

## Constructivist vs. Positive Psychology on Learning: Developing a Positive Intervention Inventory to Mediate Speaking, Anxiety, and Engagement

<sup>1</sup>Sajjad Farokhipour\*

Research Paper

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**Abstract:** Like other domains of education, language learning is largely endowed with theory and practice from psychology. However, in the recent decades, dynamic assessment (DA) and positive psychology (PP), as two distinct approaches to learning, have become more prominent and cultivated robust empirical support. To answer whether DA serves learners' and learning variables or PP, the present study adopted a comparative perspective to juxtapose their effects on speaking, foreign language enjoyment (FLE), and foreign language anxiety (FLA). To this aim, a mixed method study was employed which sought two primary purposes; the development of a PP regulatory scale and comparing the effects of PP and DA regulatory scales on speaking, FLE, and FLA. The first aim was sought through a systematic review and application of a three-phase guideline for mediational inventory development. The latter was realized through a quasi-experimental approach using a post-test control-only experimental design. Consistent with the instruments used and the nature of the data collected, one-way analysis of variance was used to compare the effects of PP and DA on speaking while Kruskal-Wallis was used to compare their effects on FLE and FLA. A mediational inventory of PP entailing 11 moves was constructed. Also, as revealed by ANOVA, ( $F(2, 33) = 20.600, p = 0.000$ ), both DA and PP groups outperformed the control group in the speaking test while the DA group performed slightly better though not significantly. Also, Kruskal-Wallis indicated that PP and DA groups outperformed in FLE ( $\chi^2(2) = 23.837, p = 0.000$ ) and FLA ( $\chi^2(2) = 22.677, p = 0.001$ ) compared with control groups. PP group slightly outmatched with FLE and FLA compared with DA group but the difference was statistically non-significant.

**Keywords:** Constructivism, Dynamic Assessment, FLA, FLE, Positive Psychology, Regulation, ZPD

### Introduction

Laying significant emphasis on a creative, supportive and engaging learning environment, constructivist pedagogy has promoted learning and learners' qualities to a significant extent (Zajda, 2021). According to Veerbeek and Vogelaar (2024), constructivist education lays the groundwork for greater social and cognitive interaction among language learners as well as teachers and learners compared with normative and classical approaches. Resing et al. (2020) gives prominence to another merit inherent in the constructive education and highlights that unlike normative approaches, constructivist education has a great propensity to serve as a diagnostic tool in educational settings because it provides direct information about learners' potentials, difficulties, instructional needs, and their capabilities for recognizing, overcoming or fulfilling them. It is also reported that constructivist education, embedded in psychology, is predisposed to provide for affective and emotional issues encountered in the learning environment such as anxiety, well-being and motivation through simultaneous regulation of cognition and affection (Udeshinee et al., 2024). Among the robust applied approaches of constructivist psychology to education has been DA which builds upon alternative mediation and scaffolding of learning to diagnose errors of learning, treat them and trace internalization of learning while considering the psychological state of learners (Poehner & Lantolf, 2022). Besides, a wide range of empirical and theoretical studies submit robust evidence on the success of dynamic intervention for removing learning

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<sup>1</sup> Assistant Professor (Corresponding Author), [farokhipours@smc.ac.ir](mailto:farokhipours@smc.ac.ir); Department of Language and Literature, Shahid Mahallati University of Islamic Sciences, Qom, Iran.

difficulties and learners' cognitive and emotional problems (Sarani et al., 2019). For the same reason, this approach of constructive psychology is employed for a number of educational purposes including instruction, assessment, and emotional regulation (Azizi & Khafaga, 2023). Farokhipour (2019) reported that DA significantly promotes both receptive and productive language skills in Iranian contexts, regulates anxiety during teacher-student interaction, and distinguishes mistake from error to be elaborated on by the teacher.

Nevertheless, the endowment of psychology to education and language teaching is not limited to the constructivism of soviet psychology. Positive Psychology (PP), a newly emerged practical discipline of psychology has enriched language teaching with theory, practice, insight, and methodology (Li, 2021). It is proved that foreign language instruction stimulates cognitive and thinking development in learners as a result of which an array of emotional experiences are encountered by language learners (Wang, 2024). Therefore, in language education, a special attention is devoted to the way that positive emotions might impose impact on academic engagement and achievement (Carmona-Halty et al, 2019). Allison, Waters, and Kern (2020) believe that positive psychology can flourish not only the context of education but also the content, material, and activities. Besides, Wang, Derakhshan, and Zhang (2021) emphasized the weight of positive emotions in second language learning and teaching which has become manifest in research, too. This emergence is also underscored by Wang and Jiang (2022) and Mercer and Gregersen (2023) positing that, PP, in language acquisition and learning discipline, came forth as a response to an increasing interest in emotions to compensate for the short-sighted cognitive focus predominating language education research. The burst forth of PP in the second language teaching and research might date back to Mercer and MacIntyre (2014) who reported that PP can add new themes in the second language research and practice and concluded that the adoption of a PP perspective can promote the whole second language performance because it engenders positive spirit in the whole process of teaching and learning rather than emphasizing mere deficiencies. Furthermore, MacIntyre, Gregersen and Mercer (2019) published a work and highlighted the emergence of PP in language teaching. During the past decade, a considerable bulk of research was devoted to PP effects on foreign and second language theory and practice including Oxford (2016) stressing theoretical aspects of this association, Dewaele et al. (2019), Jiang and Dewaele (2019) as well as Dewaele and Moskowitz (2020) and Sun (2024) stressing underlying variables in this association such as emotion, perception, anxiety, enjoyment and well-being. Some researchers, (e.g., Li, Dewaele & Hu, 2020) stressed the positive effect of PP on the achievement and outcome of language learners.

