

A model of language students' sustained flow, personal best, buoyancy, evaluation apprehension, and academic achievement

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ABSTRACT: This study attempts to add new empirical evidence on the psychological aspects of language learning. The research examined potential interactions among sustained flow, personal best, buoyancy, evaluation apprehension, and academic achievement in a single research design. To this end, 376 English as a foreign language (EFL) students at universities and private language institutes participated in the study. The conducted analyses revealed significant associations among the constructs. These findings are discussed from the perspective of current theory and research on the ways via which sustained flow, personal best, and buoyancy may contribute to language learning and how evaluation apprehension may dwindle language success. The implications and suggestions for future research are also discussed.

Keywords: sustained flow, personal best, buoyancy, evaluation apprehension, academic achievement.

Un modelo de flujo sostenido, mejor marca personal, optimismo, aprensión a la evaluación y rendimiento académico de los aprendices de idiomas

RESUMEN: Este estudio trata de agregar nueva evidencia empírica sobre los aspectos psicológicos del aprendizaje de idiomas. La investigación ha examinado las interacciones potenciales entre el flujo sostenido, la mejor marca personal, el optimismo, la aprensión a la evaluación y el rendimiento académico en un solo diseño de investigación. Con este fin, han participado en el estudio 376 estudiantes de inglés como lengua extranjera (EFL) de universidades e institutos de idiomas privados. Los análisis realizados han revelado asociaciones significativas entre los constructos. Estos hallazgos se discuten desde la perspectiva de la teoría y la investigación actuales sobre las formas a través de las cuales el flujo sostenido, la mejor marca personal y el optimismo pueden contribuir al aprendizaje del idioma y cómo la aprehensión de la evaluación puede disminuir el éxito del idioma. También se discuten las implicaciones y sugerencias para futuras investigaciones.

Palabras clave: flujo sostenido, mejor marca personal, optimismo, aprensión a la evaluación, rendimiento académico

1. INTRODUCTION

Having been studied for several decades, motivation has now faced a new paradigm (Al-Hoorie, 2017; Rostami, et al, 215) whose importance in students' success is irrefutable (e.g., Dörnyei, & Ryan, 2015; Dörnyei, & Ushioda, 2011). Directed Motivational Currents (DMCs), coined by Dörnyei, Muir, and Ibrahim (2014), as the latest motivational notion refer to the heightened level of motivation experienced by individuals in a certain period of time (Muir, & Dörnyei, 2013). Dörnyei, Ibrahim, and Muir (2015) conceptualized it in this way: "A DMC is a potent motivational surge that emerges from the alignment of a number of personal, temporal and contextual factors/parameters, creating momentum to pursue an individually defined future goal/vision that is personally significant and emotionally satisfying" (p. 103, as cited in Ghanizadeh, & Jahedizadeh, 2017). Recently, Ibrahim and Al-Hoorie (2019) introduced the synonymous term sustained flow (SF) for two reasons. First, it is connected to the mother construct, flow as a single-episode phenomenon and second, SF may alleviate the terminological proliferation witnessed in the field (see Al-Hoorie, 2018). SF leads learners towards achieving their goals beyond their imagination (Dörnyei et al., 2014; Muir & Dörnyei, 2013), regulates affective fluctuations (Dörnyei, Ibrahim, & Muir, 2015), and enhances the motivational power of teaching methodology (Dörnyei, Henry, & Muir, 2016) which can be experienced at different time points (Ibrahim, 2016a).

Dörnyei et al. (2015) identified three distinguishing characteristics of SF including vision-orientedness, salient, facilitative structure, and positive emotionality. The first feature of SF is related to the directional nature which necessitates the existence of a particular goal toward which individuals try their best to achieve. In other words, there should always be an outcome, target, or goal to create intense levels of motivation (Dörnyei et al., 2015). But the one aspect specified to SF (and not other forms of motivation) is the role of vision. According to Dörnyei and Kubanyiova (2014), the difference between goal and vision is that the latter comprises tangible images and anticipatory emotions on which SF is dependent (Dörnyei et al., 2015). A language learner with SF who intends to become a university professor, for instance, always imagines him/herself working at university and this strong sensory factor can push him/her towards goal achievement. On the other hand, a student with "merely" high level of motivation wants to learn a second language for the sake of enjoyment. As a result, he/she is motivated to achieve the goal of learning with no particular vision of future position.

