control participants.

Key words: positive psychology education, L2 motivation, deliberate vocabulary learning, L2 self-efficacy

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1. The Low Motivation in Japan Toward English Learning

It is common for learners to lose their motivation to study and learn English as a foreign language (EFL) in Japan. Several factors probably cause this demotivation, but an important one is the plethora of high stakes exams (Berwick & Ross, 1989; Miyazaki, 1981). There is high pressure to learn English to enter universities or get job promotions, and these extrinsic factors are often both short-lived and uninspiring. While a few learners feel energized on a path to succeeding at achieving high English learning goals, too many have low motivation or are demotivated (Kikuchi, 2013). Many students do not learn from a sense of interest, curiosity, or enjoyment of English, but rather with a sense of discouragement and obligation. It should be a cause of concern if not alarm that Japan leads the field in studies of second language learning (L2) demotivation (Ushioda, 2013, p. 6). Although there have been many studies in Japan about low motivation to learn English, this current investigation is concerned with a possible next step. This research aimed to investigate whether English courses that actively taught principles of positive psychology improved students' motivation toward the language learning process.

In addition to the high pressure mentioned above, another possible cause of the demotivation toward learning English in Japan is the fact that the current education system does not provide a clear path toward adequate proficiency. Japanese university graduates know far fewer words than the number that they need to know to function in English in meaningful and productive ways. Although the average Japanese university graduate has a vocabulary size of fewer than 2,500-word families, this level of knowledge is insufficient because to read, 8,000 to 9,000-word families must be known, and for oral discourse, 5,000 to 7,000 are necessary (Schmitt, 2008). To close this problematic vocabulary size gap, promoting English learning self-efficacy is essential. Learners need to know that they can achieve adequate proficiency if they are on a clear path toward it.

Paired associate learning is an essential strategy that enables learners to systematically move forward in developing their overall proficiency, efficiently helping learners to remember words and their meanings (Elgort, 2007, 2011; Nation, 2007). Decades of second language acquisition research support the effectiveness of balancing explicit and language learning (Ellis, 2005a; Norris & Ortega, 2000) with activities that support implicit learning (Ellis, 2005b; Nation, 2007). In this current research, we investigated a reading class that employed such balanced vocabulary learning activities, and see what effects the deliberate study of positive psychology principles had on attitudes toward learning. This research investigated an attempt to extend the effectiveness of paired-associate learning beyond the learning of individual words to deliberately developing English learners' understanding of positive psychology principles.

2. Positive Psychology Education in a Required Foreign Language English Class

University-level English learners of all specialties who have completed the rigors of English entrance exam study should learn it with a new perspective. They should be encouraged to shift their attitudes toward studying English for more personally beneficial and applicable purposes (Tajino, 2004). In a required English intensive reading course for non-English majors at a Japanese university, principles of positive psychology

principles were taught as the main contents. Concepts from a popular psychology framework that originated in the United States (Covey, 2004) were introduced through illustrated examples in a bilingual comic book to make the ideas accessible for L2 learners (Koyama & Franklin-Covey, 2017). The instructor also provided supplemental explanatory readings, and learners studied text comprehension questions and essential vocabulary through deliberate flashcard learning on an Internet application. Quizzes were given regularly to extrinsically motivate and monitor this learning. Also, a popular song connected to the ideas of each chapter was introduced to demonstrate broader applications and interpretations of each principle. Students also did song memorization activities to foster fluency development. In sum, the purpose of the course was to teach concepts of positive psychology while also teaching English as a foreign language in a principled way to balance explicit and implicit learning.

