Moving Second Language Acquisition One Step Forward: Validating an Inventory of Positive Psychology in Language Learning[1]

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Abstract

Positive psychology, which has emerged as a major force since the turn of the 21st century, focuses on the constructive effects of positive emotions (Fredrickson, 2001; Seligman & Csikszentmihalyi, 2014). The purpose of this study was to establish a measure of positive psychology in language learning. To this aim, the researchers developed a 54-item questionnaire after conducting semi-structured interviews with teachers. The questionnaire was piloted with 369 EFL learners. The results of running exploratory factor analysis indicated that nine items did not show high factor loadings. Therefore, the questionnaire was revised and administered to 385 participants. The results also showed that the six factors extracted by the principal axis factoring (PFA) accounted for 52.08 percent of the variance. The confirmatory factor analysis run on the data showed construct validity of the "inventory of positive psychology in language learning" or ''IPPLL.'' Moreover, non-significant chi-square, ratio of chi-square over the degree of freedom, the root mean square of error approximation (RMSEA), and Holeter index of sampling adequacy all indicated that the model showed a good fit.

Resumen

La psicología positiva, que se ha convertido en una fuerza importante desde principios del siglo XXI, se centra en los efectos constructivos de las emociones positivas (Fredrickson, 2001; Seligman y Csikszentmihalyi, 2014). El propósito de este estudio fue establecer una medida de psicología positiva en el aprendizaje de idiomas. Con este objetivo, los investigadores desarrollaron un cuestionario de 54 ítems luego de realizar entrevistas semiestructuradas con maestros. El cuestionario se sometió a prueba piloto con 369 estudiantes de EFL. Los resultados del análisis factorial exploratorio indicaron que nueve elementos no mostraron cargas de factor altas. Por tanto, el cuestionario fue revisado y administrado a 385 participantes. Los resultados también mostraron que los seis factores extraídos por la factorización del eje principal (PFA) representaron el 52.08 por ciento de la varianza. El análisis factorial confirmatorio realizado sobre los datos mostró la validez del constructo del "inventario de psicología positiva en el aprendizaje de idiomas" o "IPPLL". Además, el chi-cuadrado no significativo, relación de chi-cuadrado sobre el grado de libertad, el cuadrado medio de aproximación de error de raíz (RMSEA), y el índice de adecuación de muestreo de Holeter indicaron que el modelo mostró un buen ajuste.

Introduction

Several researchers acknowledge that learning a second language is an emotionally driven process (Bown & White, 2010a; Dörnyei, 2005; Garret & Young, 2009; Imai, 2010; MacIntyre, 2002). Much of the scholarship on the contribution of affect to language learning has focused on negative emotions, and the role of positive emotions has been largely ignored (Bown & White, 2010a). A limited number of research studies, i.e., Bown and White (2010a), Oxford (2014), and Dewaele and MacIntyre (2014), have indulged in exploring positive emotions in language learning.

A wide range of theories in Second Language Acquisition (SLA) research have focused mainly on the cognitive aspects of language learning (Swain, 2013). Those people who are concerned with devising theories for SLA have only concentrated on the transfer of linguistic information to the learners or theories related to cognition. (See Mitchell & Myles, 1998). Additionally, there are some other factors that can explain the general failure of language education, factors such as massive learner dropout rates (Draper & Hicks, 2002), loss of motivation (Gardner, 2010), and being overwhelmed by negative emotions (Imai, 2010). However, due to the dearth of attention to the emotional factors contributing to language learning in the field of SLA, it seems a thorny issue to study these factors within the predominantly cognitive frameworks which have already been established in SLA.

Considering the lack of attention to emotional and affective variables -especially positive emotions that can influence language learning to a great extent- there is an urgent need for studies which address positive emotions and their possible beneficial effects on language learning. The present study aims at developing and justifying a questionnaire to be used as an Inventory of Positive Psychology in Learning

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Language (IPPLL). This is an inventory through which the researchers attempt to assess a possible relationship between positive psychology and language learning (Rezaee & Oladrostam, 2018).

Positive Psychology

According to Fredrickson (2001; 2003), scholars in the realm of psychology have given greater consideration to negative emotions, such a sadness and anger, than to positive emotions in their psychological studies. The role of positive emotions has not been researched sufficiently in relation to improving health and wellbeing (Fredrickson, 2003). By the same token, negative emotions such as anxiety and learner inhibition have been the focus of many studies in applied linguistics (Dewaele &MacIntyre, 2014; Oxford, 2014). Positive psychology, which has emerged as a major force since the turn of the 21st century, focuses on the constructive effects of positive emotions (such as gratitude, kindness, optimism, zest, and joy) and their contribution to wellbeing and optimal performance (Fredrickson, 2001; Seligman, 2011; Seligman & Csikszentmihalyi, 2014). Studies conducted in positive psychology have shown that those people who have positive attitudes demonstrate much lower signs of depression; they are more inclined to feel engaged in life and are more creative in finding solutions to the problems they might face. (Fredrickson, 2003; Seligman, Steen, Park, & Peterson, 2005). Positive psychology was introduced by Seligman (1999) and has spread rapidly to different areas such as education and sports. Seligman (2006) posits that positive psychology gives us the tools needed to elicit positive emotions and increase interest in life. In a similar vein, Funder (2010) holds that positive psychology could enhance humanistic psychology. SLA, a discipline in which cognitive factors are very significant, can benefit substantially from the developments of positive psychology.

