Jordan Journal of Modern Languages and Literature Vol. 10, No. 2, 2018, pp 115-135

JJMLL

Developing Listening and Speaking via a Psycho-Socio-Cultural Learning Model Based on Non-Linear Dynamic Motivation

Akbar Bahari

Department of English Language Teaching and Literature, University of Qom, Iran

Received on: 5-11-2017 **Accepted on: 15-7-2018**

Abstract

Psychologically, socially, and culturally diverse students come to class with dynamic language learning motivations. To address this dynamicity, a nonlinear dynamic model was proposed via bridging psycho-socio-cultural (PSC) learning theories to develop listening and speaking skills among EFL learners. This multifaceted model facilitates learning by highlighting motivational factors at the individual level, which nonlinearly and dynamically differ from one learner to another. To test its applicability, a mixed methods approach was conducted among a group of 132 upper intermediate EFL learners. The qualitative and quantitative findings of the study confirmed a significant relationship between nonlinear dynamic motivation and developing listening-speaking under the PSC model. The main pedagogical implication of the study is the need to address dynamicity and nonlinearity of motivation among second language learners at the individual level.

Keywords: nonlinearity; dynamicity; motivation; listening; speaking; psycho-socio-cultural model.

1. Introduction

In keeping with the dynamic nature of learning motivation (Dornyei, MacIntyre, and Henry, 2015) and long-term sustaining motivation (Dornyei, Henry, and Muir, 2016), the present study proposed the psycho-socio-cultural (PSC) model, which facilitates addressing the dynamic nature of language and language learning in line with nonlinearity and dynamicity of motivational factors among second language learners. To this end, a conceptualized integrative learning model was arranged at three levels. At the social level, social cognitive theories (Boo, Dornyei, and Ryan, 2015) were adopted to integrate learners' purposeful relational activity with their ongoing participation in social practices. At the psychological level, problem based L2 learning and student-oriented learning were integrated to mediate learner's psychological functioning instead of mere scaffolding (Lantolf and Thorne, 2006). At the cultural level, with a focus on Vygotskian socio-cultural theory, mediated learning experience was highlighted to meet the needs of learners from different cultural backgrounds (Feuerstein, Feuerstein and Falik, 2010). To this end, sociocultural environments were introduced as a platform to enable learners to formulate relationships between the perceived facts (Feuerstein, Feuerstein and Schur, 1997). The previous studies have approached L2 learning and motivation from a variety of vantage points. Some have approached motivation with respect to strategies (Dornyei and Ryan, 2015; Griffiths, 2013; Oxford, 2017; Quoidbach, Mikolajczak, and Gross, 2015; Schunk and Zimmerman, 2012). Some have considered it as a static factor (Moskovsky, Racheva, Assulaimani, and Harkins, 2016) or with respect to a learner-context interaction subject (Thompson and Erdil-Moody, 2016; Thompson and Vasquez, 2015) or introducing influential factors (Lyubomirsky and Layous, 2013; Rusk and Waters, 2015). However, there

is a thin literature addressing the nonlinear dynamic nature of motivation (Ushioda, 2013) or introducing a single learning model with a focus on nonlinearity and dynamicity of motivation. To bridge the gap and recruit the most influential domains (e.g. Rusk and Waters, 2015), an applicable integrative learning model was arranged and tested to improve listening-speaking proficiency.

1.1 PSC Learning Model and Motivation Theory

To benefit from the distinct psychological environment of classroom (Nolen, Horn, and Ward, 2015) along with adjusting learners' motivational factors in a nonlinear dynamic way, the psychological level is integrated into the PSC learning model. The goal is to enhance learner engagement, classroom engagement, and autonomous learning (Legutke and Thomas, 2013) by creating positive changes in learners' attitudes as well as motivation.

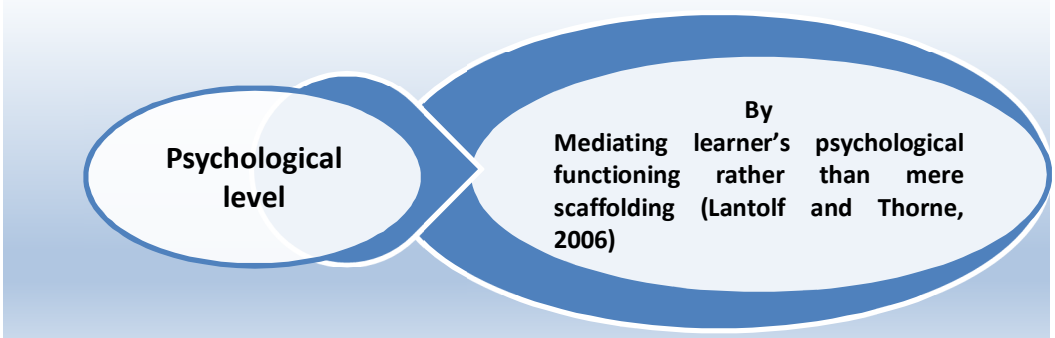

Figure 1: The Psychological level

To this end, learner's self-regulation is developed, which not only mediates learner's psychological functioning, but also lowers anxiety in classroom learning and engenders self-efficacy among L2 learners (Cheng, Lam, and Chan, 2008). Enhancing self-regulation (Katz, Chard and Kogan, 2014) among learners by identifying and tracking their dynamic motivational factors at individual level unlocks the potential of psychological factors by having a goal-specific imagery (Larmer, Mergendoller, and Boss, 2015). This benefits learner with self-efficacy as a significant psychological factor (Rubio, 2014; Schunk and Pajares, 2005) and enables teacher to cater for nonlinear dynamic motivational factors at individual level (Bahari, 2018a). Given the strong correlation between L2 learning motivation and language anxiety, this level suggests learning-teaching readjustment in keeping with nonlinear dynamic motivation by adopting a learner-centered approach to teach second language.

Figure 2: The Cultural Level

This level requires teachers to provide learning experience in a joint activity with learners to meet the needs of learners from different cultural backgrounds. Accordingly, teachers should understand the learners' level of development, sources of difficulty, and appropriate type of mediation with respect to cultural aspects. To this end, learning-teaching readjustment is suggested in keeping with nonlinear dynamic motivation on the part of the learners by highlighting culture-based achievement motivation (e.g. Russian culture that underlies learning motivation as suggested by Hufton and Elliott, 2000).

Figure 3: The Social Level

The social level aims at enabling learners to manage their emotions, thought processes, and actions (e.g., Joe, Hiver, and Al-Hoorie, 2017) via project-based learning in classroom setting with intensified motivation. To this end, experiential learning and interaction (Legutke and Thomas, 2013) is encouraged via collaborative effort and performance (Beckett and Slater, 2005). This facilitates mastering language, content and skill via individual and group activities with respect to learning process (Larmer et al., 2015) while directing the learning process in a dynamic way (Kaldi, Filippatou, and Govaris, 2011). Social participation benefits learners by highlighting the need to produce tangible products (Markham, Larmer, and Ravitz, 2003) with enhanced sense of self-fulfillment (Schmidt, Loyens, van Gog, and Paas, 2007). This level enables learners to share their experiences and understandings as well as to construct meaning via social interaction.