The second feature of SF lies within the behavioral routines that facilitate individuals to achieve their goals. This particular characteristic is the focus of SF, a factor that does not exist in other concepts of motivation. Another relevant issue is the distinct starting point of SF that is always explicit and conscious. Generally speaking, when intrinsic motivation is at hand, the person often moves towards a goal unconsciously and without observing alternation in his/her program, but individuals who experience SF are always aware of the changes and move directly to achieve their target. The use of progress checks is evident of this unique characteristic (Dörnyei et al., 2015).

The third characteristic of SF, positive affect, is different from simple pleasure and happiness and results in the self-fulfillment of one's mission. In this regard, individuals perceive positive emotions from the activities they do in the process of goal achievement.

They may even consider activities that were once boring to them, as enjoyable and satisfying (Dörnyei et al., 2015).

Although the new construct has entered the research agenda only about seven years ago, the empirical investigations concerning SF encompass various insights and discoveries (e.g., Chiocca, 2017; Colombo, 2017; Ghanizadeh & Jahedizadeh, 2017; Ibrahim, 2016b; Ibrahim & Al-Hoorie, 2019; Muir, 2016; Pietluch, 2018; Selçuk & Erten, 2017; Zarrinabadi & Tavakoli, 2017). The association between SF and demographic variables have been also studied (Ghanizadeh & Jahedizadeh, 2017; Muir, 2016). Almost all of these studies unanimously attest to the positive role of SF in education. Consequently, scrutinizing the construct in relation with other significant variables append new intuitions to the existing literature.

Personal best goals or Personal Bests (PBs) originated in sports settings, as another variable of the present study is highly associated with individuals' SF. PBs have been found to be one of the key aspects of educational contests (e.g., Bandura, 1997; Martin, 2006) aligned with one's intrinsic motivation (Ryan & Deci, 2000). According to Najafzadeh, Ghanizadeh, and Jahedizadeh (2018), "when students believe that success is accessible to them, there would be less need to maneuver in failure-avoidant ways and more reasons to be optimistic and hopeful when facing future challenges and tasks" (p. 269). The empirical inquiries in the domain of academic personal best goals comprise illustrating the association of PBs and self-efficacy (Bandura, 1997; Martin, 2006), learning flow (Csikszentmihalyi, 1990), academic motivation (Martin, 2007; Martin & Elliot, 2016; Martin & Liem, 2010), self-esteem (Martin, 2002), and students' academic achievement (e.g., Najafzadeh, Ghanizadeh, & Jahedizadeh, 2018; Martin, 2006, 2015; Martin & Elliot, 2016). In spite of all these studies, the lack of research concerning the nexus among PBs and three other relevant variables considered in the present study can be perceived.

Academic buoyancy, as another psychological construct considered in the present study, reflects "students' everyday academic resilience within a positive context and can be defined as students' ability to successfully deal with academic failures and challenges" (Jahedizadeh, Ghonsooly, & Ghanizadeh, 2019a, p. 162). It is the ability to deal with everyday adversities in the process of language learning (Martin & Marsh, 2006, 2008a, 2008b, 2009; Yun, Hiver, & Al-Hoorie, 2018). Although the notion of buoyancy seems similar to resilience, there are a number of distinctions between the two concepts in terms of methodological and operational definitions (Jahedizadeh, Ghonsooly, & Ghanizadeh, 2019a). First, academic resilience is attributed to debilitation and anxiety in unpleasant situations of failure and devastating underachievement, while academic buoyancy is a common daily experience of stress and pressure as the result of poor performance (getting a low grade at school/university). Second, academic resilience refers to more clinical types of disaffection, anxiety, alienation, depression, truancy from the educational context, and hostility to teachers, but academic buoyancy is a typical form of low confidence, motivation, and engagement (Martin & Marsh, 2008a). In the field of language learning, "whilst a good deal of research has provided in-depth understanding of resilience, a few research has specifically recognized the cognate construct of buoyancy" (Jahedizadeh, Ghonsooly, & Ghanizadeh, 2019a, p. 165).