### **Statement of the Problem**

Psychology has served as a critical foundation for many learning theories. Thus, further manipulation of psychology and cultivating its new trends and approaches for pedagogical contribution has been a continuous endeavor among applied researchers. The main problem of the current study is that unlike constructivist psychology, the possible contributions of PP to education and language learning is not examined enough. Based on the premises and argumentations presented in tenets of PP, it seems that this newly emerged approach in general psychology can promote learning and its associated variables such as emotional variables. One critical reason for which PP is not discussed enough in education is the lack of applied definitions or practical utilities for employment in a real educational context. Accordingly, the current research was twofold attempt to a) primarily develop a practical regulatory scale of positive psychology for the promotion of learning and enhancement of its associated emotional variables (Foreign Language Enjoyment; henceforth FLE and Foreign Language Anxiety; henceforth FLA) and then b) compare its effects on these variables with a previously substantiated approach (DA in constructivist psychology).

### **Importance of the Research**

This research has ontological, epistemological, and methodological importance for education in general and language learning, in particular. From an ontological perspective, the current research is among earlier attempts that introduces positive psychology as a viable applied domain for education which

may manipulate learning process and emotional issues governing learning. From an epistemological perspective, the present study has fine-tuned the adoption of the regulatory scale with real and local educational settings so that the developed regulatory scale developed in the first phase of the study is consistent with language and emotional difficulties of Iranian learners though it can be generalized to other educational contexts inside and outside the language discipline. From the methodological perspective, the current study is the first one that uses error/mistake recognition principles, systematic literature review and develops a practical approach of PP for real classroom settings and then compares it with a previously validated approach (DA) from both parametric and non-parametric perspectives on a number of variables.

Considering the very fact that DA and PP, two divisions of theoretical psychology, are newly applied to the field of education and a huge bulk of research supports both approaches, the current study is an attempt to fill the gap on the relative efficacy of these approaches in language teaching. Aimed at this purpose, the current research compares the effects of DA and PP on a number of variables associated with learning (speaking skill) and learners (FLA and FLE) and discusses the merging implications. Thus, the following research questions are formulated:

**Research Question One:** How can PP be interpreted in the real language learning context in terms of a regulatory scale?

**Research Question Two:** Does the developed PP regulatory scale affect speaking, FLE and FLA among Iranian language learners compared with DA?

**Research Question Three:** What are the main differences between theory and practice of DA and PP in language education?

## Literature Review

### Theoretical Underpinnings

#### *DA's Theory*

Mainly stemming from Soviet psychology, constructivist psychology as a notable school of thought in the psychology of learning is rooted in an array of well-known theoretical principles. DA, too, as a practical manifestation of this school enjoys from these principles and theoretical foundations. For the purposes of the current research, some of them are briefly described.

- *Constructed Learning:* According to Waite-Stupiansky (2022) on the basis of constructed learning theory, when environment is firstly a stimuli-rich context for supporting the interaction, learning then takes place in an un-scaffolded interaction between the learners' mental schemas and the objects encountered in the external world due to the his/her capability in uncovering concepts individually. The same idea was previously confirmed by Benjamin (2000) and Tzuril (2001) contending the Piagetian view that unprompted interaction of the learner with the physical world is a forerunner to her development of schemata and symbolic operational thought which then leads to learning through establishment of a social interaction.
- *Socio-Cultural Theory:* According to socio-cultural theory in learning, the assisted scaffolded talk by more significant others motivates the materialization of the emerging functions. In other words, what the learner is able to do at the present time with assistance can be done by the learner in future in the absence of any assistance (Farokhipour, 2019). Two distinctive but linked educational principles derived from this theory are scaffolding and zone of proximal development (ZPD) that form a robust unified learning theory (Xi & Lantolf, 2020). According to Lantolf, Kurtz and Kisselev (2017), ZPD identifies what a learner is able to perform individually and the way he can function while backed by a more expert collaborator and provides the assessor with the information on the kinds of psychological processes that the learner might perform in the next phase of

development. It also identifies the kinds of instruction needed for this development to happen appropriately.

- *Structural Cognitive Modifiability*: This theory elaborates on exclusive disposition of human beings for changing and modifying the structure of their cognitive functioning to tune it with the changing demand of the environment (Tzuriel, 2021). In other words, humans are seen as open systems endowed with capability to change under specified conditions of re-mediation but the point that needs to be considered is that the quality and quantity of intervention must match the learner's needs. In this conceptualization, cognitive modifiability is told apart from biological, maturational and fragmentary or transient changes and modifications (Benjamin & Lomofsky, 2002).

### ***Positive Psychology***

PP was originally constructed upon three pillar principles of PEM, representing positive emotion, engagement and meaning making derived from the authentic and validated happiness theory in psychology (Seligman, 2002). This theory was then enriched and modified into well-being theory (Seligman, 2011) which still serves as major theoretical underpinning not only for PP but also for modern psychology. Well-being theory was substantiated by PERMA principles, subsuming "Relationship" and "Accomplishment" under the earlier PEM. Wang (2024) holds that the contribution of well-being theory and PERMA principles reside in their emphasis on psychological and cognitive health of teachers and learners. Adding to the depth and wealth of well-being theory and calling for a new coherent theory for applying PP into education, Oxford (2016) proposed "EMPATHICS" principles to embrace nine interrelated dimensions and variables including emotion/empathy, meaning/motivation, perseverance, agency/autonomy, time, mind habits and hardiness, intelligence, character strengths and self-factors. It is also believed that some theories related to the topic subsumed under PP can also serve as theoretical bases in this discipline ranging from flow theory (Egbert, 2003) emphasizing the association between flow and learning, control-value theory (Pekrun, 2006) laying stress on the association between good emotion and desirable achievement to more recent theoretical explications such as modified broaden-and-build theory (Dewaele and Li, 2020) highlighting the two-way relationship between emotion, its causes and consequences as well as activation/deactivation theories of emotion (Li and Wei, 2022) calling attentions to conceptual structure, generation, impact, change, complex relationship and adjustment strategies of emotion. Derakhshan (2022) believes that rhetorical/relational goal theory (Mottel et al., 2006) and social cognitive theory (Bandura, 1986) also serve as other theoretical underpinnings of the study.