1.2. The Present Study

PSC learning model unlocks the potential behind nonlinear dynamic motivation at three levels with respect to psychological, social, and cultural constructs to develop listening-speaking proficiency (see Fig.4)

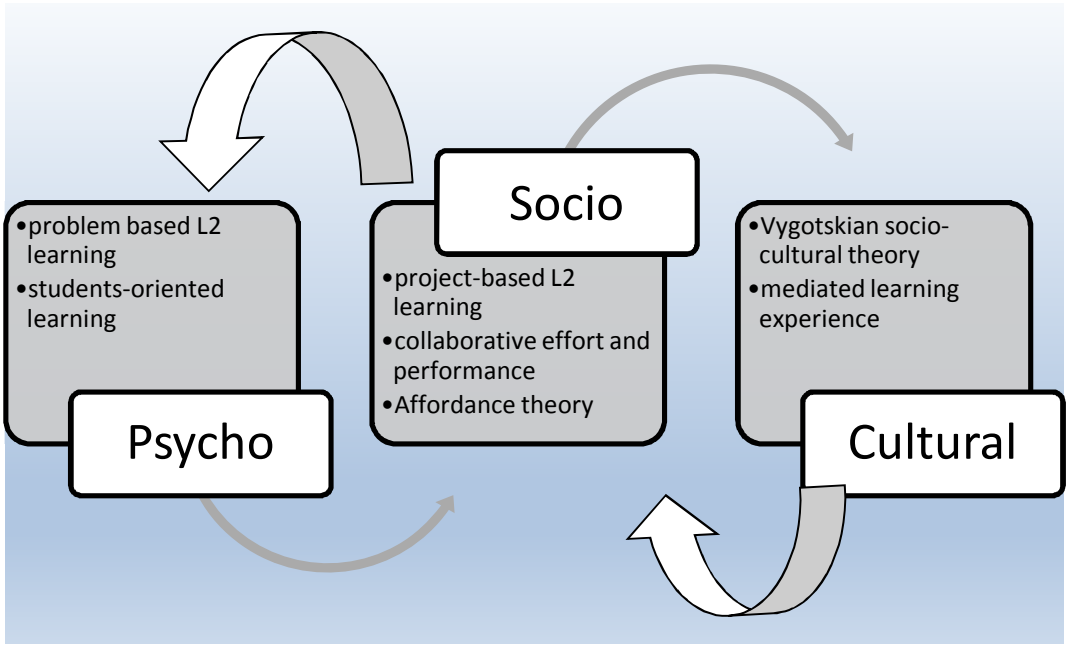

Figure 4: The Visual representation of PSC learning model based on nonlinear dynamic motivation

Despite the apparent divergence of theoretical bases, the study has managed to converge the PSC constructs into a model with respect to nonlinearity and dynamicity of motivation to meet nonlinear dynamic motivational needs of L2 learners. To this end, the constructs were addressed separately and together during every step of the study without violating the contingency of the model. A mixed methods approach was adopted to investigate the implementation of PSC learning model in EFL setting. To this end, several strands of data collection were employed in response to the following research questions:

RQ1: Is there a significant statistical relationship between applying PSC learning model as a nonlinear dynamic motivation model and listening-speaking proficiency among L2 learners?

RQ2: What relationships can be observed between L2 learners' responses and developing listening-speaking proficiency with regard to nonlinearity at psychological, social, and cultural levels?

RQ3: How are psychological, social, and cultural constructs of PSC model reflected in participants' listening-speaking performances?

2. Method

2.1. Setting and participants

One hundred and seventy eight participants (studying the same materials) joined the study at the beginning of the study. However, the absence of some of them (more than three sessions) and the fact that they missed the intended treatment of those sessions justified their exclusion from the study. Finally, 132 upper intermediate EFL learners with a TOEFL listening mean score of 23 and speaking mean of 20 were included (40% male + 60% female) in the study. They were drawn from a private language school in Tehran, Iran. Participants' ages ranged between 15 and 35 as follows: 39.5% = 15-21, 40% = 22-28, and 16.5% = 29-35 years. Despite the heterogeneity of participants' age, partially similar techniques were adopted with respect to dynamic motivational factors at individual level to ensure the validity of the

results. Permission to participate in the research was obtained from the participants. Given the size of the research population (10 classrooms) it was impossible to conduct random sampling to ensure generalizability; therefore, intact group design was used for the study. To facilitate qualitative and quantitative analyses, the participants were classified into two categories: experimental and control group category in keeping with quantitative research question, and male and female category in keeping with qualitative research question.

2.2. Treatment

2.2.1. PSC-based listening treatment

The experimental group was provided with a treatment emphasizing reinforcing automaticity in L2 learners to participate in communicative activities by removing scaffolding in line with real-life listening experience (Field 2007), addressing a single linguistic feature at a time (Ellis 2009), noticing the corrective force of the feedback and engaging learners in strategic planning to internalize L2 structure, encouraging metacognitive strategies to build meaning (Graham 2006), facilitating comprehension process, encouraging learners to overcome the compulsion to translate and avoiding applying L1 segmentation procedures to the rhythmically different target language (Cutler 2001), planning pre-listening activities to activate learners' script and getting to know learners' motivational features, encouraging natural target language reproduction rather than echoing, imitating or slavish mimicry, encouraging the use of listening instruction strategy to improve listening proficiency (Harris 2007), encouraging learners to pay attention to pause-bounded units to facilitate listening comprehension rather than syntactic cues (Harley 2000), encouraging the use of communicative strategies to manage listening problems (Nakatani and Goh 2007) and encouraging global rather than partial comprehension.

2.2.2. PSC-based speaking treatment

The experimental participants were provided with a treatment emphasizing giving feedback while considering individual learner differences (Dörnyei 2006), encouraging making questions that require evaluation and reaction rather than recall of details and encouraging students to see learning as an enjoyable process (Zhang, Lin, Zhang, and Choi, 2016), and encouraging L2 learners to inhabit an identity of a fluent speaker by imitating body movements (McCafferty 2008). To visualize and enact pronunciation phenomena, they use instructional gestures (Smotrova 2017), encourage them to process the speech rather than retrieve the information from the long-term memory and beginning with an elicitation rather than reformulation (Lyster 2004), encourage communicative responses with adaptation, interpretation, paraphrasing and addition of new information rather than meaningful responses, engage learners in multi-tasking to give 'voice' to learners' experience (Levy 2015), encourage imitation so that learners can use the imitated content for their own communicative purposes (Smotrova 2017), encourage information exchange via location-based learning systems to enhance in-field learning (Burston 2014), encourage producing modified comprehensible output via interactional strategies (Pica 2002), and encourage the use of interactional strategies to facilitate meaning negotiation, providing learners with

opportunities to manage their emotions, thought processes, and actions (e.g. Joe et al. 2017) while encouraging experiential learning and interaction (Legutke and Thomas 2013).