The adapted theory of well-being was first presented by Seligman (2011). In this theory, happy people, as well as those who report feelings of well-being tend to find more creative solutions to their problems. According to Seligman, the acronym PERMA (Positive emotions, Engagement, Relationship, Meaning, and Achievement) has been used to describe characteristics of very happy and successful people. In a similar vein, Oxford (2014) suggests a close connection between PERMA and a list of character strengths found in some people. Different components of PERMA can be summarized in the following Table (Oxford, 2014, p. 594):

P (positive emotions)	E (engagement)	R (relationships)	M (meaning)	A (achievement)
Gratitude	Curiosity	Honesty	Perspective	Creativity
Hope	Perseverance	Kindness	Appreciation of beauty and excellence	Judgment
Love	Zest	Social intelligence	Spirituality	Bravery
		Teamwork		Love of learning
		Fairness		Self-regulation
		Leadership		Prudence
		Interpersonal forgiveness		Humor
				Humility
				Perseverance
				Zest

(Adapted from Oxford, 2014)

Table 1. Different Components of PERMA

Oxford (2014) stated that there is a clear relationship between her inventory of strategies and some components of positive psychology, such as resilience, relationship, and accomplishment. Resilience is the quality that encourages people to continue studying a language in spite of temporary failures. Relationship is in close connection with the socio-interactive strategies that learners employ when they try to relate to both the culture and native speakers of the language the target language. Accomplishment finds a close match with the whole strategic framework. In other words, if learners do not use strategies, they will not succeed in the rather complicated task of language learning. (Rezaee & Oladrostam, 2018).

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Method

Study

Considering the beneficial effects that positive emotions may have on language learning, the purpose of this study is to validate a positive psychology questionnaire; to investigate if it is possible to create a model in positive psychology and to relate it to language learning. In order to develop this positive psychology model, a questionnaire was developed after considering relevant theories and conducting interviews with instructors. This questionnaire can be used in future to gain a better understanding of instructors' as well as learners' views on positive emotions and the role they can play in language learning. (Rezaee & Oladrostam, 2018).

Participants

Two groups of participants took part in both pilot and main phases of the study: 120 males (32.5%) and 249 females (67.5%) participated in the pilot phase of the study. They were studying English as a foreign language at a private language institution in Tehran. Their ages ranged from 13 to 60. Their levels of proficiency were pre-intermediate, intermediate, or upper-intermediate and their native tongue was Persian. In the main study, 385 participants took part: 70 males (17.6%) and 315 female learners (82.4%). They had the same age (M=18) and the same proficiency levels as those in the pilot phase. (Rezaee & Oladrostam, 2018).

Instruments

The questionnaire used in the study was the Values in Action Inventory (VIA inventory), (Peterson & Seligman, 2004). This inventory consists of six categories and their respective sub-components as follows:

1. Wisdom and knowledge are characterized by “positive traits related to the acquisition and use of information in the service of the good life. In psychological language, these are cognitive strengths” (Peterson & Seligman, 2004, p. 95). This category comprises constructs such as creativity, curiosity, open-mindedness, love of learning, perspective, and innovation.
2. Courage entails “the exercise of will to accomplish goals in the face of opposition, either external or internal” (Peterson & Seligman, 2004, p. 199). It is composed of bravery, persistence, integrity, vitality, and zest.
3. Humanity refers to strengths that “positive traits manifest in caring relationships with others” (Peterson & Seligman, 2004, p. 293). This category includes love, kindness, and social intelligence.
4. Justice deals with strengths that are “broadly interpersonal, relevant to the optimal interaction between the individual and the group or the community” (Peterson & Seligman, 2004, p. 357). It encompasses citizenship, fairness, and leadership.
5. Temperance is identified as “what a person refrains from doing.(Peterson & Seligman, 2004, p. 431). It covers forgiveness and mercy, humility, prudence, and self-control.
6. Transcendence is related to strengths that “allow individuals to forge connections to the larger universe and thereby provides meaning to their lives” (Peterson & Seligman, 2004, p. 519). It comprises appreciation of beauty and excellence, gratitude, hope, humor, and spirituality.

The final version of this study was taken from Ruch, Weber, Park, and Peterson (2014) study. In this questionnaire, all character strengths and their appropriate definitions are listed in the form of a checklist. These definitions were used during the item-construction phase of the newly developed measure of positive psychology, relating them to language learning. (Rezaee & Oladrostam, p.4).

This new questionnaire, called the Inventory of Positive Psychology in Language Learning (IPPLL), consists of 54 items and six categories, each of which contains some subcategories or strengths. (Rezaee & Oladrostam, 2018). It is available in Appendix A.

Wisdom and knowledge in this questionnaire encompass “creativity, curiosity, open-mindedness, love of learning, and perspective” (Chao, 2015, p. 236). According to Chao (2015), courage consists of “bravery, perseverance, honesty, and zest” (p. 237). Moreover, humanity encompasses “love, kindness, and social intelligence” (p. 237). Justice covers “teamwork, fairness, and leadership” (p. 237); temperance includes “forgiveness, modesty, prudence, and self-regulation” (p. 237). Finally, transcendence involves “appreciation of beauty and excellence, gratitude, hope, humor, and religiousness” (p. 238). Table 2 which has been extracted from Rezaee and Oladrostam (2018) shows the categories along with the related items.

Wisdom and knowledge	Items 1 to 10
Courage	Items 11-18
Humanity	Items 19-29
Justice	Items 30-34
Temperance	Items 35-45
Transcendence	Items 46-54

Table 2. IPPLL categories and items

Procedures

This study was carried out in two phases: the pilot and the main study. Before administering the questionnaire, fifteen teachers were interviewed. The results of the interview indicated that teachers have a favorable attitude towards positive psychology. In other words, most of the items of the VIA, including self-regulation, perseverance, love of learning, perspective, creativity, zest and some other features of the VIA were extracted. The questionnaire was first administered to 369 learners. After the pilot study phase some items were eliminated (i.e., items 3 and 7 from the wisdom and knowledge category, item 14 from the courage, items 22, 25, and 27 from the humanity, items 38 and 40 from the temperance, and item 53 from the transcendence category were dropped).