### **Related Literature**

#### ***Studies Related to DA***

Highlighting new advancements in artificial intelligence and its effect on language learning, Udeshinee et al. (2024) developed a regulatory scale tuned with chat environment for mediating learning. To this aim, natural interaction data including instructors' oral conversation and chat transcripts as well as some interviews with them underwent thematic analysis that resulted in a three-step regulatory scale suggested for enhancing learning in the chat environment. This developed scale proved capable of identifying the learner's potential and assist them in partial or complete self-regulation. Besides, in a comparative study conducted by Kehoe, Matrat and Delage (2024), the effect of DA on phonological awareness of monolingual and bilingual French speakers was investigated. Estimating the responsiveness of language learners on a segmentation task accompanied by a series of graduated cues, the authors reported that this type of dynamic intervention increased learners' sensitivity to phonological issues and promoted their performance in phonology tasks. Furthermore, Wang and Jokikokko (2024) lay an emphasis on the effect of DA on language learning as well as learners' socialization. Building on perspectives from socio-cultural theory, they examined newcomers and found that this constructivist approach result in diagnosing students' needs and socialization strategies and therefore promotes the two variables to a significant extent. Veerbeek and Vogelaar (2024) also

employed graduated prompt from the same school of thought to delve into examine the relationship between dynamic intervention and learners' instructional needs. It was revealed that using dynamic assessment as a training purpose is directly correlated with identifying instructional needs. Aimed at examining the efficacy of dynamic assessment in a multilingual context, Pye and Chan (2023) designed a study to explore the impact of DA on diagnosing reading difficulties such as dyslexia and the way it can be mediated. It was reported that DA serves as significant predictor of potential reading difficulty in the experimental group. Highlighting learning in the zone of proximal development, Sellberg, Lundin and Säljö (2022) assessed knowledge-in-action in performing an educational task through dynamic evaluation in a higher educational context. It was proved that dynamic mediation results in joint knowledge creation. Zarbafian et al. (2020) that blended viewpoints from transformation in learning and dynamic assessment in Iranian EFL context. It was reported that dynamic intervention engenders transformation of knowledge in the language classroom through peer support, teacher challenge and enhancement of interaction. And last but not the least, Farokhipour et al. (2018) investigated the impact of dynamic assessment on removing learning anxiety and psychological barriers to speaking. It was found that employing dynamic intervention decreases anxiety of foreign language learners significantly and eradicates the encountered barriers to speaking as observed by the mediator.

### ***Studies Related to PP***

Building on a previously established link between emotional well-being and educational achievement, Sun (2024) explored Chinese college-students' emotions on their performance and achievement in speaking class. To this aim, adopting a PP perspective, twelve students were sampled and interviewed. The findings from qualitative analysis revealed that students' emotional state changes in different occasions in a semester and rises to its peak at the middle of the term. It was also revealed that students experience negative-positive emotions concurrently which exerts effect on their performance. van Zyl et al. (2024) carried out a systematic critical review of PP and found that absence of a robust theoretical and conceptual framework, lack of a robust methodologies and evaluative instrument, scarcity of empirical evidence and replication, distance from mainstream psychology and a decontextualized neoliberalist ideology and capitalistic venture are major deficiencies associated with PP that limits its contribution to science and practice. Adopting a PP perspective, Wang (2024) reviewed emotions in language acquisition and obtained radical findings from the previously mentioned critical review and reported that PP theories are deepening and innovating, discipline is expanding and methodology and tools are maturing. Besides, Mercer and Gregersen (2024) examined PP's role in additional language acquisition. It was revealed that PP contributes to additional language acquisition through preserving rights of practitioners, engendering critical pedagogy and social justice, establishing humanity and compassionate interpersonal relationship, embedding positive experience and equipping teachers and learners with an array of skills and competences. Aimed at unearthing positive emotion in foreign language classes, Oladrostami, rezaee, and Nushi (2022) revisited PP's association with SLA. To this aim, a local inventory of PP to be used in language classroom was developed and views of teachers and learners about it was examined. It was revealed that, teachers, compared to learners, value PP more highly while fail to capitalize meaningfully on it during teaching. Laying stress on trends and direction, Derakhshan (2022), revisited research on PP in second and foreign language education to expatiate conceptualizations, hypotheses, theories and methods as well as new research trends in PP and SLA. Furthermore, PP factors associated with either learning or learners' variables are elaborated on in details. Besides, employing a latent transition analysis, Tejada-Gallardo, Blasco-Belled and Alsinet (2022) delved into the effect of a multicomponent PP intervention on adolescents' time attitudes (the positive and negative feelings regarding the past, the present, and the future) in a school setting. It was revealed that those who underwent intervention in the educational setting were more inclined to transit to positive profiles from the negative side of a continuum of latent profiles. Building on a case study on emotional experiences, Huang (2022) adopted a PP perspective to explore academic emotions of Chinese learners in the process of acquiring English listening skills. It was uncovered that PP exerts effect on diversity, intensity, and frequency of learners' emotion which is directly related with their performance in listening tasks. Carr et al. (2020) conducted a meta-analytical systematic study to investigate the effectiveness of PP interventions. It was revealed that huge bulk of theoretical and

empirical evidences submit proof on this effect. Building upon “engagement” as a major PP principle, Hammill, Nguyen and Henderson (2020) investigated the effect of PP intervention on this core variable. To this aim self-reported feedback was explored. It was indicated that experimental group submitted to PP intervention reported more engagement than control group. And last but not the least, Li (2019) investigated the impact of PP on EFL learners’ emotional intelligence, FLE and achievement. A significant, partial and medium correlations between PP and the studied variables was reported.