The instructor aimed to help students to both effectively learn English and reflect on the course contents. English learning activities followed Nation's four strands framework for balancing explicit and implicit learning (2007). As the course title was "Intensive Reading", primary emphasis was placed on giving ample and accessible meaning-focused input from reading. There were also speaking and listening activities focused on understanding the texts. The course was organized around the textbook, a bilingual comic that exemplified each of the seven habits with a short story and bilingual explanations (Koyama & Franklin-Covey, 2017). The instructor also supplied learner-friendly English handouts written at a 2500-word vocabulary level that explained how the ideas applied directly to their lives. These handouts were written in an objective, academic voice to balance the casual conversational tone of the stories in the comic. In addition to the main text and handouts, the instructor introduced a theme song for each unit. These were classic American songs that demonstrated the main ideas. For example, for the chapter on being proactive, the song *Smile* was chosen, and lyrics such as "Smile though your heart is aching, smile even though it's breaking," were explained as examples of this habit. In this way, the materials for each unit of the course consisted of 3 parts: a handout explaining the ideas objectively, an engaging bilingual comic, and a song to enjoyably integrate the ideas.

In addition to direct explanations by the instructor, the learners deepened understanding of each of the three types of materials through text retelling and jigsaw activities. On the handouts, students practiced with a fill-in-the-blanks activity in which the keywords were extracted from the text. The handouts were designed to enable students to practice repetitive paired-associate learning both on paper and using an Internet flashcard application. The instructor regularly explained strategies that enhance effective paired-associate learning. Short quizzes were conducted at the end of each unit to monitor and extrinsically motivate learning. The quizzes required students to understand and study each of the materials more deeply and included comprehension questions about the handouts and main text. Essential vocabulary was also practiced and quizzed regularly; students were shown the Japanese meanings and were required to produce the target words.

The *7 Habits* framework is based on the view that modern society's perspectives and paradigms of success are distorted and wrongly focused on a simplistic and superficial notion of personal success. Covey (2004) argues that the current emphasis on external aspects such as popularity, wealth, and status has caused great unhappiness. Due to this misguided focus, many people who have achieved outward success find themselves struggling with a deep need for personal autonomy, authenticity, congruency, effectiveness, and healthy, growing relationships. He blames these problems on society's fixation with the *personality ethic*, which

is characterized by excessive attention to social image and techniques for bringing fast and easy solutions to life's complex problems. Covey (2004) emphasizes that people can find more meaning and happiness in life if they take the time and effort to make a paradigm shift away from the personality ethic. He insists that people can find real success by adhering to principles and paradigms of the *character ethic* such as integrity, humility, fidelity, courage, patience, industry, and modesty.

Although it is easy to understand the importance of basing one's life on character ethic principles, regularly applying them requires earnest sustained effort. Covey (2004) thus explains the importance of developing habits that align with character ethic principles and explains the process of combining knowledge, skill, and desire to build a foundation of strong habits. In sum, the *7 Habits* are an organized framework for developing human effectiveness. Habits 1, 2, and 3 are concerned with fostering personal development, Habits 4, 5, and 6 are about enhancing healthy relationships, and Habit 7 emphasizes constant reflection and all-around improvement.

The first three habits focus on three different aspects of individual personal growth. Together they chart a path from an ineffective mentality characterized by dependence and blame to a more effective state of personal independence. *Habit 1: Be Proactive* is established in the fact that for any stimulus that occurs within a person's awareness, he or she has the freedom to choose how to respond. Proactive people develop their self-awareness, imagination, conscience, and independent will, enabling them to step back and consider situations and circumstances from an objective and positive perspective. They develop this high awareness by overcoming reactive unconscious and automatic urges such as anger, helplessness, and blame. Being proactive means expanding one's influence by focusing on aspects of situations and circumstances that one can control, rather than reacting to those that they cannot. *Habit 2: Begin with the End in Mind* stresses the importance of raising everyday awareness by focusing on high ideals, noble values, and a clear life mission. The text urges readers to center their lives around virtuous principles that have been universally and naturally acknowledged for thousands of years (Peterson & Seligman, 2004). Constantly referring to a personal creed founded in high ideals enables a person to respond to life's inevitable difficult circumstances and situations constructively. Diener (2009) has also noted the timeless value of such principles: "In one sense, positive psychology is thousands of years old, dating back to the thoughts of ancient philosophers and religious leaders who discussed character, virtues, happiness, and the good society" (p. 7). *Habit 3: Put First Things First* emphasizes managing one's time to promote effectiveness, instead of conforming to the modern obsession with efficiency. This habit entails planning and scheduling according to importance. It guides readers to prioritize time for relationship building, planning, and developing their productive capacity. Such effective time management contrasts with ineffective time management, which is a misguided process of reacting to daily life events from a short-sighted perspective based on urgency. When urgency is of primary concern, non-important activities and interruptions dominate when one is busy. Trivial time-wasters such as pleasant leisure activities and escapism dominate when one is not busy. Together, the first three habits focus on fostering one's proactivity, a sense of purpose, and daily effectiveness.