Then the questionnaire was administered again to 385 learners. Both in the first and second phases of the study, some participants were excluded because they either missed a majority of the items or gave irrelevant answers. The questionnaires were anonymous, and participants were told that their identities would not be revealed even if they decided to write their names before going through the questionnaire. Participants were asked to read the questions carefully and to choose the best responses (Rezaee & Oladrostam, 2018).

Results

Pilot Study

The first draft of the questionnaire was administered to 369 EFL learners; out of whom 19 were eliminated because they either missed the majority of the items or gave irrelevant answers (e.g. they checked a single choice across the questionnaire). The Cronbach's alpha reliability indices and exploratory factor analysis were run on the remaining 350 participants.

Table 3 shows the Cronbach alpha reliability of different subcategories of the inventory of Positive Psychology in Language Learning (IPPLL). As shown, all subcomponents enjoy high levels of reliability.

Subcategories	Cronbach's alpha	Number of items
Wisdom & Knowledge	.839	10
Courage	.837	8
Humanity	.834	11
Justice	.831	5
Temperance	.875	11
Transcendence	.840	9

Table 3. Cronbach Alpha Reliability of IPPLL Subcategories (Pilot Study)

An exploratory factor analysis using principal axis factoring (PAF) method was run to probe the underlying constructs of the 54 items of the IPPLL questionnaire. The results of the Parallel Analysis Scree Plot and the total variance explained suggested that the seven factors extracted by the PAF method accounted for 45.79 percent of the variance. That is to say, the 54 items of the IPPLL questionnaire measured seven constructs with an accuracy of 45.79 percent.

Table 4 (see Appendix B). shows the factors loadings of the 54 items of the IPPLL under the seven extracted factors. Based on these results, it can be concluded that:

1. The ten items of the Wisdom and Knowledge sub-category of IPPLL loaded under the third factor of which item three (.102) and item seven (.075) had factor loadings lower than .30 which is considered as the minimum acceptable value (Field, 2013).
2. The eight items of the Courage sub-category of IPPLL loaded under the fifth factor. Item 14 was the only item with a factor loading of .063.

3. The eleven items of the Humanity sub-category of IPPLL loaded under the second factor of which item 22 (.080), item 25 (.028) and item 27 (.062) had factor loadings lower than .30.
4. The Justice sub-category had its all five factors loading meaningfully (> .50) on the sixth factor.
5. The eleven items of the Temperance sub-category of IPPLL loaded under the first factor of which item 38 (.069) and item 40 (.018) had factor loadings lower than .30.
6. The nine items of the Temperance sub-category of IPPLL loaded under the fourth factor of which item 53 (.069) had a factor loading lower than .30.

Main Study

After removing the irrelevant items, the new questionnaire with 45 items was administered to 385 participants. Twenty-four cases were dropped either because they missed all items or checked the same choice for majority of the items. The remaining 361 cases' responses were analyzed through Cronbach's alpha reliability and confirmatory factor analyses. The results are discussed below.

As displayed below in Table 5, high levels of the Cronbach alpha reliability for the subcategories and total IPPLL Questionnaire were shown in the main study.

Subcategories	Cronbach's alpha	Number of items
Wisdom & Knowledge	.89	8
Courage	.87	7
Humanity	.90	8
Justice	.84	5
Temperance	.91	9
Transcendence	.88	8
Total Questionnaire	.89	45

Table 5. Reliability Statistics of the subcategories and total questionnaire (main study)

Exploratory factor analysis

An exploratory factor analysis using principal axis factoring (PAF) method was run to probe the underlying constructs of the 45 items of the IPPLL questionnaire. The Parallel Analysis Scree Plot (see figure 1) and the total variance explained in Table 6 (see Appendix C), suggested a six-factor solution which accounted for 52.08 percent of the total variance. As displayed in the Table, the six factors extracted by the PAF method accounted for 52.08 percent of the variance. That is to say; the 45 items of the IPPLL questionnaire measured six constructs with an accuracy of 52.08 percent.

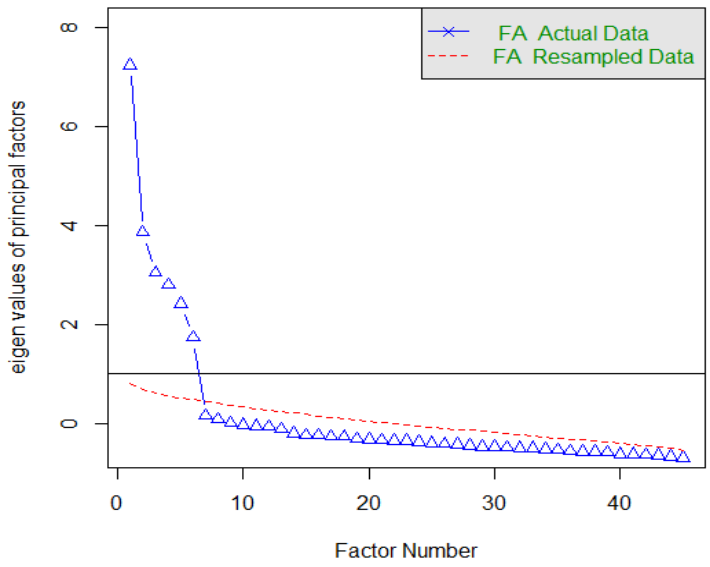

Figure 1. Parallel Analysis Scree Plot Number of factors to be extracted for IPPLL questionnaire

According to Table 7 (see Appendix D), the items related to the Temperance, Humanity, Wisdom and Knowledge, Transcendence, Courage and Justice significantly (=> .50) loaded in the first to six factors.