## Methodology

### Context and Design

Building on Shan (2022) that encourages mixed-methods studies due to their dialectical pluralism and richness of findings, a mixed-methods design was selected aimed at developing a PP-based regulatory scale of positive psychology and then investigating the application of this typology on speaking, FLE and FLA of Iranian university students compared with a DA regulatory scale derived from Farokhipour (2019) which was already tuned to productive skills and affective state of Iranian language learning context. Considering the fact that PP is a new area of research in language education and is not previously applied to this dimension of language education in terms of a regulatory scale, the first phase was a qualitative meta-analysis of PP research aimed at arriving at a PP-based regulatory scale for mediating the aforesaid variables. Then, a quantitative quasi-experimental approach was utilized and the effects of the adopted (DA) and the developed (PP) inventories on one learning variable (speaking) and two learners’ variables (FLE and FLA) was investigated.

### Data Sources

For meeting the objectives of the research, two different sources of data were targeted. These two sources are described below:

#### *Corpus*

Following Hansen, Steinmetz and Blocks (2021), for qualitative meta-analysis a sample of 96 research articles and books published on PP in education from 2010 to 2024 were collected from the literature in Iranian and international databases. According to Timulak (2009), this method follows the same logic and objective as quantitative data analysis and the only difference is that the primary sources for appraisal and evaluation are qualitative or partially qualitative. Schreiber et al. (1997) had previously declared that meta-analysis has contribution to research and knowledge at least in three dimensions; building theories, explicating theories and developing existing theories.

#### *Participants*

However, for the quasi-experimental phase of the study, 36 TEFL university students (male and female, aged between 18 and 20) were selected from a university in the city of Qom through convenience sampling. These students, after recruitment, were registered in an additional language learning program held by an institute affiliated to the Ministry of Science. At the outset of the research and before the allocation of sample to the groups, a standard proficiency test was administered on the whole sample but no significant outliers were detected. Thus, both control and experimental groups were homogenous in proficiency level (lower intermediate). Participants’ informed consents were withheld, and they voluntarily agreed to the intervention. These learners were, then, randomly assigned to the control instruction group (N = 11) receiving regular instruction, the DA group (N = 13) and the PP group (N = 12).

## Instruments

### *DA Regulatory Scale*

Building upon the tripartite axes of error diagnosis, mediation and responsiveness to mediation, Farokhipour (2019) developed a scale of dynamic assessment mediation that was finely tuned with Iranian language setting and was supported by empirical research. This regulatory scale is constituted of 15 mediational moves distributed on a continuum starting from implicit intervention to explicit interventional options. Also, aimed at tracing the cognitive modifiability of learners, the scale entailed 9 responsiveness moves which provide valuable information on learning development of learners. This scale is depicted in table 1 below.

**Table 1**

*Moves of Mediation and Reciprocity in Productive Skills (Farokhipour, 2019)*

<b>Mediation</b>	<b>Responsiveness</b>
Assist keeping the track	Staying Silent
Ask for repetition	Repeating themselves
Refusing Answer	Repeating teacher
Ask for modification	Searching in book and notes
Recalling instruction	Asking repetition of mediation
Pinpointing erroneous segment	Asking for additional clues
Narrow down error site	Identifies problem
Pinpointing the type of error	Asking for explanation
Providing Metalinguistic clues	Answering correctly
Using mother tongue	
Providing similar examples	
Providing binary options	
Providing correct form	
Teaching the rule	
Reviewing learning	

### *FLE Scale*

Deeply rooted in PP theory and practice, FLE is a theoretical construct which entails not only the learners' negative feelings such as negative emotions and anxiety but also the negative and positive classroom emotions and teaching activities. To the purpose of the current research, we adopted a Likert-type FLE scale from Dewaele and MacIntyre (2016) which consisted of 21 items on different dimensions of this construct.

### *FLA Scale*

According to Dewaele, Botes and Meftah (2023), foreign language anxiety is among three core emotional-psychological problems reported in L2 learning contexts. In order to investigate this core phenomenon, Horwitz et al. (1986) was adopted and used which defines FLA in terms of a distinct phenomenon comprised of self-conceptions, attitudes, beliefs, feelings, as well as behaviors related to language learning in real class setting. This scale (also known as FLCA) entails 33-item measuring learner's inclination to feel anxious when using or learning a foreign language.