The other construct reflected in the present study is evaluation apprehension referring to the scrutiny of individuals' performance while working in groups when those who perform in front of others have a concern about others' evaluations (Cottrell, 1972). In the

field of language learning, students are expected to perform tasks via different mediums including discussions, lectures, and presentations as well as other means of performance (e.g., reading and writing). In this regard, some students may find it difficult to express their thoughts in the presence of others due to negative judgments from their classmates or teachers (poor pronunciation, unfamiliar accent, grammatical errors, etc.). They may gradually become passive language learners by the detrimental role of evaluation apprehension. Although many studies investigated second /foreign language anxiety (e.g., Horwitz, 2010) and EFL communication apprehension (e.g., Tzoannopoulou, 2016), studies examining the role of evaluation apprehension in the context of EFL/ESL learning are scarce in number (Jahedizadeh, Ghonsooly, & Hosseini, 2019b).

2. PURPOSE OF THE STUDY

Due to the key role of SF in students' success and the scarce number of empirical studies exploring the construct in association with other psychological variables, the researchers of this study aimed at examining the casual relationships (using Structural Equation Modeling) among four psychological variables, including SF, PB, buoyancy, and evaluation apprehension as well as students' academic achievement within a single framework. In other words, the following research questions were investigated in the present study:

- a. Does EFL learners' PB play any significant role in their SF?
- b. Does EFL learners' PB play any significant role in their evaluation apprehension?
- c. Does EFL learners' PB play any significant role in their buoyancy?
- d. Does EFL learners' PB play any significant role in their academic achievement?
- e. Does EFL learners' SF play any significant role in their buoyancy?
- f. Does EFL learners' SF play any significant role in their evaluation apprehension?
- g. Does EFL learners' SF play any significant role in their academic achievement?
- h. Does EFL learners' evaluation apprehension play any significant role in their buoyancy?
- i. Does EFL learners' evaluation apprehension play any significant role in their academic achievement?
- j. Does EFL learners' buoyancy play any significant role in their academic achievement?

Figure 1 demonstrates the hypothesized model according to theoretical foundations discussed earlier. In this model, SF constitutes the core of the study and their direct and indirect roles in the other four variables are investigated.

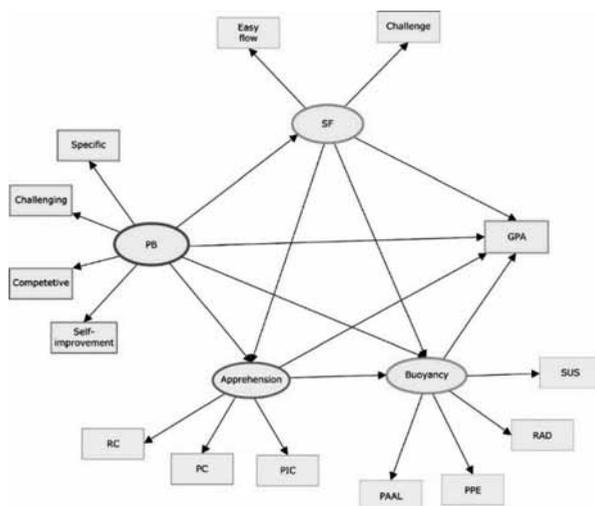


Figure 1. Graphic Representation of the Variables Considered in the Present Study

Note. SF: sustained flow; PB: personal best; RC: reading commotion; PC: presentation consternation; PIC: participation in class discussions; SUS: sustainability; RAD: regularity adaptation; PPE: positive personal eligibility; PAAL: positive acceptance of academic life; GPA: grade point average.

3. METHOD

3.1. Participants

The participants of the present study comprised 376 EFL students (287 BA, and 85 MA, and 4 PhD) selected according to convenience sampling among EFL students studying English at Universities and Language Institutes in Iran during the fall semester of 2018. The profile of the students is as follows: Their age varied from 18 to 56 years old ($M = 24$, $SD = 6.21$) and the majority (133) had upper-intermediate proficiency level, 47 elementary, 49 pre-intermediate, 127 intermediate, and 20 advanced students as reported by themselves took part in this study. Female participants numbered 329, while 47 were male. There were no requirements other than that the participants be currently learning English course during the fall semester of 2018. The participants were required to answer the four online questionnaires and provide demographic information.