Based on these results, it can be concluded that the EFA supported the construct validity of the IPPLL questionnaire.

Confirmatory factor analysis

A confirmatory factor analysis (CFA) was run to probe the trait structure of the six components of the IPPLL questionnaire. Before discussing the results, it should be noted that the assumptions of univariate and multivariate normality were met. The absolute values of the skewness and kurtosis statistics were lower than 2 (Bae & Bachman, 2010) indicating that the assumption of univariate normality was met. The Mardia's index of multivariate normality; (i.e., -1.60) was lower than -3. Thus, it can be concluded that the assumption of multivariate normality was retained.

Figure 2 shows the CFA model probed in this study. The rectangles represent the 45 items of the IPPLL questionnaire. Each sub-set of items measure a latent (un-observed) variable. The latent variables are represented by ovals. The single-headed arrows indicate direct relationship between the variables. The small circles connected to items are the error terms.

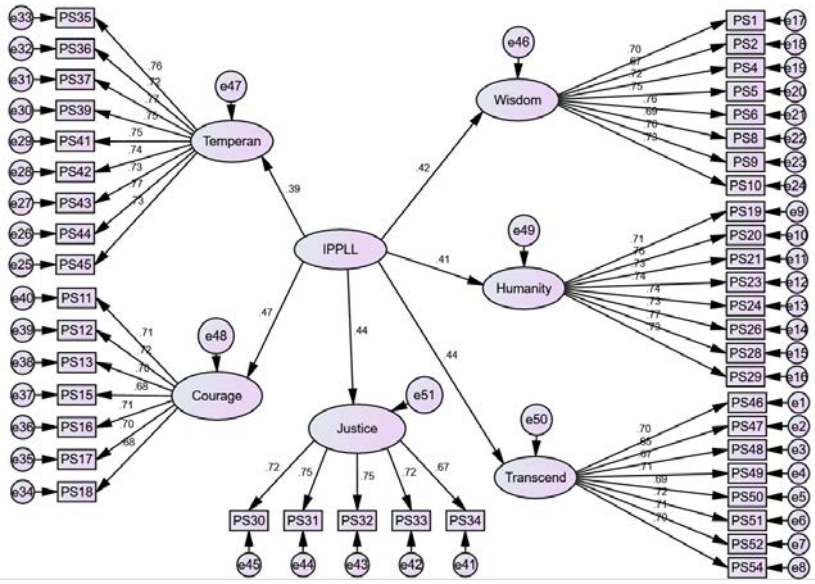

Figure 2. Trait Structures of Components of IPPLL Questionnaire

The most important results were the contribution of six sub-categories to the IPPLL; (i.e., the Wisdom and Knowledge, β= .420; Temperance, β= .386; Courage, β= .468; Justice, β= .441; Transcendence, β= .436; and Humanity, β = .409) all had large contributions to the IPPLL. The overall model indicated a good fit. The non-significant chi-square (χ^2 (939) = 869.90, p = .834) also indicated a good fit. The ratio of chi-square over the degree of freedom (869.90 / 939 = .955) was lower than 3; another argument to claim for the fit of the model. RMSEA was .000. Its 90 percent confidence interval (i.e., .000 and .009) was lower than .05. These results also confirmed the fit of the model. Table 8 summarizes the model fit statistics all of which supported the fit of the IPPLL model. One of most important findings was the Holeter index of 406 (> 200) which indicated that the present sample size was adequate for running the CFA.

Statistic	Value	Criterion	Conclusion
Chi-square	896.901	---	---
D.F.	939	---	---
P	.834	>=.05	Good Fit
Ratio	.955	<=3	Good Fit
SRMR	.0299	Not = 1	Good Fit
CFI	1	>=.90	Good Fit
TLI	1	>=.90	Good Fit
IFI	1	>=.90	Good Fit
GFI	.906	>=.90	Good Fit
RMSEA	.000	<=.05	Good Fit
95 % CI	[.000, .009]	<=.05	Good Fit
PCLOSE	1	>=.05	Good Fit
Holeter	406	>=200	Sampling Adequacy

Table 8. Model Fit Indices

Discussion and conclusion

The results of exploratory factor analysis indicated that the six factors extracted by PFA accounted for 52.08 percent of the variance. Moreover, the confirmatory factor analysis established the construct validity of IPPLL. There are a host of reasons why some items had to be extracted in the first version of the questionnaire. The reasons are discussed in this section.

Oxford (2014) has mapped the strengths of character in Seligman's framework onto the elements of PERMA (i.e., positive emotions, engagement, relationships, meaning, and accomplishment). As also emphasized by Oxford (2014), the positive emotions of PERMA can clearly embody character strengths such as gratitude, love, and hope. Engagement seems to represent zest, perseverance, and curiosity. Concerning relationships, they can best be manifested through strengths such as kindness, fairness, honesty, forgiveness, leadership, social intelligence, and teamwork. Meaning can markedly embrace concepts such as appreciation of beauty and excellence, spirituality, and perspective. As to the last element of the acronym PERMA, one can infer that a large number of strengths such as love of learning, perseverance and zest, bravery, self-regulation, creativity, judgment, humility, prudence, and humor can be subsumed under accomplishment.