The treatment was administered along with the normal syllabus to the experimental group every session (90 min) over the summer term (3 months). In each session, one of the psychological, social, and cultural levels was emphasized and employed to present the principles of the PSC-based treatment along with nonlinear dynamic motivational factors to motivate participants to collaboratively develop listening-speaking proficiency under the influence of the treatment and find out whether it is possible to benefit from the potential of PSC model or not.

2.3. Data sources

2.3.1. PSC questionnaire

PSC questionnaire (PSCQ) is a 24-item survey developed by the author to examine the impact of psychological, social and cultural factors on L2 learners provided with nonlinear dynamic motivational factors. The PSCQ items are rated along a 6-step Likert continuum (e.g., 1 = *strongly agree* to 6 = *strongly disagree*).The questionnaire took approximately 20–25 minutes to complete. Participants read the items on their own and the researcher was available to answer questions they had about individual items.

The first eight aspects on the PSCQ assess students' opinions towards psychological factors as part of the L2 learning syllabus based on nonlinear dynamic motivational factors. These are termed as *psychological factors (a=.85),* the belief that one can be successful at listening-speaking by means of providing nonlinear dynamic motivational factors at the psychological level. The second eight aspects on the PSCQ assess students' attitudes towards social factors as part of the L2 learning syllabus based on nonlinear dynamic motivational factors. These are termed as *social factors (a=.77),* the belief that one can be successful at listening-speaking by means of providing nonlinear dynamic motivational factors at social level. The third eight aspects on the PSCQ assess students' attitudes towards cultural factors as part of the L2 learning syllabus based on nonlinear dynamic motivational factors. These are termed as *cultural factors (a=.70),* the belief that one can be successful at listening-speaking by means of providing nonlinear dynamic motivational factors at cultural level. To determine the internal consistency reliabilities of the subscales in the present study, the 24 subscales were subjected to a reliability test. Reliabilities are presented in keeping with (Wigfield and Guthrie 1995) alphas and as can be seen, the current study subscales had reasonable reliabilities ranging from .70 to .85. The results are presented in Table1.

Table 1: Reliability Statistics

Subscale	N of Items	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
psychological	8	.853	.851
social	8	.771	.770
cultural	8	.703	.701

2.3.2. PSC interview

PSC interview is a 15-item survey developed by the author to examine the efficiency of PSC model at three levels with regard to nonlinear dynamic motivation. PSC interview items are Yes/No/Why questions that can be considered as open-ended questions which are rated as yes/no on the basis of consistency of responses with the definition provided at the coding list (e.g., Yes= *the response is consistent with the corresponding definition, No= the response is not consistent with the corresponding definition*). The first five items on the PSC interview assess students' attitudes towards psychological factors as part of the L2 learning syllabus based on nonlinear dynamic motivational factors. These are termed as *psychological factors (a=.74),* with the belief that one can be successful at listening-speaking by means of PSC model in an L2 learning environment rich in nonlinear dynamic motivational factors. The second five items on the PSC interview assess students' attitudes towards social factors as part of the L2 learning syllabus based on nonlinear dynamic motivational factors. These are termed *social factors (a=.70),* with the belief that one can be successful at listening-speaking by means of PSC model in an L2 learning environment rich in nonlinear dynamic motivational factors. The third five items on the PSC interview assess students' attitudes towards cultural factors as part of the L2 learning syllabus based on nonlinear dynamic motivational factors. These are termed *cultural factors (a=.72),* representing the belief that one can be successful at listening-speaking by means of PSC model in an L2 learning environment rich in nonlinear dynamic motivational factors. To determine the internal consistency of the subscales in the present study, 15 subscales were subjected to a reliability test. Reliabilities are presented in Table 2. In keeping with Wigfield and Guthrie (1997: 36), alphas are presented at three subscales which had reasonable reliabilities ranging from .70 to .74.

Table 2: Reliability Statistics

Subscale	N of Items	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
Psychological factors	5	.742	.740
Social factors	5	.704	.701
Cultural factors	5	.725	.721

2.4. Instruments

A student self-reported PSC-based questionnaire was arranged on a six-point Likert scale. This questionnaire was administered at the end of the study to elicit and evaluate all participants' views with regard to PSC as an effective way to improve listening-speaking skills. The difficult terms were explained to the participants in advance to avoid misunderstanding. The questionnaire consisted of 24 statements reflecting the opinion of participants concerning being dynamically motivated under a PSC-based treatment and its influence to improve their listening-speaking proficiency. The first 8 statements were arranged to reflect the psychological values, the second 8 statements reflected social factors and the third 8 statements reflected learners' cultural factors with regard to PSC-based model of developing listening-speaking proficiency. To test speaking-listening proficiency, the IECP Oral Placement Test was adapted

from Kimura, Mattson, and Amory (2017). The test aimed at making a valid assessment of the listening and speaking of learners for accurate placement into English classes. The IECP OPT consists of five parts:

Table 3: The IECP OPT format adapted from Kimura et al. (2017)

No.	Format	Time
1	Greeting and warm-up	(1–2 minutes)
2	General conversation with an interviewer	(3–4 minutes)
3	Topic response	(2–3 minutes)
4	Partner conversation	(4–5 minutes)
5	Concluding the interaction	(1–2 minutes)

A random sample of 40 1-on-1 (20 male and 20 female) participants were interviewed. The interviews were conducted among the experimental group at the end of the studyto measure the effect of adapted PSC model as part of the treatment by the author along with some trained researchers, while the teachers of the classes who had administered the treatments did not attend interviews. Fifteen questions were arranged to elicit the opinion of the participants concerning the three levels of PSC model. They were presented by the teachers over the course along with their influence to improve students' English speaking-listening proficiency. The interview was arranged to reflect the participants' interest/disinterest concerning the efficiency of applying PSC model with respect to nonlinear dynamic motivational factors. The author tried to convince the interviewees that they did not have to answer in a way to please the interviewer or to answer under the influence of social, cultural and psychological pressure.

2.5. Data analysis

To integrate the findings into meta-inferences and conduct a thematic analysis of qualitative-quantitative data, a mixed data analysis (see Fig.5) was conducted. This was in keeping with Tashakkori and Teddlie (2003) as well as with iterative analyses concerning the decisions about the adoption of qualitative or quantitative analyses during the study.