## Procedures

As it is also depicted above, DA regulatory scale was adopted but PP regulatory scale was intended to be developed. Therefore, this objective was realized in the first phase of the research in which all relevant sources in the selected period (2010-2024) were collected and underwent an early appraisal in

a way that meaningful propositions concerning PP principles were extracted from the sources while trying to retain their primary meaning and function. Finfgeld (2003) was used to secure data saturation by investigating commonalities and discrepancies in the obtained principles and factors related to a PP. After arriving at core factors, variables and principles of PP, following Farokhipour et al. (2020) in diagnosing deviant forms in teachers-students interaction and Poehner van Compernelle (2011) guidelines for devising a mediational inventory, and Oxfords' (2016) model of mapping PP principles into second language education, a typology of PP-based corrective feedback was devised. For the quantitative phase, however, a post-test-only control group design was used to investigate the comparative effect of PP regulatory scale and DA regulatory scale on the variables of the study. To this later aim, all three groups of the study underwent 12 sessions of intervention. The control group underwent its normative instruction program based on the regular routine of the language institute but the in the experimental groups the mistakes occurred by learners was intervened by teacher based on the adopted DA or the developed PP regulatory scale until the correct form was modified by the learner or explained directly by the teacher. Then, a final test of speaking developed by teacher was administered. Also adopted FLE and FLCA scales were administered to participants in the post test and results were analyzed through ANOVA and Kruskal Wallis test in SPSS (Version 24).

## Results

### Development of PP Regulatory Scale

As it was designated above, the primary goal of the current study was to develop a regulatory scale from PP discipline for mediation of different aspects of learning and psychological states of language learners in the Iranian context. The developed scale entails co-constructing and re-specifying educational goals that is not necessarily central to the immediate task, but also shows consideration for the emotional state and feelings of language learning during the primary learning task. Although in model-making studies structural equation modeling and similar approaches are used to explore core factors and their entailing variables and then validate the obtained model but regulatory scale development in psychology is proceeded through a distinct path. This goal was sought through meeting the objectives discussed above mainly through systematic literature review of PP studies particularly those emphasizing core PP principles including resilience, engagement, social support, positive emotion, self-regulation, grit, self-efficacy, empathy, meaning & purpose, gratitude, autonomy and agency. In the construction stage, Poehner and van Compernelle (2011) guidelines as well as Oxfords' (2016) model of mapping PP principles into second language education were employed according which firstly, learners' verbalizations were elicited (this helped the mediator to determine a learner's mistake, his/her understanding of the mistake and the status of the mistake in learners' zone of proximal development); secondly, collaborative interactional frame were decided upon (in which the mediator targets support to learner needs and tracks this throughout the process of completing the task) and thirdly, a cooperative interactional frame was selected (in which instructional co-constructing and re-specifying moves were identified). The three step model of Farokhipour et al (2020) including the necessity of inclusion of feed-up, feed-back and feed-forward in any mediation inventory also guided the construction of this typology. Finally, the following regulatory scale was devised to be compared with DA in affecting speaking, FLE, and FLA.

**Table 2**

*Developed PP Regulatory Scale*

<b>Mediation Moves from Implicit to Explicit</b>
Assist keeping the track when a halt occurs
Asking for repetition when an error occurs
Controlling class environment and hampering peer correction
Recalling that error point is simple and already taught
Asking for repetition and self-correction
Instilling passion by asking for modification

Providing binary or multiple options of correct form
Seeing error from mother tongue perspective (e.g. using translation)
Providing metalinguistic clues and real-world examples, real-world usage
Giving appreciation for attempt, responsiveness, or correct answer
Asking learner to use the corrected form in an unrehearsed task

This typology consisted of eleven mediational moves distributed along a continuum from the most implicit to the most explicit to secure appropriate scaffolding of language learning.

### Comparing the Effects of PP and DA on Speaking

Aimed at investigating the comparative effect of PP regulatory mediation and DA regulatory Mediation on speaking skills of the participants of the study, a quasi-experimental post-test only control group design was used and the three groups of the study went through their respective instruction. The logic behind selection of this design was its cost and time-effective nature of the design allowing the researcher to trace the effects of the intervention only. Control group underwent its regular instruction, PP group was mediated by PP regulatory scale developed based on principles and tenets of positive psychology during the occurrence of mistakes or errors while DA group was intervened by DA regulatory scales developed based on constructivist psychology principles and approaches particularly socio-cultural theory, cognitive modifiability theory and constructed learning theory during 12 sessions of instruction. Then, a teacher-made speaking task was administered and unassisted achievement scores of students were collected and analyzed through ANOVA on a 1 to 20 scoring scale. The results are presented in the following tables.

**Table 3**

*ANOVA Output for Estimation of Transcendence in Speaking Test*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	130.239	2	65.119	20.600	.000
Within Groups	104.317	33	3.161		
Total	234.556	35			

Table 3 ascertains the significant difference between the means of the three groups. The significance value reveals 0.000 (i.e.,  $p = 0.000$ ), that is below 0.05 and, therefore, a statistically significant difference in the mean of scores (i.e. control group, DA group and PP group) is proved. Besides, to identify where the difference lies, a multiple comparison test was carried out (following table).

**Table 4**

*Tukey-HSD Test for Multiple Comparison (Post-hoc)*

(I) Groups	(J) Groups	Mean			95% Confidence Interval	
		Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Control Group	DA Group	-4.378*	.728	.000	-6.16	-2.59
	PP Group	-3.788*	.742	.000	-5.61	-1.97
DA Group	Control Group	4.378*	.728	.000	2.59	6.16
	PP Group	.590	.712	.688	-1.16	2.34
PP Group	Control Group	3.788*	.742	.000	1.97	5.61
	DA Group	-.590	.712	.688	-2.34	1.16

\*. The mean difference sig at 0.05.

According to Table 4, a statistically significant difference is reported in the mean scores between the control group and PP group ( $p = 0.000$ ) as well between the control group and DA group ( $p = 0.000$ ). However, there were no significant differences between DA group and PP group ( $p = 0.688$ ) though the DA group outperformed the PP group to a slight extent. In sum, a statistically significant difference between groups was determined by one-way ANOVA ( $F(2, 33) = 20.600, p = 0.000$ ). A Tukey post hoc test also suggested that using alternative intervention either in DA or PP forms is significantly more productive than regular normative classrooms.