According to Seligman (2011), each element in well-being theory must meet three important criteria:

1. It should play a key role in well-being
2. People follow each element for its own sake
3. It should be definable and measurable

Oxford (2014) has leveled two criticisms against the VIA devised by Peterson and Seligman (2004). She stated that not all elements of PERMA are measurable and definable. For instance, she postulated that meaning and engagement are inextricably interwoven. She justified her opinion based on the fact that people usually engage in activities that they consider meaningful. She believed that engagement includes intrinsic motivation, flow, self-determination, and investment. This is also supported by Ryan and Deci's (2000, 2008) seminal work on self-determination theory (SDT) and its contributions to intrinsic motivation, social development, and well-being. They argued for the possible implications that SDT can offer to promote individuals' intrinsic motivation and their creativity and learning.

Furthermore, Norton and Gao (2008) stated that "the notion of investment signals the socially and historically constructed relationship of learners to the target language." (p. 110). Likewise, Oxford (2014) asserted that when individuals cannot invest in the target language, they might have two reactions. They either try to work harder and attempt painstakingly to achieve their educational goals in order to be accepted by the target community or, by contrast, they avoid participating in the community or working firmly to learn the language. Oxford (2014), therefore, believed that engagement consists of a wide range of factors including resilience, motivation, relationship, and meaning. She also believed that elements such as relationship, achievement, and positive emotions are tightly connected. Therefore, one of the reasons some items of each specific category could not be extracted might be because some of the categories merge.

For instance, in Oxford's (2014) view, curiosity, perseverance, and zest are subparts of engagement part of PERMA. Taking into account the relationship of the questionnaire used in this study to PERMA, it can be seen that items such as curiosity, perseverance, and zest belonged to two separate categories of wisdom and knowledge and courage respectively in IPPLL. Yet, these items are actually merged under the engagement category in Oxford's (2014) classification. Therefore, some of the items, including items 3 and 7 in wisdom and knowledge and item 14 in the courage category, could not be extracted as separate items and had to be omitted. These two categories can actually be mixed. Consequently, their items can also merge.

Another example of merging some categories of PERMA into one single category can be seen when item extraction does not occur in three items (items 22, 25, and 27) in the humanity category. The reason might lie in the possibility that the humanity category was also merged with the justice category and most of its subparts (kindness, fairness, teamwork, and leadership) were subcategorized under R or the relationship part of the PERMA in Oxford's (2014) mapping of strengths to PERMA. In IPPLL, however, kindness belongs in the humanity category while fairness, teamwork, and leadership all belong in the justice category. Therefore, most of the items of the humanity category had to be omitted since the two categories of humanity and justice can actually amalgamate and can be used as one category. Thus, merging their items may seem plausible. This is evidenced by Oxford's (2014) claim with regard to the firm connection between relationship and positive emotions.

The second criticism that has been put forward against the VIA inventory is that the theory of well-being is predominantly focused on positive emotions whereas learners sometimes slog through the process of learning. They, therefore, experience negative emotions such as boredom, anxiety, or sadness. They sometimes experience feelings of self-retribution after failure. In a similar vein, Dewaele and MacIntyre (2014) have advised researchers to consider both positive and negative emotions, emphasizing that learners tend to experience both positive and negative emotions in the process of learning. Furthermore, Dewaele and MacIntyre (2014) found that "the ratio of positive to negative emotion in the most advanced group of learners is approximately 2:1, then 1½:1 in the intermediate group, and finally 1:1 in the group self-described as performing far below average" (p. 263). Based on their results, they argued that future studies should explore the ratio of positive to negative emotions. One of the reasons some of the items could not be extracted in the first questionnaire is that the questionnaire is only focused on positive emotions. It would have been a better approach for the researchers to consider both positive and negative emotions.

Pekrun (2000) has elaborated on the socio-cognitive theory of emotions. According to this theory, there are always both environmental and individual antecedents which can determine emotions. Individual factors comprise factors such as self-confidence and self-efficacy. Social factors encompass factors like feedback and the level of support which is usually provided in interactions (Pekrun, Goetz, Titz, & Perry, 2002). In fact, what comes to the foreground in this theory highlights cognitive appraisals, self-related appraisals, and situation-related appraisals which determine emotion. For instance, individuals might interpret an approaching deadline differently. One might interpret the deadline as a good source of challenge. Another person might interpret it as a source of anxiety. Thus, since learners might have interpreted each of these emotional categories differently and depending on the varied contextual features, some items were characterized under the same category and did not emerge independently.

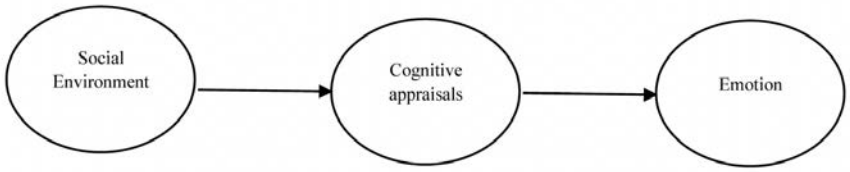

Figure 3: Socio-cognitive theory of emotions (Bown & White, 2010a, p.333)

There are also various reasons why the IPPLL can be applicable to the area of SLA. First, Gardner (1985, 2010) in his (socio-educational) model has described emotional variables that explain motivated learners. One of these variables is having positive attitudes toward speakers of another language and the other is having an interest in learning another language. The other model is Clement, Gardner, and Smythe's (1980) social psychological model. which defined self-confidence as positive attitudes toward self. It can be concluded, therefore, that for learners, most of these emotional items were considered important because all these factors tend to motivate them and to affect their success in second language acquisition to a great extent.