The second three habits entail three different ways to enhance interpersonal relationships. The outset of this second part explains that the overall framework sees human growth as a process of development through three stages: from dependence on others to individual independence to effective interdependence. Covey (2004)

stresses that independence is overrated, and the human condition is necessarily interdependent. This half of the framework explains how to develop habits that will foster effective interdependent personal and work relationships. *Habit 4: Think Win/Win* is about basing all relationships on a paradigm of abundance and finding mutual benefit. This paradigm is directly opposed to society's current tendency to emphasize competition. Thinking Win/Win means having both the consideration to deeply understand the needs and desires of others while at the same time having the courage to make demands, so one's own needs and desires get fulfilled. In all relationships, business, work, family, and friendship, this entails having a strong character that others can trust. It requires the development of relationships based on honesty, respect, and generosity. It also means forming clearly defined agreements and explicitly outlining roles and responsibilities. *Habit 5: Seek First to Understand, then to be Understood* is about refraining from the urge to force opinions and priorities on others by instead entering interactions with the pure desire to completely understand them first. Such an understanding entails developing the habit of empathic listening, which gives others psychological air and builds trust in relationships. People tend to listen haphazardly, focusing most of their attention on thinking how to respond. This habit entails reversing such tendencies and focusing first on completely understanding the other person's perspective. *Habit 6: Synergize* is acknowledging that human reality is highly interdependent, so two or more people working together can accomplish many times more than any individual through collaboration. It means honoring a diversity of opinions and working positively with the strengths that others bring. In this way, the second three habits offer suggestions for developing mutually beneficial interpersonal relationships. Finally, *Habit 7: Sharpen the Saw* focuses on constant improvement concerning the physical, mental, spiritual, and social/emotional aspects of character development.

3. The Developing Field of Positive Psychology's Influence on Second Language Acquisition Research

This research investigated whether the ideas and principles taught in the courses described in the previous section coincide with constructs put forth within the newly developed field of positive psychology. Such an investigation may offer insights that will help increase motivation to learn English as a foreign language in Japan. Positive psychology is a relatively new branch within the broader field of psychology. However, it is quickly gaining recognition: "Positive psychology conferences are held around the world, academic journals showcase the research, and hundreds of colleges and universities offer classes on the topic" (Siegel, 2016, p. 5). As Marsh and Martin point out (2011, p. 59), "There is a revolution sweeping psychology, one that emphasizes positive psychology and focuses on how healthy, normal, and exceptional individuals can get the most from life." In other words, the field of positive psychology attempts to balance psychology by not only studying weaknesses and healing psychological problems that traditional psychology has attended to but by studying human strengths and the building of psychological resources (Seligman, 2002, 2011; Seligman & Csikszentmihalyi, 2000).

Now, new ideas from positive psychology are being integrated into the SLA domain, to create a vibrant subfield with deep roots and a bright future (MacIntyre & Mercer, 2014). Researchers have proposed an

L2 self-system that contrasts a desired future self with the present to show deficiencies that drive motivation (Dörnyei, 2005, 2009b; Dörnyei & Ushioda, 2009, 2011). Self-concept constructs from positive psychology may also contribute towards a system of L2 self. This area that has been mostly unexplored in the past, but now motivational research on second language acquisition is increasingly focused on understanding how teachers can foster positive learner attitudes to promote second language learning (Macintyre, Gregersen, & Mercer, 2019; Oxford, 2016). In sum, positive psychology is an exciting new field of research, and the field of SLA is integrating its ideas.