3.2 Instruments

3.2.1. The Persian Version of DMC Disposition Scale

To determine student SF, the study employed the Persian version of the DMC Disposition Questionnaire designed and validated by Muir in 2016 and translated into Persian by

(Ghanizadeh & Jahedizadeh, 2017). The dynamic online DMC Disposition Questionnaire consists of a number of items and questions among which 12 main statements pose easy flow (8 items) and challenge (4 items) facets of DMC via a 5-point Likert type response format. The results were intended to identify three key issues: 1) the proportion of people who have experienced DMCs in general, 2) The individuals who have experienced DMCs specifically, and 3) the characteristics of their experience regarding DMC (the duration and reason for beginning, etc.). The DMC Disposition Scale was demonstrated to have strong internal consistency (Cronbach's Alpha = .84).

3.2.2 *The Persian Version of Personal Best Scale*

To explore student PBs, the Persian version of Personal Best Scale designed by Martin in 2006 was utilized. The questionnaire comprises 16 items measuring four different types of goals namely; specific goals (4 items), challenging goals (4 items), competitively self-referenced goals (4 items), and self-improvement goals (4 items) via a 5-point Likert type response format. The Cronbach's alpha of the Personal Best Questionnaire was acceptable ranging from .77 to .90 regarding sixteen items (Martin, 2006).

3.2.3 *The Student Evaluation Apprehension Scale (SEAS)*

To assess EFL students' evaluation apprehension, the SEAS designed and validated by Ghanizadeh and Jahedizadeh (forthc.) was investigated. The instrument comprises twenty items measuring the three aspects of evaluation apprehension (reading commotion, presentation in the classroom, and participation in classroom discussions/ question and answer exchanges). The items are answered on a five-point scale. The reliability of the questionnaire found via Cronbach's alpha was .86.

3.2.4 *The Academic Buoyancy Scale (ABS)*

To assess students' buoyancy, the ABS designed and validated by (Jahedizadeh, Ghonsooly, & Ghanizadeh, 2019a) was used. The questionnaire involves twenty-seven items measuring four dimensions of L2 buoyancy including Sustainability, Regularity Adaptation, Positive Personal Eligibility, and Positive Acceptance of Academic Life emerged. The items are answered on a five-point scale from 1 ("definitely disagree") to 5 ("definitely agree").

3.3. Procedure

All the participants were supposed to answer the four questionnaires online. In effect, the scales were designed in an online format for the ease of administration and data collection. The participants were provided with the web address of the questionnaires. All the procedures used to obtain data have been carried out after obtaining consent from the institution.

The responses obtained from the questionnaires were analyzed through the computation of descriptive statistics, and then percentile measures were reported. Since a Pearson product moment correlation formula can only be conducted on linear and one-sided relationship, a Structural Equation Modeling (SEM) was used to study the involved causal relations as it

explores the causal associations as well as the predictive power of each variable, a property which is absent in correlational analysis. Mplus software, version 7 was employed to run the SEM. To determine the relationships between student SF, proficiency and educational level, Pearson Product-Moment correlations were run.

4. RESULTS

Table 1 presents descriptive statistics of SF. As the table indicates, easy flow receives a higher mean ($M= 27.57$, $SD=9.70$) than challenge ($M= 14.41$, $SD=5.22$).

Table 1. Descriptive statistics of SF

| | N | MINIMUM | MAXIMUM | MEAN | STD. DEVIATION |
|--------------------|-----|---------|---------|-------|----------------|
| Easy flow | 376 | .00 | 40.00 | 27.57 | 9.70 |
| Challenge | 376 | .00 | 20.00 | 14.41 | 5.22 |
| Valid n (listwise) | 376 | | | | |

Table 2 represents descriptive statistics of PB goals. As it is indicated, competitively self-referenced goals receive the highest mean ($M= 15.24$, $SD=2.28$), followed by self-improvement goals ($M= 15.01$, $SD=2.29$).