The second reason why the IPPLL seems to work is that it looks at factors which are important in the process of language acquisition and not just the final product. Dörnyei's (2005) cognitive situated approach to motivation argues that studies of language motivation cannot be linked to the studies of SLA due to two important reasons. The first is the different backgrounds of motivation researchers and SLA researchers. Researchers who work in the motivation field are social psychologists, whereas researchers who work in the SLA field are linguists. The second reason might lie in the product-oriented stance motivation research has taken during all these years.

Dörnyei (2005) stated that there are two main questions motivation researchers have permanently asked:

What are motivational characteristics of learners who decide to study an L2?

How do different types of motivational dispositions affect L2 learning achievement? (p. 109)

These questions clearly show the product-oriented nature of motivation research which is in conflict with the very process-oriented nature of L2 acquisition. SLA research mostly deals with the process of second language acquisition and how this process takes place. Resultantly, the items of this questionnaire were intended to be relevant to learning the language while taking into account the process-oriented nature of second language acquisition as well.

Likewise, Dörnyei and Skehan (2003) introduced the notion of self-regulation of emotion. Self-regulation refers to attempts made by an individual to achieve goals or to fulfil an ambition. In a similar vein,

another definition of self-regulation has been provided by Vohs and Baumeister (2004) “any efforts by the human self to alter any of its own inner states or responses” (p. 2) Thus, according to Bown and White (2010b), self-regulation involves the steps taken by one individual to overcome any negative feelings and to begin to have positive emotions in order to achieve goals. Therefore, the other reason IPPLL is deemed to be applicable would be that, during any learning and especially language learning, it is important for learners to be able to take control of their affective stance and to be able to regulate their emotions. The results of administering the IPPLL to students, with the special focus on the Temperance category, can reveal if they are aware of their feelings and how much this emotional self-awareness could be beneficial in their process of second language acquisition. In fact, items 43 and 44 of the Temperance category represent self-regulation, which deals with making conscious choices about learning and monitoring one’s own learning.

Further suggestions come from the notion of intelligent processing by Goetz, Frenzel, Pekrun, and Hall (2005) and Martinez-Pons (2000 , 2002). This notion refers to using ones’ cognitive abilities to control and regulate one’s emotions. Bown and White (2010b) defined three key stages which are involved in this process. Perception is the first stage. During this stage, learners only identify emotions and try to categorize these emotions under any groups they belong to. These groups include language learning context, learners, peers, etc. The second stage involves thinking about the emotion in its context. The last stage includes managing emotions. An example could be structuring a task in order to optimize emotions that can enhance learning. The reason this questionnaire could be applied in SLA is because this inventory consists of items that show how learners can control and regulate their feelings and how they can use such feelings to succeed.

All in all, in this study, it was concluded that the inventory of positive psychology in language learning has a high reliability. Therefore, it can be used in other similar studies. If students judge all positive psychology strengths as important in learning, other studies can be carried out using the IPPLL as the starting point in language classrooms. Both students and teachers can benefit from using these character strengths in their learning and teaching. Other studies could be carried out in which classes are observed to see how many of these character strengths are use and emphasized during their teaching. Certain questions could be answered in such studies. For instance, are there any materials or approaches which encourage learners to be optimistic about the final product of learning? Or are there any materials or approaches which encourage students to be grateful about good events which have happened to them as a result of their own learning? Having observed a lack of such materials or such approaches, we think that some teacher education programs could be established in which practitioners are made aware of the IPPLL and its potential effects on learning and teaching.

Implications and Limitations

There are a number of limitations in the present study that need to be highlighted. First, the number of male participants was much lower than that of female participants. Second, due to the difficulty attached to asking learners from other institutions to participate in this study, convenience sampling was used. Third, considering the practical restrictions associated with asking all learners in different proficiency levels to participate in the study, only some levels of proficiency including pre-intermediate, intermediate, and upper intermediate levels were considered.

It is recommended to conduct further studies in which the same questionnaire could be administered to teachers to find out whether there are any significant differences between teachers’ and students’ answers to these items. Some variables such as age, and teaching or learning experience, or linguistic background, or even gender could be included in the questionnaire to investigate how such factors could affect both teachers’ and students’ responses to the items in the questionnaire. After filling out the questionnaires, students could take some proficiency tests so that possible relationships between students’ answers to the IPPLL items and their proficiency level could be discovered. It is also recommended that teachers’ practices in their classrooms be observed to see how much their teaching practices converge with positive psychology practices. They could also be interviewed to probe the presence of the IPPLL’s underlying constructs in their verbal output. Additionally, future studies conducted in (socio-culturally, pedagogically, etc.) different L2 contexts would be welcome in order to enhance the generalizability of the findings.

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Appendix A

Inventory of positive psychology in language learning (IPPLL)

Dear instructors,

Read the items carefully and tick the extent to which you agree with each item.