2.5.1. Quantitative analytic plan

To address the research questions, quantitative analyses were conducted to find out the effect of PSC-based treatment on the participants. This was done by running paired samples t-test for the obtained data from control and experimental groups. The elicited data from PSC questionnaire and PSC interview were triangulated along with quantitative results. This was done to ensure the validity of the findings concerning the applicability of PSC model. To this end, the following research plan was observed:

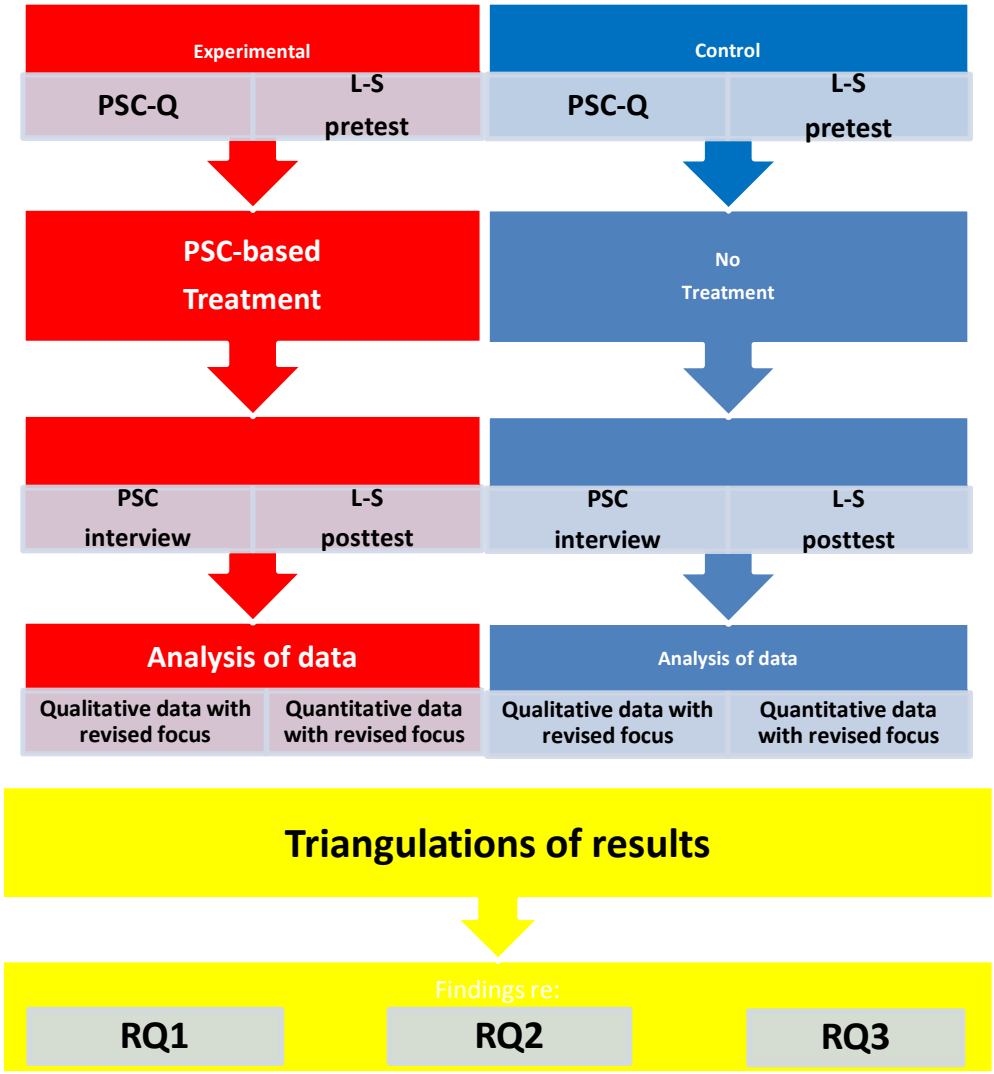

Figure 5: Visual representation of the study design

2.5.2. Qualitative analytic plan

Codable PSC-based statements were identified in the transcribed PSC interview. Following Urdan and Mestas (2006: 354), the presence/absence of PSC-based statements in responses was considered as the criterion of data analysis. The orientation of statements either towards or away from the three psychological, social, and cultural levels was sorted and categorized under a list of codes prepared in keeping with Saldaña (2013) and to provide a specified picture of statements and the subcategory that they represent within the primary level, and a subcoding technique suggested by Saldaña (2013) was adapted and accordingly the list of codes was prepared. The presence or absence of the modified motivation strategy was identified by means of subcategories. To ensure higher inter-rater reliability, the interview was administered by the author with the help of 3 expert EFL researchers. To resolve the discrepancies, two other trained persons rated the transcribed interview and the results revealed that the inter-rater agreement was 79% per interview on average.

3. Results

3.1. RQ1

Paired samples t-test was carried out to compare the effect of PSC-based treatment on experimental group (who received the treatment by their regular teacher who had been updated about the study in advance) versus control group (who did not receive any treatment and observed the ordinary schedule). The results of pretest and posttest administered simultaneously among the groups revealed a significant relationship between being nonlinearly and dynamically motivated under PSC model and improving listening-speaking proficiency. According to Table 4, the experimental group (both male and female participants) shows a significantly better listening performance at posttest in comparison with pretest. Female participants' listening performance from pretest M=66.23 has significantly developed into posttest M=86.76 and male participants' listening performance from pretest M=67.10 has significantly developed into posttest M=81.96. Accordingly, standard deviation has almost doubled in both male and female experimental participants which should not be interpreted as a negative thing but rather a sign of big variation created by administering the PSC-based treatment.

Table 4: Paired Samples Statistics for Listening Performance

Paired Samples Statistics for Listening Performance

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest Con-female	67.2703	37	2.05005	.33703
	Posttest Con-female	67.3784	37	2.15189	.35377
Pair 2	Pretest Ex-female	66.2381	42	2.69425	.41573
	Posttest Ex-female	86.7619	42	4.78213	.73790
Pair 3	Pretest Con-male	66.9200	25	1.93477	.38695
	Posttest Con-male	66.4000	25	2.43242	.48648
Pair 4	Pretest Ex-male	67.1071	28	2.51425	.47515
	Posttest Ex-male	81.9643	28	4.59051	.86752

According to the compared samples test for listening, there was a significant difference in the listening scores for female experimental participants pretest-posttest (M=-25.23, SD=5.82) conditions; t (41) =-26.7, p=0.005. Accordingly there was a significant difference in the listening scores for male experimental participants pretest-posttest (M=-18.57, SD=7.89) conditions; t (27) =-15.1, p=0.005. Table 5 displays a significant difference in scores for experimental group (Female Pretest-posttest: M = -20.5, SD = 4.96; Male Pretest-Posttest: M = -14.8, SD = 5.20) and control group (female pretest-posttest: M = -.10, SD = 1.02; male pretest-posttest: M = .520, SD =2.32). The significant magnitude of the difference in the means (eta squared = 0.9927) indicates the large effect of PSC-based treatment on the development of listening proficiency among the participants.

Table 5: Paired Samples Test for Listening Performance

Paired Samples Test for Listening Performance

	Paired Differences					t	df	Sig.(2tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
P-1	-.10811	1.02154	.16794	-.44871	.23249	-.644	36	.524
P-2	-20.523	4.96445	.76603	-22.070	-18.976	-26.7	41	.000
P-3	.52000	2.32952	.46590	-.44158	1.48158	1.116	24	.275
P-4	-14.857	5.20480	.98361	-16.875	-12.838	-15.1	27	.000

According to Table 6, the experimental group (both male and female participants) shows a significantly better speaking performance. Female participants' speaking performance has significantly developed from a pretest M=63.85 into a posttest M=89.09 and male participants' speaking performance has significantly developed from a pretest M=67.82 into a posttest M=86.39. Accordingly, standard deviation has increased in both male and female experimental participants which should not be interpreted as a negative thing but rather a sign of big variation created by administering the PSC-based treatment.