Measuring Motivation and Attitude of the Positive Second Language Self

This section discusses the theoretical and measurement issues involved in the current investigation. In an article that took a broad look at self-concept and theoretically understanding it, Swann, Chang-Schneider, and McClarty (2007) argued for contextualizing self-concepts and outcomes. They pointed out that attitude and trait researchers use the *specificity matching* principle for predictors and criteria (p. 87). A multitude of factors may cause a particular outcome, and the further removed a predictor variable becomes, the less reliable it is. To show relationships among variables, researchers need to consider the specificity among the variables. There are more robust relationships with variables of similar levels of specificity and weaker relationships when the specificity differs. The structural relationships of psychological constructs are hierarchical. Broad constructs of the global self are more general than aspects of the domain self, and particular achievement motivations are the most specific. The most abstract level, global self, relates to the whole self and is relatively stable and trait-like. The next, less general level, is the domain self, which relates to a person's particular domain or individual interest in life. This level of self relates to a relatively enduring disposition in a particular field or sphere of activity. The most specific level of self is achievement motivation, which focuses on particular tasks or activities. Together, this hierarchy makes up the three-tiered model of self to explain a person's motivation to do a wide variety of activities. Applying this model to measuring the positive English learning (L2) self, the structural relations are similarly directed from global to domain to particular motivations, as shown in Figure 1.

This research examined a model of positive L2 self that follows this hierarchy by integrating constructs of positive psychology and motivation in the context of English learning based on responses to questionnaires given in before and after students studied in the English class explained above. In this model, the global level of positive self-constructs was flourishing, curiosity, and hope. At the positive L2 self level, the constructs were interest, passion, and mastery goal orientation. At the most specific task-oriented level, L2 self-efficacy in listening, reading, and speaking were measured (see Lake, 2013, 2014, 2016, for additional validation research).

Constructs of positive global self: Flourishing, curiosity, and hope. *Flourishing* is a psychological construct that refers to being mentally healthy. Like mental illness, it is a collection of symptoms. That is, the construct consists of observable signs of an underlying state that persists over time. Seligman (2011) promoted a version of flourishing wherein happiness is central. In his reworking of positive psychology, he advocated for "PERMA", an updated model that focuses on well-being composed of the following five elements: **P**ositive emotion, **E**ngagement, **R**elationships, **M**eaning, and **A**chievement.

Similarly, *curiosity* is also a trait-level construct. It is not focused on an object or skill and is distinctly different from enjoyment and happiness. Curiosity, as used in this current study, refers to "recognizing, embracing, and seeking out knowledge and new experiences" (Kashdan et al., 2009, p. 988). The *hope* construct is composed of elements of clearly defining goals, thinking about ways to achieve them, and motivating oneself to act toward them. Hope can be characterized and measured as a trait or state. In this study, hope was measured at the trait level.

Constructs of positive L2 self: Interested L2 self, harmonious passion for L2 learning, and mastery L2 goal orientation. We elaborated three core aspects of a positive L2 self to understand aspects of the psychology of the language learner relating to positive psychology: an interested-in-L2 self, a harmonious passion for L2 learning, and mastery L2 goal orientation. As mentioned above, self-concept can refer to different levels of specificity. That is, people may have trait-like global self-constructs and more specific self-concepts regarding their academic selves. This study used a positive second language self-concept; in other words, a positive L2 self (Lake, 2016). The construct of positive L2 self is composed of L2 domain level dispositional traits that are positively related to both well-being and second language learning. Constructs at this level are specific to the academic domain or academic language-learning domain, but they are more general than classroom situations and specific language skills and tasks.