### Comparing the Impact of PP and DA on FLE and FLA

Next to the quasi-experimental phase on speaking, the FLE and FLA scale were administered to all the three groups of language learners, and they reflected their views on different dimensions of the classroom environment during the intervention on two five-point rating scale ranging from strongly disagree to strongly agree in both instruments. Due to the nature of the data obtained, considering the qualities of ordinal data, Kruskal Wallis test was utilized for comparing groups' responses. Since Kruskal Wallis is an omnibus statistics, Bonferroni test was used for post hoc analysis.

**Table 5**

*Kruskal-Wallis- Hypothesis Test Summary (Asymptotic significances for FLE and FLA)*

	<i>Null Hypotheses</i>	<i>Test</i>	<i>Sig</i>	<i>Decision</i>
1	The distribution of FLE was the same everywhere on the categories of Groups.	Independent-Samples Kruskal-Wallis	<b>.000</b>	The Null hypothesis is rejected
2	The distribution of FLA was the same everywhere on the categories of Groups.	Independent-Samples Kruskal-Wallis	<b>.001</b>	The Null hypothesis is rejected

**Table 6**

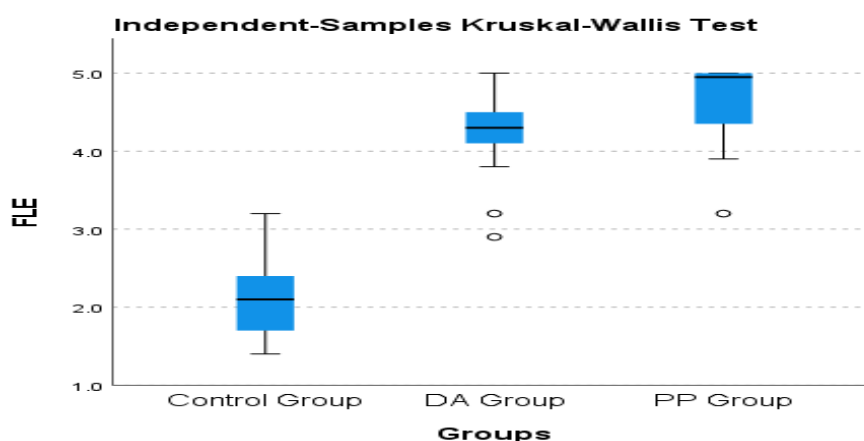
*Summary of Independent-Samples Kruskal-Wallis for FLE*

Total Number	36
Test-Statistics	23.837a
df	2
<b>Asymptotic Sig.(2-sided test)</b>	<b>.000</b>

As it is shown in the Table 6, the p value for FLE distribution among the three groups of the study is less than 0.05. This indicates that these three groups have performed significantly different in reflecting their views on FLE scale. In sum, the Kruskal-Wallis test revealed a statistically significant difference in mean scores between the different groups of language learners,  $\chi^2(2) = 23.837$ ,  $p = 0.000$ . Though these findings uncovered a significant difference between the three groups on FLE variable, where the difference exactly was revealed through a further statistical manipulations because the Kruskal-Wallis H-test provided only a unitary view of the difference. To this purpose a post-hoc was conducted. Tables and Figures related to these post hoc analyses are reported below.

**Figure 1**

*Independent- Samples Kruskal-Wallis test's Visualization for FLE*



As it is depicted in the Figure 1, the mean rank for the Control Group, DA Group and PP Group stands at different points of a mean score on a Likert scale, roughly predicting a significant difference between the groups but aimed at statistically estimating these differences, the multiple comparisons were conducted and the following results were reported.

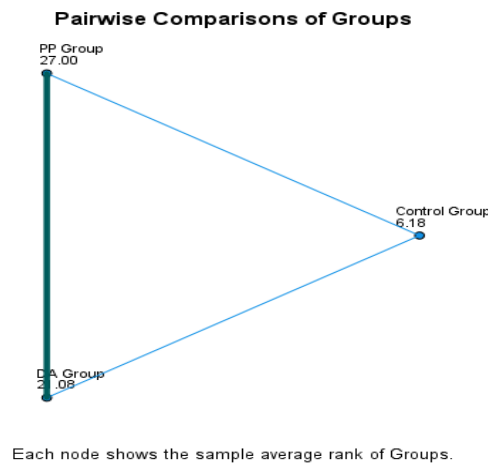
**Table 7**

*Pair-wise Comparison Statistics of Groups' Reflections on FLE in the Post-test*

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Statistic	Test Sig.	Adj. Sig. <sup>a</sup>
Control Group-DA Group	-14.895	4.297	-3.466	.001	.002
Control Group-PP Group	-20.818	4.378	-4.755	.000	.000
DA Group-PP Group	-5.923	4.199	-1.411	.158	.475

**Figure 2**

*Pair-wise Comparison Statistics' Visualization for Groups' Reflections on FLE in the Post-test*



As it is revealed in Table 7 and Figure 2, the pairwise multiple comparison of the three groups uncovered a statistically meaningful difference between Control Group-DA Group ( $p=0.002$ ) as well as between Control Group-PP Group ( $p=0.000$ ). These findings indicated that, alternative mediation provision, irrespective of its type or modality, promoted FLE among language learners compared with regular normative classroom. The reverse was almost the case for FLA because strikingly opposite findings were reported because the intervention reduced the FLA among experimental participants to a significant extent. These findings are elaborated on below.