Table 6: Paired Samples Statistics for Speaking Performance

Paired Samples Statistics for Speaking Performance

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest Con-female	62.5405	37	5.10226	.83881
	Posttest Con-female	61.1081	37	5.08147	.83539
Pair 2	Pretest Ex-female	63.8571	42	4.90182	.75637
	Posttest Ex-female	89.0952	42	5.21634	.80490
Pair 3	Pretest Con-male	64.3600	25	3.59258	.71852
	Posttest Con-male	65.7200	25	2.82135	.56427
Pair 4	Pretest Ex-male	67.8214	28	2.24522	.42431
	Posttest Ex-male	86.3929	28	7.78574	1.47137

There was a significant difference in the speaking scores for the female experimental participants pretest-posttest (M= -25.23, SD= 5.82) conditions; t (41) = -28.0, p= 0.005. Accordingly, there was a significant difference in the speaking scores for the male experimental participants pretest-posttest (M= -18.57, SD= 7.89) conditions: t (27) = -12.4, p=0.005.

Table 7 displays a significant difference in scores for the experimental group (Female Pretest-posttest: M = -20.23, SD = 5.82; Male Pretest-Posttest: M = -18.57, SD = 7.89) and the control group (female pretest-posttest: M = -1.43, SD = 3.83; male pretest-posttest: M = 1.36, SD =4.10). The significant magnitude of the difference in the means (eta squared = 0.9927) indicates the large effect of PSC-based treatment on the development of speaking proficiency among the participants.

Table 7: Paired Samples Test for Speaking Performance

Paired Samples Test for Speaking Performance

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
P1	1.4324	3.83363	.63024	.15424	2.71063	2.273	36	.029
P2	-25.23	5.82178	.89832	-27.052	-23.423	-28.0	41	.000
P3	-1.3600	4.10163	.82033	-3.0530	.33307	-1.65	24	.110
P4	-18.571	7.89012	1.49109	-21.630	-15.511	-12.4	27	.000

Table 8 displays the significance of Pearson Chi-Square value at the $p<.05$, and accordingly one can claim that the levels integrated into the PSC model are related, are not independent and need to be included in any listening-speaking learning model to facilitate learning in keeping with nonlinear dynamic motivational factors that are provided via these levels.

Table 8: Chi-Square Tests

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	184.078[a]	140	.007
Likelihood Ratio	112.305	140	.959
Linear-by-Linear Association	18.486	1	.000
N of Valid Cases	37		

a. 165 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

3.2. RQ2

This section includes analysis of the participants' responses to the PSC questionnaire at the psychological, social, and cultural levels under a model with reinforced nonlinear dynamic motivational factors. Figure 6 provides a clear picture of the elicited responses at the three levels.

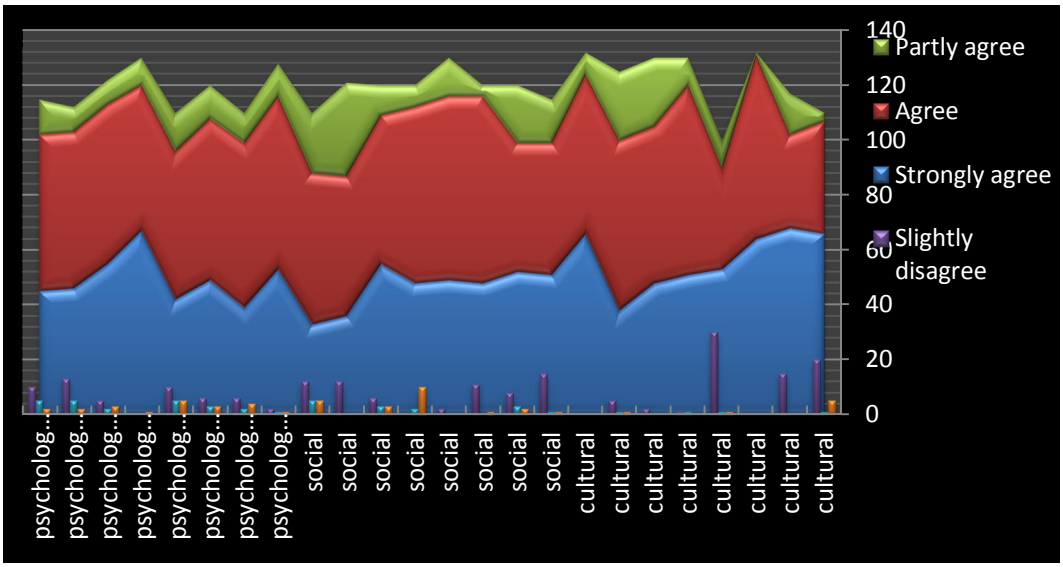

Figure 5: PSC Questionnaire results

The findings of the study reveal that the significant majority of the participants have a positive opinion concerning the statements by opting for either partly agree, agree, or strongly agree. Such a big number of positive opinions confirms the efficiency of the presented model and calls for further analysis on the part of the scholars to delve more into the applicability of PSC model as part of the L2 instruction. Pearson Product-moment Correlation measures of psychological, social, and cultural levels reveal a strong association between sex and these levels with the Pearson Correlation coefficient, suggesting an inverse correlation between sex, on the one hand, and the three levels of PSC questionnaire, on the other, which can be interpreted as large in terms of the strength of the relationship.

3.3. RQ3

To elicit the participants' attitudes towards the effectiveness of PSC model for developing listening-speaking performances, the PSC interview was conducted. The elicited responses were sorted and categorized along a 6-step Likert continuum (e.g., 1 = *strongly agree* to 6 = *strongly disagree*) to facilitate data analysis. Based on the results, it can be argued that the majority of the interviewees had positive opinions concerning the efficiency of PSC learning model. It is worth mentioning that most of the participants in their private exchanges expressed their strong support for including nonlinear dynamic motivational factors as part of the model. Varimax rotation with Kaiser normalization was used to analyze a principal component in elicited responses from the participants. The dataset was validated by sampling adequacy measure of Kaiser-Meyer-Olkin (0.455) and sphericity test of Bartlett ($\chi 2 = 211.406$, $p < 0.001$). Figure 6 presents the elicited responses as follows:

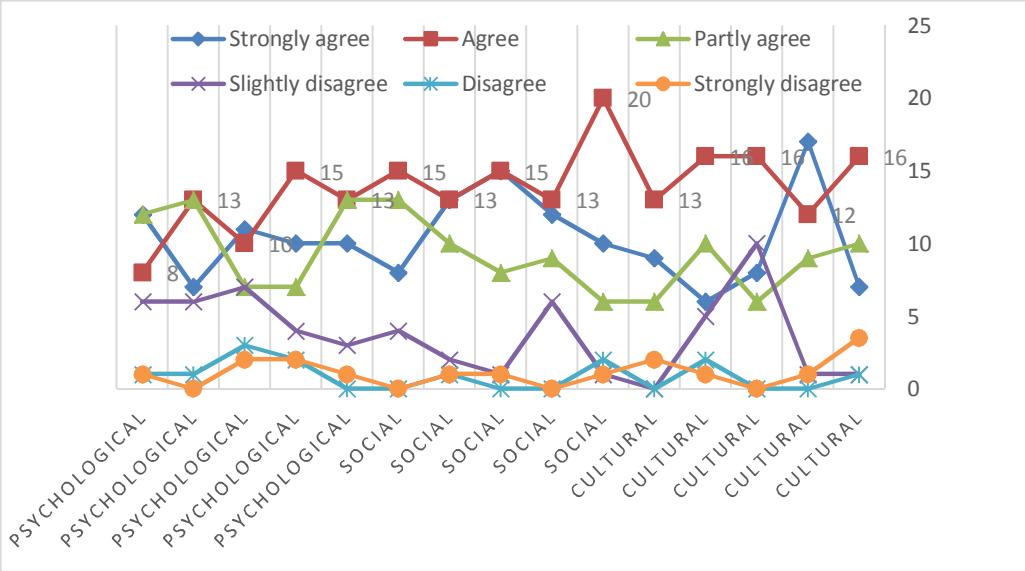

Figure 6: PSC Interview Results

4. Conclusion

PSC model drawing on three aspects of language and language learning collaboratively tried to cater for motivational needs of second language learners with a focus on nonlinearity and dynamicity. Implementing PSC model accounted for 85% of the total variance in the observed rating scores (psychological level for 29%, social level for 31.50%, and cultural level for 24.50%). The findings concerning the first research question confirmed a significant relationship between applying PSC learning model and developing listening-speaking proficiency among L2 learners. Based on the elicited responses from the interviewees, catering for diverse motivational factors at individual level, not only improves self-confidence but also enhances achievement motivation. The findings of the study concerning the second research question revealed that the significant majority of the participants had a positive opinion concerning the relationship between L2 learners' responses and developing listening-speaking proficiency with regard to nonlinearity at psychological, social, and cultural levels. This is consistent with findings reporting the significance of nonlinearity and dynamicity of language learning and language learner with respect to motivation (e.g. Bahari, 2018b). The personal opinions exchanged between the author and the participants, following the classroom observations, teacher logs, and teacher interviews, also confirmed the effectiveness of PSC model at developing listening-speaking skills. The findings are partially consistent with other findings reporting the significance of psychological factors, the cultural contexts, social concepts, and learning needs of learners (e.g. DeCapua and Marshall, 2015; Gay, 2010; Kana'iaupuni, Ledward, & Jensen, 2010; Lopes-Murphy, 2012). Given the obtained results and learner variability (including exceptional needs), the study confirms the efficiency of PSC model to develop listening-speaking proficiency and suggests the need to cater for nonlinear dynamic motivational factors at the individual level.

Acknowledgment

The author would like to thank the anonymous reviewers for their insightful comments and suggestions to improve the paper. He also wishes to thank his wife and daughter, Mona and Anahita for their patience and kindness. He is also thankful to Dear Professor Vaneshani, who is truly a great man.

تطوير الأداء الكلامي للطلاب باستخدام النموذج النفسي والاجتماعي والثقافي بناءً على التحفيز الديناميكي غير الخطي

أكبر بهاري
قسم اللغة الإنجليزية وآدابها ، جامعة قم ، طهران، إيران

الملخص

الطلاب الذين يعانون من ظروف نفسية واجتماعية وثقافية متنوعة ودوافع ديناميكية في تعلم اللغة يذهبون إلى الصف. بالنظر إلى هذه الديناميكية ، تم إنشاء نموذج ديناميكي غير خطي من خلال دمج نظريات التعلم النفسية-والاجتماعية-والثقافية. يسهل هذا النموذج متعدد الأغراض التعلم من خلال إبراز العوامل التحفيزية على المستوى الفردي التي تختلف من طالب لآخر. ولاختبار إمكانية استخدام النموذج، استُخدام طريقة الجمع بين 132 من المتعلمين رفيعي المستوى، وتؤكد النتائج الكمية والنوعية للباحث وجود علاقة ذات دلالة بين الدوافع الديناميكية غير الخطية وتنمية المهارات السمعية باستخدام نموذج PSS، ومن النقاط المهمة في البحث التربوي ضرورة الاهتمام بديناميات عدم التحفيز وعدم انتظامه بين طلاب اللغة الثانية وعلى مستوى الفرد.

الكلمات المفتاحية: غير الخطية، تنقلية، حافز، سمعي، منطوق، النموذج النفسي والاجتماعي-والثقافي.

References

Abrahamsson, Niclas, and Hyltenstam Kenneth. 2009. Age of Acquisition and Native-Likeness in a Second Language–Listener Perception vs. Linguistic Scrutiny. *Language Learning.* Vol. 59, no. 2: 291–306.

Bahari, Akbar. 2018a. Nonlinear Dynamic Motivation-Oriented Telecollaborative Model of Language Learning Via Formulaic Sequences to Foster Learner Autonomy. *The Journal of Teaching English with Technology.* Vol. 18, no. 3: 34–52.

Bahari, Akbar. 2018b. Sacred Text Motivation for General L2 Learners: A Mixed Methods Study. *Journal of Academic Ethics*, 1–31.

Beckett, Gukbahar, H. and Slater Tammy. 2005. The Project Framework: A Tool for Language, Content, and Skills Integration. *ELT Journal.* Vol. 59, no. 2: 108–116.

Boo, Zann, Dornyei, Zoltan, and Ryan Stephen. 2015. L2 motivation research 2005-2014: Understanding a publication surge and a changing landscape. *System.* Vol.55, no. 1: 145-157.

Burston, Jack. 2014. MALL: The Pedagogical Challenges. *Computer Assisted Language Learning.* Vol. 27, no. 4: 344–357.

Cheng, Rebecca Wing-yi., Lam Shui-fong, and Chan, Joanne Chung-yan. 2008. When High Achievers and Low Achievers Work in The Same Group: The Roles Of Group Heterogeneity and Processes In Project-Based Learning. *British Journal of Educational Psychology.* Vol. 78, no. 2: 35–48.

Cutler, Anne. 2001. Listening to a Second Language through the Ears of a First. *The TESOL encyclopedia of English language teaching.* Vol. 5, no. 1: 67–79.

DeCapua, Andrea, and Marshall Helaine. W. 2015. Students with Limited or Interrupted Formal Education in US Classrooms. *NASSP Bulletin.* Vol. 99, no. 4: 173–189.

Dornyei, Zoltan. 2006. Individual Differences in Second Language Acquisition. *ILA Review.* Vol. 19, no. 17: 42–68.

Dornyei, Zoltan, Henry Alastair, and Muir, Christine. 2016. Motivational Currents in Language Learning: Frameworks for Focused Interventions. *Hungarian Educational Research Journal.* Vol.7, no. 1: 127–129.