Interested L2 self is a domain-specific, mid-level self-concept that we define as the disposition to find learning a second language interesting and enjoyable. It is a consequence of believing that one is competent in the L2 and having repeated positive experiences of discovering novel aspects of the language and successfully learning them. The *harmonious passion for L2 learning* construct is slightly different from the *interested-in-L2 self*. Passion is a strong inclination toward activities that are liked or loved. Whereas interest theory developed over time from the "bottom-up" based on decades of empirical research, passion theory was created "top-down" from self-determination theory. The model developed by Vallerand and colleagues (2003, 2010) posited two types of passions, a more self-determined harmonious passion, and a less controlled obsessive passion. *Mastery L2 goal orientation* is another aspect of a positive L2 self. Mastery goals, which are also known as learning goals, are based on goal orientation theory or achievement goal theory (Dweck & Leggett, 1988; Elliot, 2005; Kaplan, Middleton, Urdu, & Midgley, 2002) and have to do with building competence. Mastery goals define the purpose or orientation toward absolute gains in learning within an individual.

Constructs of reading, speaking, and listening self-efficacy. Bandura's (1997) social cognitive theory of human behavior relates an individual's actions and cognitions with environmental influences. As a part of social cognitive theory, competence perceptions and control beliefs are important agency components of human development and change. The emphasis of this theory is on competence beliefs or self-efficacy beliefs that one can exercise control and is capable of doing a task in a given situation and domain. *L2 reading self-efficacy* had positive relationships with positive self-concept variables, positive L2 self variables, and L2 proficiency (Lake, 2013). Students who read extensively with graded readers gained L2 reading self-efficacy, while those who used graded readers but did not read extensively showed no gains (Lake, 2014). Also, this research showed that gains in L2 reading self-efficacy relate with gains in measures of a positive L2 reading self. When self-efficacy is

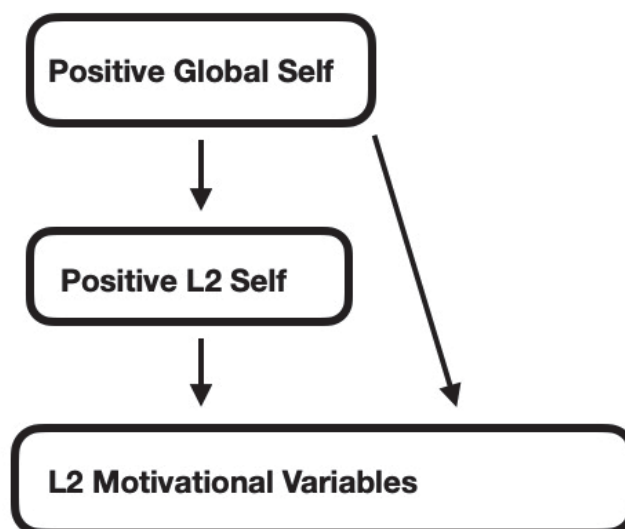


Figure 1. Relationships among levels of positive selves and motivation.

more general, it becomes similar to the construct of confidence. *L2 listening self-efficacy* refers to the belief in being capable of successfully listening and understanding at different levels to different sources of spoken language. Mills, Pajares, and Herron (2006) found that listening self-efficacy was associated with listening proficiency in the female participants of their study.

Research Questions:

Does learning about positive psychology in an EFL class have effects on learners' positive self, positive L2 self, and L2 self-efficacy over time?

Do the relationships between Positive self, L2 positive self, and L2 self-efficacy constructs change as a result of learning in an EFL class about positive psychology and self-efficacy?

4. Methods

Effects on learner attitudes and overall proficiency were measured by a survey compiled of scales from the three-tiered model of positive L2 self and a general proficiency test. Long-term effects of class contents and paired-associate learning activities were analyzed by comparing survey responses from the experimental participants' group ($n = 41$) to responses from control group participants in classes without an emphasis on positive psychology or paired associate learning ($n = 252$). Pretest scores on an external proficiency test were also analyzed. We conducted a Rasch analysis to refine measurements of motivational traits and dispositions. These measurements were then correlated with the overall English proficiency measure.