**Table 8**

*Summary of Independent-Samples Kruskal-Wallis for FLA*

Total Number	36
Test Statistics	22.677 <sup>a</sup>
df	2
<b>Asymptotic Sig.(2-sided test)</b>	<b>.001</b>

Like the previous non-parametric variable, the research findings in this section showed that FLA manifestation is significantly different among the groups of the study as  $p$  value for this variables distribution among the three groups is reported less than 0.05 in table 8. Briefly concluding, a Kruskal-Wallis H test was symptomatic to a statistically meaningful difference in mean scores between the different groups of language learners,  $\chi^2(2) = 22.677, p = 0.001$ . Despite the fact that these findings shed light on a significant difference between the three groups on FLA, the exact point of difference is still uncovered and a further statistical manipulations because the Kruskal-Wallis H-test provided only

a unitary view of the difference. To this purpose a post-hoc was conducted. Tables and Figures related to these post hoc analyses are reported below.

**Figure 3**

*Independent- Samples Kruskal-Wallis Visualization for FLA*

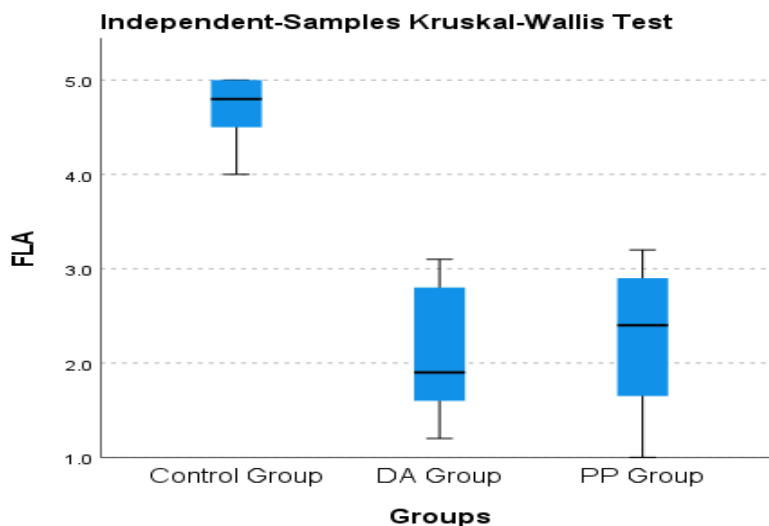


Figure 3 indicates that the mean rank for Control Group, DA Group and PP Group shows different points and values. The difference between control group and the two experimental groups of the study is sharp while the inter-difference between the two experimental groups is relatively slight.

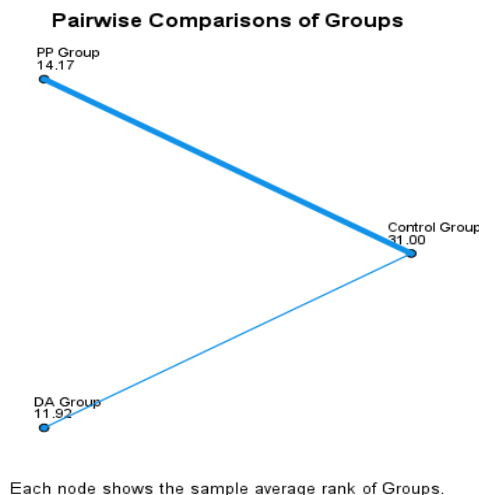
**Table 9**

*Statistics summary for Pair-wise Comparison of Groups' Reflections on FLA in the Post-test*

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Statistic	Test Sig.	Adj. Sig. <sup>a</sup>
DA Group-PP Group	-2.244	4.209	-.533	.594	1.000
DA Group-Control Group	19.077	4.307	4.429	.000	.000
PP Group-Control Group	16.833	4.388	3.836	.000	.000

**Figure 4**

*Pair-wise Comparison Statistics' Visualization of Groups' Reflections on FLA in the Post-test*



As it is revealed in Table 9 and Figure 4, the pairwise multiple comparison of the three groups uncovered a significant difference between Control Group-DA Group ( $p=0.000$ ) as well as between Control Group-PP Group ( $p=0.000$ ). It was proved that the alternative mediational intervention in form of either DA regulatory scale of PP regulatory scale has a strong diverse effect on FLA as it reduced this debilitating variable significantly.

### **The Main Differences between DA and PP**

The final goal of the study was to decipher which approach of psychology is more suited to language education. The results of the current research revealed that both DA and PP have statistically significant and meaningful effects on the variables of the study but DA was more suited to learning speaking while PP was more suited to emotional variables of learners. Another finding from this study was that tracing responsiveness of language learners was not possible in PP regulatory scale while it was evident in the DA scale. These differences reside in the fact that theoretical underpinnings of DA are more mature to be used in the educational setting as they are fully-grown, processed and tuned-up to the instruction by the previous research. The theoretical backbone of the zone of proximal development explains many learning processes within learners. On the contrary, the principles and tenets described in PP are not processed enough to be applied easily for instructional purposes. These tenets are theoretical ones the application of which stands in the dire need of further applied research and future empirical and theoretical verification. In sum, though it was effective on promoting learning and enhancing learners, PP is not still comparable to DA for application in education because PP tenets are more theoretical ones the application of which requires further investigation. The current research was an early attempt at this purpose and showed that an applied regulatory scale of PP is both possible and effective in language education.