Dornyei, Zoltan, MacIntyre, Peter, and Henry, Alstair. 2015. *Motivational Dynamics in Language Learning.* Bristol: Multilingual Matters.

Dornyei, Zoltan and Ryan Stephen. 2015. *The Psychology of The Language Learner Revisited*. New York: Routledge.

Ellis, Rod. 2009. Corrective Feedback and Teacher Development. *L2 Journal.* Vol. 1, no. 4: 18–29.

Feuerstein, Reuven, Feuerstein, Rafael, and Schur, Yaacov. 1997. Process as Content in Education of Exceptional Children. Feuerstein. *Revista Electrónica de Investigación Educativa.* Vol. 4, no. 2: 56–70.

Feuerstein, Rafael., Feuerstein, Reuven, and Falik Louis. 2010. *Beyond Smarter: Mediated Learning and the Brain's Capacity for Change.* New York: Teachers College Press.

Field, John. 2007. Looking Outwards, Not Inwards. *ELT Journal.* Vol. 61, no. 3: 61–71.

Flege, Jim E. 2009. *Give Input a Chance!* In T. Piske & M. Young-Scholten (Eds.). Input Matters in SLA. Second language acquisition.

Gay, Geneva. 2010. *Culturally responsive teaching: Theory, research, and practice.* New York: Teachers College Press.

Graham, S. 2006. Listening Comprehension: The Learners' Perspective. *System* Vo. 34, no. 2: 165–84.

Griffiths, Carol. 2013. *The Strategy Factor in Successful Language Learning*. Bristol: Multilingual Matters.

Harley, Birgit. Listening Strategies in ESL: Do Age and L1 Make a Difference? *TESOL Quarterly.* Vol. 34, no. 4: 769–776.

Harris, Vee. 2007. Exploring Progression: Reading and Listening Strategy Instruction with Near Beginner Learners of French. *Language Learning Journal.* Vol. 35, no. 3: 189–204.

Huensch, Amanda, and Thompson Amy. S. 2017. Contextualizing Attitudes toward Pronunciation: Foreign Language Learners in the US. *Foreign language annals*. Vol. 50, no. 2: 410–432.

Hufton, Neil, and Elliott. Julian. 2000. Motivation to Learn: The Pedagogical Nexus in the Russian School: Some Implications for Transnational Research and Policy Borrowing. *Educational Studies.* Vol.26, no. 1: 115–122.

Hiver, Phil, and Al-Hoorie. Ali. H. 2017. Classroom social climate, self-determined motivation, willingness to communicate, and achievement: A study of structural relationships in instructed second language settings. *Learning and Individual Differences*. Vol. 53, no. 3: 133–144.

Kaldi, Stavroula, Filippatou Diamanto, and Govaris, Christos. 2011. Project-Based Learning in Primary Schools: Effects on Pupils' Learning and Attitudes. *Education 3-13.* Vol. 39, no. 1: 35–47.

Kana'iaupuni, Shawn., Ledward, Brandon, and Jensen, Umi. 2010. *Culture-based Education and its Relationship to Student Outcomes.* Honolulu: Kamehameha Schools, Pauahi Publications.

Katz, Lilian G., Chard, Sylvia, and Kogan, Yvonne. 2014. *Engaging Children's Minds: The Project Approach. Santa Barbara.* Praeger Publications.

Kimura, Daisuke., Mattson, Nikki, and Amory, Michael. 2017. A Conversation Analytic Approach to Oral Placement Test Validation: Attending to Vertical and Horizontal Comparisons. *TESOL Journal*, Vol. 9, no. 3: 431–454.

Larmer, John., Mergendoller, John and Boss, Suzie. 2015. Setting the Standard for Project-based Learning. Alexandria: USA.

Legutke, Michael, and Thomas Howard. 2013. *Process and Experience in the Language Classroom*. New York: Longman Group.

Levy, Mike. 2015. The Role of Qualitative Approaches to Research in CALL Contexts: Closing in on the Learner's Experience. *CALICO Journal.* Vol. 32, no. 3: 554–568.

Lopes-Murphy, Solange. 2012. Universal Design for Learning: Preparing Secondary Education Teachers in Training to Increase Academic Accessibility of High School English Learners. *The Clearing House: A Journal of Educational Strategies.* Vol. 85, no. 6: 226–230.

Lyster, Roy. 2004. Differential Effects of Prompts and Recasts in Form-Focused Instruction. *Studies in Second Language Acquisition.* Vol. 26, no. 3: 399–432.

Lyubomirsky, Sonja, and Layous Kristin. 2013. How Do Simple Positive Activities Increase Well-Being? *Current Directions in Psychological Science.* Vol. 22, no. 1: 57–62.

Markham, Thom., Larmer, John, and Ravitz, Jason. 2003. *Project-Based Learning Handbook: A Guide to Standards-Focused Project-Based Learning for Middle and High School Teachers.* Novato, CA: Buck Institute for Education.

McCafferty, Steven. G. 2008. Gesture and the Materialization of Second Language Prosody. *International Review of Applied Linguistics in Language Teaching.* Vol. 44, no. 2: 197-209.

Moskovsky, Christo, Racheva, Silvia, Assulaimani Turki, and Harkins, Jean. 2016. The L2 Motivational Self System and L2 Achievement: A Study of Saudi EFL Learners. *The Modern Language Journal.* Vol. 16, no. 2: 88–95.

Nakatani, Yasuo and Goh Christine. 2007. A review of oral communication strategies: Focus on interactionist and psycholinguistic perspectives. In Andrew D. Cohen and Ernesto Macaro (Eds.), *Language learner strategies*, 207–227. Oxford: Oxford University Press.

Nolen, Susan., Horn, Ilana, and Ward, Christopher. 2015. Situating Motivation. *Educational Psychologist.* Vol. 50, no. 3: 234–247.

Oxford, Rebecca. 2017. *Teaching and Researching Language Learning Strategies: Self-Regulation in Context*. New York: Routledge.

Quoidbach, Jordi., Mikolajczak, Moira, and Gross, James. 2015. Positive Interventions: An Emotion Regulation Perspective. *Psychological Bulletin*. Vol. 141, no. 3: 655–693.

Pica, Teresa. 2002. Subject-matter content: How Does It Assist the Interactional and Linguistic Needs of Classroom Language Learners? *Modern Language Journal.* Vol. 86, no. 3: 1–19.

Rubio, Fernando. 2014. Self-esteem and self-concept in foreign language learning. In S. Mercer & M. Williams (Eds.), Multiple Perspectives on the Self in SLA, 41–58. Bristol: Multilingual Matters.

Rusk, Reuben, and Waters Lea. 2015. A Psycho-Social System Approach to Well-Being: Empirically Deriving the Five Domains of Positive Functioning. *The Journal of Positive Psychology.* Vol. 10, no. 2: 141–152.

Saito, Kazuya. 2015. Experience Effects on The Development of Late Second Language Learners' Oral Proficiency. *Language Learning.* Vol. 65, no. 3: 563–595.

Saldaña, Johnny. 2013. *The Coding Manual for Qualitative Researchers*. SAGE Publications, Los Angeles.