Participants

The participants in this study were second-year students at a national teacher training university ($N=293$). They were required to take the English course that was the focus of this research in order to fulfill 1 of 6 credits of a university-wide foreign language requirement. Approximately 60% of the participants were female, and 40% male. Their English proficiency varied slightly, but the majority had test score equivalents to approximately level A1 on the CEFR.

Measurement Instruments

The measurement instruments used in this study were analyzed using the Rasch rating scale model. Lake (2013, 2016) described the development of the specific instruments (for more information on Rasch analysis and rating scale analysis see Bond & Fox, 2015). For this study, the original English scales were translated into Japanese with six response options. A second translator then back-translated the Japanese scale into English, and the items checked and were determined to be acceptable. Self-report instruments at three levels of specificity were used to measure components of positive self, positive L2 self, and motivational variables. In this study, all scales were administered at the same time with the scale items randomly mixed into a single questionnaire on two separate occasions. All scales were modified or written to have 6-item responses that ranged from: *Definitely not true of me*; *Not true of me*; *Slightly not true of me*; *Slightly true of me*; *True of me*; *Definitely true of me*. Total scores on the Assessment of Communicative English developed by the Association for Language Proficiency Assessment were used to measure L2 proficiency (Association for English Language Proficiency Assessment, n. d.).

Measures for the global positive self. The Curiosity and Exploration Inventory II (CEI-II; Kashdan *et al.*, 2009) is a scale designed to measure curiosity. The CEI-II contains five items measuring a dimension of curiosity about seeking new knowledge and experiences (e.g., "I actively seek as much information as I can in new situations"). It also includes five items that measure a dimension of curiosity about a general willingness to embrace the novel, uncertain, and unpredictable in life (e.g., "I am the type of person who enjoys the uncertainty of everyday life"). Kashdan *et al.* reported alpha reliabilities of .85 and .86. They also suggested that because the two dimensions strongly correlate ($r = .79$), the ten items may be used together as a single scale. The alpha reliability for the present study was .89. The Hope scale (Snyder, 2000) is an eight-item scale that measures trait-level hope. The hope construct consists of two factors: (1) four items that reflect *hope agency*, which is agentic thinking about one's goals (e.g., I meet the goals that I set for myself); and (2) four items that reflect *hope pathways*, which is specified thinking about clear ways to achieve goals (e.g., "There are many ways around a problem"). Reported alpha reliabilities have ranged from .74 to .88. The alpha reliability for the present study of the combined measure of hope agency and hope pathways was .88. The Flourishing Scale (Diener *et al.*, 2010) consists of eight items describing aspects of positive functioning and human flourishing (e.g., "I actively contribute to the happiness and well-being of others"). The alpha reliability reported was .87, and for the present study, it was .85.

Measures for the positive L2 self. Three scales were used to measure different aspects of the construct of the L2 self. Two of these scales, Interested L2 Self and L2 Mastery Goal, consisted of items from previous studies by the second author (Lake, 2013, 2016). The Interested L2 Self scale consisted of seven items (e.g.,

"English is an interesting field of study"), in which the alpha reliability was .91 and .92. For the present study, the alpha reliability for Interested L2 Self was .92. For the L2 Mastery Goal scale, (e.g., "I like learning difficult things in this class"), the reliability was .87 and .94. For the seven items in the present study, the reliability coefficient was .93. Items from the Harmonious Passion sub-scale (Vallerand et al., 2003) were adapted for English (e.g., "I am passionate about learning English") to create a Passion for L2 scale, and reliability was .90 and .90. In the present study, the reliability of the Passion for L2 scale was .92.