### **Discussion**

It is depicted above that DA continued to be renowned as an approach that tries to promote performance and encourage development through mediators' assistance and discerning learning potentials. The findings obtained in DA experiments are consistent with an abundance of research previously submitted proof on the constructive role of constructivist psychology in EFL/ESL contexts. These findings are consistent with Ebadi (2016) that applied a micro-genetic and thematic analysis as the main analytical framework for data analysis of DA intervention of online university students which reported that DA mediations lays a suitable groundwork for depicting learners' potential for future functioning in online dynamic assessment compared with normative approaches. Besides, the findings of our study are in harmony with Bridges (2009) who had stated that response to intervention has been proposed as a framework for early identification and intervention and concluded that dynamic assessment not only enjoys a predictive characteristic for learning difficulties but also promotes learning of some language skills such a reading. Though DA serves as a validated mode of alternative assessment that is favored with a plethora of confirmatory studies in the literature, it is not a one-size-fit-all approach to be applied haphazardly in any context by any instructor. Taking this fact into account on one side and the necessity of devising a more local approach for this global agenda on the other, the present study made an attempt to put this at the service of the native context once more.

The other side of the story was PP. Despite Llewellyn et al's (2024) trenchant criticism against epistemology and methodology of PP in theory and practice, a huge bulk of empirical and theoretical studies stand firm against these criticisms and prove the reverse. For instance, Seligman (2000) and Fredrickson (2001) first concluded that PP exerts positive effects on emotion and learners' affective status. Similarly, Grobler et al. (2014) reported that higher levels of learner motivation and autonomy, adoption of positive attitude towards learning, and lower levels of educational anxiety due to PP. Bester and Kuyper (2020), too, found that additional educational support, positive teacher-learner relationships, cognitive development, and study methods as well as higher resilience and academic achievement result from the employment of PP principles in the real language learning class. The findings of the current research tallies with those studies supporting the productive role of positive

psychology such as Derakhshan (2022b) highlighting positive practices enhancing both teachers and learners, Dong and Xu (2022) underlining the positive impacts of PP tenets on teaching practice and teaching quality, as well as Dahling, Gabriel and MacGowan (2017) emphasizing the role of typologies of feedback environment perceptions on language learning and teaching. It is worth mentioning that huge bulk of studies have inquired into one or more variables of positive psychology such as those conducted on anxiety, emotion regulation, affective filters, dynamic assessment, dynamic interaction and etc. but are not branded under PP research. In particular, the first part of the findings revealed that PP principles can be put into effect in a real teaching activity. In this part, the findings of the study are consistent with Gurzynski-Weiss (2016) underlining that contextual variables, on top of that, the environment of teaching, correlates positively with success of oral corrective feedbacks because a positive environment promote encouraging factors and shows consideration for anxiety level and emotional states of the students. Findings of this part are also in line with Atai and Shafiee's (2017) which revealed that affective consideration is a critical learner variable in impacting oral intervention in language classes. These is also consistent with Farokhipour et al (2020) depicting that how a mediator can decide to attend a problem in students' performance while using a mediational inventory aimed at scaffolding language students' learning. Moreover, building on a critical tenet in PP and well-being theory, i.e. meaning and engagement, the current developed typology shows due consideration for error impeding meaning and interrupting communication which bring about both cognitive and affective consequences for language learners. Thus, from this angle of look, the current findings support Kamiya (2016) which underlines error that exert debilitating effect on provision of regulatory intervention. To sum up, the currents findings stands firm behind Bigverdi and Khalili Sabet (2024) that reported on the simultaneous impact of feedback type on learning skills as well as language mindset of EFL students.

### Conclusion and Implications

To conclude, research findings proved that both alternative intervention methods in both schools of psychology affected both speaking and the examined learner variables in a significant manner. While DA was more effective on promoting speaking compared to PP regulation, the latter outperformed in affecting FLE and FLA though the difference in either groups of the variables were not significantly different. Putting aside the direct implications of the study for language teaching and instruction, any finding from the DA research and alternative intervention, at least of its benefits, can inform language instruction to a great extent. The findings of the current study might illuminate education and instruction. Taking these points into account, the developed PP typology in this study can enlighten language instruction in the country by shedding lights on the nature of problems with which Iranian language learners are faced. Also, by the same token, the findings of this model are in line with the newly developed concept of curriculum-based DA which, according to Lidz (2002), tries to fill the gap between assessment and intervention and inform instruction because the content of the intervention corresponds to the content of actual curriculum. In other words, the findings of the first part of this study determine prerequisite knowledge for expanding the mediator's understanding of the participants and supporting him in the process of the learning. Thus, this model is in line with Lidz (2002, p.74) and Murphy (2002) who stated that mediations in dynamic assessment are given spontaneously in response to the needs of the learners.

Likewise, from a PP perspective, the current study, in addition to comparison with DA, sought a number of distinct objectives. A qualitative meta-analysis was conducted to derive critical principles and tents of PP which could possibly endow to language education that was fulfilled thorough systematic review that resulted in development of PP-based regulatory scale. Besides, the second purpose of the research was investigating the effect of the developed typology on speaking, FLA and FLE. Findings from a quasi-experimental design showed that utilizing the typology during a 12-sessions intervention resulted in a significant effect on both performance on a future speaking task and learners emotional and affective state as depicted by FLE and FLA. These findings, too, have considerable pedagogical implications for EFL practitioners and stakeholders. The primary implication is for language teachers who could consider integrating PP principles and tenets not only in moderating

affective dimensions of language teaching but also in cognitively-demanding real-time activities such as error correction, internalization of learning and transcendence of linguistic performance. It was proved that PP principles could be exercised during oral teachers-students interaction and bring about a boost in education and learning. Besides, among other implications of the current research is inclusion of PP feedbacks in alternative assessment. These findings have pragmatic implications for language teachers, language learners, applied linguist and even educational counselors. Despite these implications, certain technical, practical and contextual limitations associated with conducting dynamic intervention are reported (e.g. Mohammadimanesh et al, 2022) that impose inherent limitations on employment of these approaches in EFL settings.

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The author has no conflict of financial or non-financial interests to declare.

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