Schmidt, Henk G., Gog, Tamara, and Paas, Fred. 2007. Problem-based Learning is Compatible with Human Cognitive Architecture: Commentary on Kirschner, Sweller, and Clark (2006). *Educational Psychologist.* Vol. 42, no. 2: 91–97.

Schunk, Dale H, and Pajares Frank. 2005. Competence beliefs in academic functioning. Chapter in A. Wigfield & J. Eccles (Eds.), *Development of Achievement Motivation*. San Diego: Academic Press.

Schunk, Dale H, and Zimmerman Barry. 2008. *Motivation and Self-Regulated Learning: Theory, Research, and Applications.* Mahwah, NJ: Lawrence Erlbaum.

Smotrova, Tetyana. 2015. Making Pronunciation Visible: Gesture in Teaching Pronunciation. *TESOL Quarterly*. Vol. 51, no. 1: 59–89.

Tashakkori, Abbas., and Teddlie Charles. 2003. *Handbook of Mixed Methods in Social & Behavioral Research.* Thousand Oaks: Sage.

Thompson, Amy S. 2017. Don't Tell Me What To Do! The Anti-Ought-To Self and Language Learning Motivation. *System*. Vol. 67, no. 1: 1–13.

Thompson, Amy S., and Erdil-Moody Zeynep. 2016. Operationalizing Multilingualism: Language Learning Motivation in Turkey. *International Journal of Bilingual Education and Bilingualism*. Vol.19, no. 3: 314–331.

Thompson, Amy S. and Vasquez Camilla. 2015. Exploring motivational profiles through language learning narratives. *Modern Language Journal*. Vol. 99, no. 1: 158–174.

Urdan, Tim, and Mestas Miranda. 2006. The Goals behind Performance Goals. *Journal of Educational Psychology.* Vol. 98, no. 2: 354–365.

Ushioda, Ema. 2013. Foreign Language Motivation Research in Japan: An 'Insider' Perspective from Outside Japan. In: Apple, M. T. and Da Silva, D. and Fellner, T., (eds.) Language Learning Motivation in Japan. Bristol: Multilingual Matters.

Wigfield, Allan and J T. Guthrie. 1995. *Dimensions of children's motivations for reading: An initial study.* Athens, GA: National Reading Research Center.

Wigfield, Allan. 1997. Relations of Children's Motivation for Reading to The Amount and Breadth of Their Reading. *Journal of Educational Psychology*. Vol. 89, no. 3: 420–432.

Zhang,Yining., Lin, Chin-Hsi, Zhang, Dongbo, and Choi, Yunjeong. 2016. Motivation, Strategy, and English as a Foreign Language Vocabulary Learning: A Structural Equation Modeling Study. *British Journal of Educational Psychology*. Vol. 87, no. 1: 57–74.

Appendix A. PSC-based listening treatment

The following table displays the theoretical bases of the treatment.

Listening treatment with reinforced ⇩	Instructions to fellow teachers
Psychological Factors	Reinforcing automaticity in L2 learners via encouraging participation in communicative activities and removing scaffolding in line with real-life listening experience (Field, 2007).
	Not addressing a single linguistic feature at a time (Ellis, 2009).
	Encouraging learners to notice the corrective force of the feedback.
	Engaging learners in strategic planning to internalize L2 structure.
	Encouraging metacognitive strategies to build meaning (Graham, 2006).
	To facilitate comprehension process, encouraging learners to overcome the compulsion to translate and to avoid applying L1 segmentation procedures to the rhythmically different target language (Cutler, 2001).
	Planning pre-listening activities to activate learners' script and get to know learners' motivational features.
	Encouraging natural target language reproduction rather than echoing, imitating or slavish mimicry.
Cultural Factors	Encouraging the use of listening instruction strategy to improve listening proficiency (Harris, 2007).
	Encouraging learners to pay attention to pause-bounded units to facilitate listening comprehension rather than syntactic cues (Harley, 2000).
	Encouraging learners to selectively work on linguistic features that are related to comprehensibility rather than linguistic native-likeness (Saito, 2015).
	Increasing input in naturalistic settings (Flege, 2009) with respect to nonlinear dynamic motivational factors at individual level.
	Approaching the cultural contexts and learning needs of learners (Lopes-Murphy, 2012) at individual level.
Social Factors	Encouraging the use of communicative strategies to manage listening problems (Nakatani and Goh, 2007) by creating authentic communication settings.
	Encouraging global comprehension rather than partial comprehension to enhance self-confidence and achievement motivation.
	Avoid disrespecting social and cultural values which can causes students feel disfranchised (Kana'iaupuni et al., 2010).
	Encouraging experiential learning and interaction (Legutke and Thomas, 2013) instead of rote learning.
	Including social and cultural factors to make learning an important and meaningful task for learners (Gay, 2010) while attending the psychological needs and interests.

Appendix B. PSC-based speaking treatment

Speaking treatment with reinforced ⇩	Instructions to fellow teachers
Psychological Factors	Considering individual learner differences while giving feedback (Dörnyei ,2006) and avoid generalizing and using the same feedback for all learning group.
	Encouraging making questions that require evaluation and reaction rather than recall of details.
	Keep encouraging students to see learning as an enjoyable process (Zhang, et al., 2016)
	Encouraging L2 learners to inhabit an identity of a fluent speaker by imitating body movements (McCafferty, 2008).
	Visualizing and enacting pronunciation phenomena by the use of instructional gestures (Smotrova, 2017).
	Promoting new ways of thinking, necessarily involves both forms of mediation operating in tandem (Negueruela, 2008)
	Develop ideal selves along with ought-to selves among learners based on the positive relationship between them and the desire to improve pronunciation in a foreign language (Huensch and Thompson, 2017)
	Encourage processing the speech rather than retrieve the information from the long-term memory.
	Begin with an elicitation rather than reformulation (Lyster, 2004).
	In keeping with interactional feedback adopting a type of feedback (e.g. recasts, clarification requests, repetition, metalinguisitc feedback, direct elicitation, and direct correction) is suggested as an excuse to produce multiple reconstructed answers.
Cultural Factors	Encourage communicative responses with adaptation, interpretation, paraphrasing and addition of new information rather than meaningful responses.
	Engage learners in multi-tasking to give 'voice' to learners' experience (Levy, 2015).
	Encourage imitation so that learners can use the imitated content for their own communicative purposes (Smotrova, 2017).
	Appreciate cultural differences and promote the motivation and agency of individual learners in classroom context (Ushioda, 2013).
	Inform learners that accent is a normal characteristic of L2 speech production (Abrahamsson and Hyltenstam, 2009) that should not act as a demotivating factor.
Social Factors	To enhance in-field learning encourage information exchange via location-based learning systems (Burston, 2014).
	Encourage producing modified comprehensible output via interactional strategies (Pica, 2002).
	Encourage the use of interactional strategies to facilitate meaning negotiation.
	Provide learners' with opportunities to manage their emotions, thought processes, and actions (e.g., Joe et al., 2017)