Measures of L2 self-efficacy. The L2 self-efficacy variables are specific to L2 learning, skills, and tasks. Variables at this level are more dynamic or less trait-like because of their specificity and the situational nature of the contexts, processes, and specific tasks. The self-efficacy items were also taken from previous studies by the second author (Lake, 2013, 2016). The Self-Efficacy in Speaking scale consisted of nine items (e.g., "I can give a speech in English"), and in previous studies, its reliability was .90. The alpha reliability for the present study was .93. The Listening Self-Efficacy measure used nine items (e.g., "I can understand the main ideas when listening to English songs") for the present study, reliability was .90. The Reading Self-Efficacy measure used seven items in this study (e.g., "I can read and understand a menu in English"), and alpha reliability was .92.

Procedures

Teachers participating in this research distributed the questionnaire to students to complete during class time. Participants took approximately 15-20 minutes to complete the questionnaire. First, we conducted a Rasch analysis using the *Winsteps* software (Linacre, 2011) to get measures for each student. Rasch analysis uses a one-parameter logistic model of item response theory. It is based on a probabilistic procedure wherein a person with a greater quantity of an attribute will have a higher probability of endorsing an item than someone with less of the attribute. Rasch analysis then returns information on all participants, the scale as a whole, single items, and the overall framework of the measure. We did a Rasch analysis for this study two times. First, the measures were analyzed with the total participants ($n = 263$) to get item and person parameters. The second time, we analyzed the measures the item parameters anchored to the first analysis in order to detect changes for each person. After completing the Rasch analysis, we investigated correlational relationships.

5. Results

Descriptive statistics and alpha reliabilities are presented in Table 1. The items and scale measures met the requirements of the Rasch rating scale model for a well-formed scale. In other words, item fit statistics were acceptable, average measures advanced monotonically with categories, and step calibrations advance with appropriate higher values. Furthermore, there were no additional dimensions to each measure that suggested violations of unidimensionality (for more about measure construction and Rasch rating scale development see Bond & Fox, 2015). Importantly, means for all the L2-self measures were negative, showing that in general, learners had negative attitudes about learning English. However, the effectiveness of the class explained in this research was confirmed by the experimental groups' gains in L2 listening, reading, and speaking self-efficacy, which were significantly higher than those of control participants.

Table 1. Means, Standard Deviations, Alphas, and Gains on Positive Self, Positive L2 Self, and L2 Self-efficacy Variables

Measures	<i>M</i>	<i>SD</i>	Reliability	Gains
Positive Self				
Curiosity	-0.27	1.17	0.89	0.04
Flourishing	-0.25	1.06	0.85	0.15
Hope	-0.04	1.38	0.88	0.16
Interested in L2 Self	-0.92	2.00	0.92	0.04
Mastery Goal Orientation	-1.27	2.25	0.93	0.05
L2 Harmonious Passion	-1.28	2.03	0.92	0.03
L2 Listening Self-efficacy	-2.24	1.82	0.90	C: .13/E: .52*
L2 Reading Self-efficacy	-2.02	2.20	0.92	C: .31/E: .49*
L2 Speaking Self-efficacy	-2.37	2.15	0.93	C: .30/E: .45*

Note: *Marks a significant difference between the control and experimental group ($p = .05$). C = Control group; E = Experimental group

Table 2 below shows the correlations of positive self, positive L2 self, L2 self-efficacy, and L2 proficiency. Except for the correlations marked non-significant (ns), all correlations in the table are significant. Of primary interest in the current research was how the positive psychology constructs would correlate with actual L2 proficiency. The non-significant correlations between general positive self and L2 proficiency attest to the theoretical framework of the analysis, separating general attitudes from attitudes concerned with L2. The positive L2 self and L2 self-efficacy variables correlated weakly with actual L2 proficiency but were significant. Concerning general positive self, positive L2 self, and L2 self-efficacy, constructs correlate highly within their levels in the proposed three-tiered hierarchy. Furthermore, correlations were more robust for the constructs directly associated with L2. That is, for positive self in general, responses on the curiosity, flourishing, and hope scales had medium-strength correlations. The strongest correlations were between interest in L2 and passion for L2 at the level of positive L2 self, and between L2 listening, L2 reading, and L2 speaking at the level of L2 self-efficacy.