Item	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
1. Students' use of creative learning methods is effective in their learning					
2. Teacher's use of creative learning methods is effective in Students' learning					
3. Students' interest in the materials which are presented is effective in their learning.					
4. Students' interest in classmates is effective in their learning.					
5. Students' interest in their teacher is effective in their learning.					
6. Students' interest in class atmosphere is effective in their learning.					
7. Having a critical stance toward what is presented is effective in students' learning.					
8. Mastering new skills and areas is effective in students' learning					
9. Classmates' feedbacks are effective in students' learning.					
10. Teacher's feedbacks are effective in students' learning					
11. Being able to deal with difficulties and challenges is effective in students' learning					
12. Becoming a volunteer for doing class activities is effective in students' learning					
13. Having a high level of perseverance and expanding a lot of effort is effective in students' learning					
14. Showing their true skills and capabilities in the class is effective in students' learning					
15. High attraction of classroom materials is effective in students' learning					
16. An exciting classroom is effective in students' learning					
17. Having energetic classmates is effective in students' learning.					
18. Having an energetic teacher is effective in students' learning					
19. Having a high rapport with classmates is effective in students' learning					
20. Having a high rapport with teacher is effective in students' learning					
21. Teacher's interest in students is effective in their learning					
22. Teacher's interest in students' classmates is effective in their learning					
23. Assisting classmates is effective in students' learning					
24. Assisting teacher is effective in students' learning					
25. Students' awareness about their own feelings is effective in their learning					
26. Students' awareness about their classmates' feelings is effective in their learning					
27. Being aware of the true value of learning is effective in students' learning					
28. Activities that create motivation in me are effective in students' learning					

29. Activities that create motivation in students' classmates are effective in their learning					
30. Group activities done in classroom are effective in students' learning					
31. Getting classmates' feedbacks about class activities is effective in students' learning					
32. The same behavior of teacher with all students is effective in students' learning					
33. Being a group leader is effective in students' learning					
34.Being able to accomplish group activities successfully is effective in students' learning					
35. Getting help from classmates is effective in students' learning					
36. Getting help from teacher is effective in students' learning					
37. Giving corrective feedbacks to their classmates is effective in students' learning					
38. Receiving corrective feedbacks on their mistakes from classmates is effective in students' learning					
39. Receiving corrective feedbacks on their mistakes from the teacher is effective in students' learning					
40. Teacher's neglect of their mistakes is effective in students' learning					
41. Classmates' awareness of their capabilities is effective in students' learning					
42. Teacher's awareness of their capabilities is effective in students' learning					
43. Making conscious choices about learning methods is effective in students' learning					
44.Monitoring their own learning is effective in students' learning					
45.Monitoring their emotions is effective in students' learning					
46. Having a sense of gratitude toward classmates is effective in students' learning					
47. Having a sense of gratitude toward the teacher is effective in students' learning					
48. Being grateful about good events which have happened to them as the result of learning the language is effective in students' learning					
49. Being optimistic about learning the language fully is effective in students' learning					
50. Students' sense of humor is effective in their learning					
51 .Classmates' sense of humor is effective in students' learning					
52 .The teacher's sense of humor is effective in students' learning					
53. Having an awareness about goals of learning a language is effective in students' learning					
54. Having an awareness of the benefits of learning a language is effective in students' learning					

Appendix B

Table 4. Rotated Factor Matrix; IPPLL Questionnaire (Pilot Study)

	Factor						
	1	2	3	4	5	6	7
PS1	.062	.009	*.675*	.089	.092	.007	.110
PS2	.026	.061	*.699*	.069	.061	.069	.037
PS3	.071	.048	*.102*	.052	.062	.041	.489
PS4	.017	.054	*.635*	.049	.051	.056	.070
PS5	.054	.104	*.668*	.075	.017	.066	.099
PS6	.061	.095	*.657*	.057	.080	.044	.150
PS7	.059	.094	*.075*	.042	.068	.029	.436
PS8	.132	.046	*.647*	.066	.012	.086	.091
PS9	.073	.020	*.677*	.077	.063	.054	.113
PS10	.092	.061	*.684*	.051	.058	-.014	.100
PS11	.069	.096	.086	.080	*.676*	.065	.042
PS12	.062	.083	.085	.067	*.713*	.035	.052
PS13	.088	.070	.035	.090	*.644*	.071	.127
PS14	.030	.069	.018	.002	*.063*	.096	.565
PS15	.057	.094	.024	.046	*.668*	.024	.098
PS16	.060	.047	.085	.065	*.740*	.039	.047
PS17	.086	.107	.056	.022	*.658*	.076	.076
PS18	.013	.096	.048	.093	*.648*	.012	.098
PS19	.052	*.667*	.062	.039	.057	.036	.135
PS20	.076	*.675*	.047	.024	.073	.039	.132
PS21	.058	*.708*	.071	.035	.096	.023	.075
PS22	.064	*.080*	.092	.029	.078	.050	.429
PS23	.039	*.706*	.066	.014	.086	.066	.098
PS24	.039	*.667*	.044	.058	.090	.062	.152
PS25	.045	*.028*	.023	.100	.041	.018	.550
PS26	.075	*.712*	.029	.074	.091	.051	.051
PS27	.022	*.062*	.047	.052	-.009	.010	.466
PS28	.058	*.682*	.077	.096	.089	.068	.035
PS29	.027	*.715*	.061	.061	.048	.013	.082
PS30	.041	.071	.069	.078	.063	*.648*	.072
PS31	.087	.078	.067	.016	.047	*.719*	.058
PS32	.062	.030	.057	.070	.045	*.682*	.120
PS33	.053	.093	.058	.050	.041	*.700*	.107
PS34	.061	.031	.069	.064	.090	*.687*	.059
PS35	*.733*	.050	.085	.037	.038	.025	.084
PS36	*.739*	.026	.061	.089	.033	.058	.076
PS37	*.748*	.027	.081	.059	.077	-.007	.085
PS38	*.069*	.070	.082	.010	.038	.062	.438
PS39	*.728*	.006	.075	.072	.045	.026	.027
PS40	*.018*	.076	.146	.093	.046	.005	.484
PS41	*.715*	.118	.000	.055	.057	.060	.057
PS42	*.717*	.062	.038	.039	.067	.066	.058
PS43	*.712*	.044	.054	.026	.057	.036	.044
PS44	*.758*	.034	.099	.021	.078	.043	.114
PS45	*.732*	.089	.063	.030	.036	.070	.058
PS46	.029	.040	.083	*.645*	.063	.045	.060
PS47	.057	.023	.076	*.616*	.025	.033	.051
PS48	.055	.019	.030	*.686*	.077	.021	.059
PS49	.038	.035	.067	*.639*	.080	.027	.067
PS50	.066	.073	.086	*.629*	.029	.055	.045
PS51	.050	.068	.054	*.703*	.024	.050	.073
PS52	.054	.084	.061	*.674*	.106	.027	.073
PS53	.051	.055	.033	*.069*	.066	.066	.466
PS54	.021	.032	.044	*.659*	.052	.043	.098

"Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalization".

Appendix C

Table 6. Total Variance Explained (Main Study)

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.042	17.870	17.870	7.568	16.817	16.817
2	4.520	10.045	27.915	4.071	9.047	25.865
3	3.972	8.827	36.742	3.497	7.771	33.635
4	3.734	8.297	45.040	3.242	7.205	40.840
5	3.354	7.454	52.493	2.849	6.331	47.171
6	2.687	5.971	58.465	2.211	4.913	52.084
7	.824	1.832	60.296			
8	.780	1.734	62.031			
9	.726	1.613	63.643			
10	.716	1.590	65.234			
11	.700	1.555	66.789			
12	.678	1.507	68.296			
13	.666	1.480	69.776			
14	.644	1.431	71.207			
15	.621	1.379	72.587			
16	.613	1.362	73.949			
17	.596	1.324	75.273			
18	.572	1.271	76.544			
19	.561	1.247	77.791			
20	.534	1.187	78.978			
21	.522	1.161	80.139			
22	.520	1.155	81.294			
23	.513	1.141	82.435			
24	.490	1.089	83.524			
25	.475	1.056	84.580			
26	.469	1.043	85.623			
27	.461	1.025	86.648			
28	.442	.981	87.629			
29	.434	.964	88.593			
30	.419	.931	89.524			
31	.401	.891	90.415			
32	.393	.873	91.289			
33	.380	.844	92.132			
34	.372	.827	92.959			
35	.356	.792	93.751			
36	.345	.767	94.518			
37	.339	.754	95.272			
38	.320	.710	95.983			
39	.307	.683	96.665			
40	.293	.652	97.317			
41	.273	.607	97.924			
42	.266	.591	98.515			
43	.259	.575	99.090			
44	.227	.504	99.594			
45	.183	.406	100.000			

Extraction Method: Principal Axis Factoring.

Appendix D

Table 7. Rotated Factor Matrix (Main Study)

	Factor					
	1	2	3	4	5	6
PS37	*.756*	.057	.033	.108	.027	.038
PS35	*.753*	.045	.077	.045	.057	.028
PS41	*.752*	.028	.028	.028	.036	.060
PS44	*.752*	.042	.049	.076	.079	.012
PS39	*.741*	.051	.040	.033	.062	.055
PS42	*.729*	.098	.041	.047	.028	.086
PS45	*.725*	.041	.041	.029	.072	.041
PS43	*.716*	.052	.050	.078	.101	.031
PS36	*.714*	.054	.075	.076	.039	.027
PS28	.003	*.756*	.086	.078	.076	.028
PS20	.062	*.747*	.047	.038	.051	.034
PS24	.035	*.734*	.038	.010	.082	.022
PS23	.087	*.724*	.060	.037	.029	.083
PS21	.084	*.718*	.074	.021	.036	.065
PS26	.047	*.717*	.041	.065	.063	.026
PS29	.072	*.712*	.091	.062	.060	.058
PS19	.051	*.693*	.099	.079	.067	.056
PS6	.028	.068	*.752*	.031	.060	.041
PS5	.041	.063	*.739*	.093	.040	-.002
PS10	.003	.081	*.720*	.072	.042	.042
PS4	.086	.023	*.704*	.058	.104	.046
PS1	.076	.083	*.687*	.098	.007	.042
PS9	.042	.069	*.682*	.037	.062	.103
PS8	.077	.043	*.678*	.074	.052	.058
PS2	.049	.090	*.664*	.009	.085	.028
PS51	.017	.056	.071	*.711*	.073	.043
PS49	.062	-.012	.025	*.703*	.049	.077
PS52	.071	.035	.065	*.696*	.075	.073
PS54	.071	.066	.063	*.693*	.025	.058
PS46	.044	.042	.071	*.692*	.059	.056
PS50	.037	.059	.053	*.679*	.072	.014
PS48	.077	.024	.057	*.654*	.066	.033
PS47	.080	.098	.050	*.632*	.059	.069
PS12	.050	.090	.037	.069	*.708*	.032
PS11	.089	.031	.089	.066	*.696*	.046
PS13	.047	.020	.042	.057	*.694*	.058
PS17	.055	.030	.078	.054	*.692*	.067
PS16	.083	.092	.069	.081	*.685*	.053
PS18	.057	.088	.022	.097	*.665*	.080
PS15	.053	.077	.087	.039	*.664*	.067
PS32	.051	.081	.090	.044	.062	*.738*
PS31	.036	.053	.047	.089	.079	*.736*
PS30	.058	.078	.050	.082	.072	*.704*
PS33	.087	.050	.048	.076	.106	*.698*
PS34	.069	.055	.075	.088	.059	*.653*

Extraction Method: Principal Axis Factoring.