Table 2. Correlations of Positive Self, Positive L2 Self, and L2 Self-efficacy Variables

Variable	1	2	3	4	5	6	7	8	9	10
1. Curiosity	1	0.65	0.76	0.47	0.54	0.57	0.44	0.45	0.46	-0.3
2. Flourishing		1	0.81	0.48	0.49	0.51	0.42	0.43	0.46	ns
3. Hope			1	0.51	0.55	0.58	0.41	0.43	0.48	ns
4. Interested				1	0.86	0.87	0.63	0.62	0.65	0.27
5. Passion					1	0.90	0.64	0.64	0.70	0.27
6. MGO						1	0.64	0.65	0.70	0.26
7. Listening SE							1	0.83	0.82	0.30
8. Reading SE								1	0.82	0.34
9. Speaking SE									1	0.32
10. L2 Proficiency										1

Note: $n = 263$; All correlations significant except for ns = not significant; Interested = Interested in L2 Self; MGO = Mastery Goal Orientation; SE = Self-efficacy; L2 Proficiency = Total Score on Assessment of Communicative English

Finally, in Table 3, average correlations were calculated within and between levels for the constructs. Table 3 simplifies the results from Table 2 by combining the more specific variables measured and averaging them at each level. As above, the averages show that scales at each level measure constructs consistently, and the correlations within each level of self are strong.

Table 3. *Average Correlations within Levels, Among Levels, and with L2 Proficiency*

Average Correlations	Positive Self	Positive L2 Self	L2 Self-efficacy
Positive Self	0.74		
Positive L2 Self	0.52	0.76	
L2 Self-efficacy	0.44	0.65	0.82
L2 Proficiency	-0.30	0.27	0.32

6. Discussion

All of the measures analyzed had high alpha reliability. The correlations of Positive L2 Self and L2 Self-efficacy with overall L2 proficiency revealed that positive attitudes toward English learning have some influence on the development of L2 abilities. The average correlation of positive L2 self with overall proficiency was .27, and average L2 self-efficacy correlated at an average of .32. Although the correlations were weak, they were nevertheless significant, showing that these specified positive attitudes yield some influence on actual language learning results. The negative correlation between overall Positive Self and L2 proficiency shows that people can feel positive about themselves for many reasons other than their English ability. These two different results attested to the appropriateness of the three-tiered model used in this research to measure the general positive self, the more specified positive L2 self, and the highly specified L2 self-efficacy constructs.

Similarly, the intercorrelations and correlation averages in Tables 2 and 3 are strong within each level. They demonstrate that within each level, measures correlate more highly than with those at other levels. Also, the global positive-self measures correlated with the L2 domain-self measures more strongly than with the positive L2 self-efficacy measures. Likewise, the positive L2 domain-self measures correlated more strongly than the positive global measures with the L2 self-efficacy measures. In this way, the correlations confirmed the validity of the three tiers of constructs used to measure positive self, positive L2 self, and L2 self-efficacy.

7. Conclusion

This research investigated the effects of participating in an EFL class in which the contents covered theories and applications of positive psychology. We measured positive psychological-self constructs at three distinct levels of self: global, general L2 domain, and specific L2 self-efficacy. We found that the general pattern of relationships was similar to previous studies by Lake (2013, 2016). That is, positive global self, L2 domain self, and L2 self-efficacy measures all had stronger relationships within the levels, and progressively more distal relationships as the level of generality/specificity changed. Pretest to posttest gains on the survey's L2 listening,

reading, and speaking self-efficacy scales attested to the positive influence of participation in the class. Furthermore, survey results showed significant correlations between scores on a measure of general proficiency and the constructs of positive L2 self and self-efficacy. In sum, the research confirmed the three-tiered model for measuring constructs of positive L2 self, and also found significant correlations between these and actual proficiency. These results showed that positive attitudes have beneficial effects on language learning and that learning about positive psychology can help to improve learners' attitudes.

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