Table 2. Descriptive statistics of PB

| | N | MINIMUM | MAXIMUM | MEAN | STD. DEVIATION |
|-------------------------------|-----|---------|---------|-------|----------------|
| Specific | 376 | 8.00 | 20.00 | 14.56 | 2.29 |
| Challenging | 376 | 6.00 | 20.00 | 14.59 | 2.40 |
| Competitively self-referenced | 376 | 8.00 | 20.00 | 15.24 | 2.28 |
| Self-improvement | 376 | 7.00 | 20.00 | 15.01 | 2.29 |
| Valid n (listwise) | 376 | | | | |

Table 3 depicts descriptive statistics of evaluation apprehension. The highest mean is for RC/reading commotion ($M= 20.72$, $SD=7.01$), followed by PIC/participation in classroom discussions ($M= 19.85$, $SD=6.40$).

Table 3. Descriptive statistics of evaluation apprehension

| | N | MINIMUM | MAXIMUM | MEAN | STD. DEVIATION |
|--------------------|-----|---------|---------|-------|----------------|
| RC | 376 | 7.00 | 35.00 | 20.72 | 7.01 |
| PC | 376 | 6.00 | 30.00 | 16.44 | 5.80 |
| PIC | 376 | 7.00 | 35.00 | 19.85 | 6.40 |
| Valid N (listwise) | 376 | | | | |

The results of descriptive statistics of buoyancy and academic achievement are both shown in Table 4 to save space. Among the four components of buoyancy, PPE/positive personal eligibility receives the highest mean ($M= 30.58, SD=4.65$), followed by PAAL/positive acceptance of academic life ($M= 29.52, SD=4.53$). The mean score of students' GPA was found to be 17.48.

Table 4. Descriptive statistics of buoyancy and GPA

| | N | MINIMUM | MAXIMUM | MEAN | STD. DEVIATION |
|--------------------|-----|---------|---------|-------|----------------|
| SUS1 | 359 | 9.00 | 67.00 | 26.08 | 4.97 |
| RAD1 | 359 | 7.00 | 20.00 | 14.80 | 2.54 |
| PPE1 | 358 | 14.00 | 40.00 | 30.58 | 4.65 |
| PAAL1 | 359 | 16.00 | 40.00 | 29.52 | 4.53 |
| GPA1 | 376 | 11.50 | 20.00 | 17.48 | 1.75 |
| Valid N (listwise) | 358 | | | | |

The purpose of this section is to examine the structural relations by testing the proposed model using Mplus (Version 7.4). For this purpose, as the first step, the measurement model and the factor loadings of each construct are measured. The factor loadings are expected to be more than 0.3 in each construct. Then the goodness of fit indices of the model were calculated and the model ability to fit is evaluated. If these values are not in the desired range, model corrections must be made. Finally, each construct was evaluated for its validity and reliability with the help of AVE and CR indices. If the model is in good condition, these two indices are expected to be 0.5 and 0.7, respectively.

Figure 2 shows the results of the measurement model and the values of standardized factor loadings for each structure.

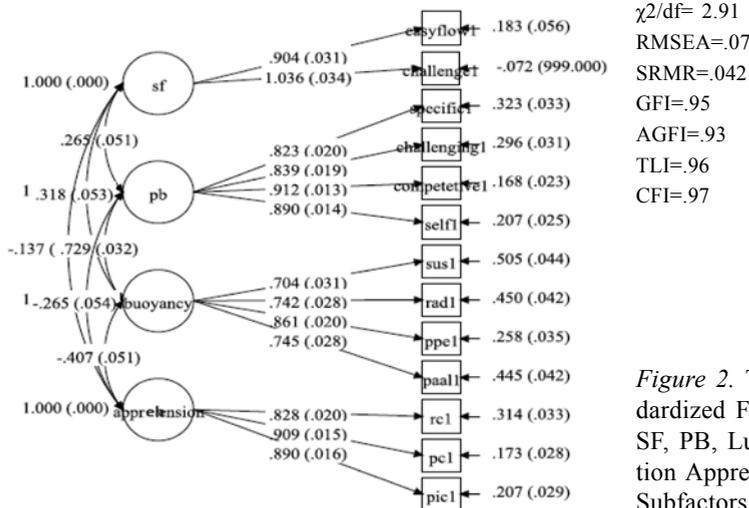


Figure 2. The Values of Standardized Factor Loadings of SF, PB, Luoyancy, and Evaluation Apprehension and Their Subfactors

In order to clarify the findings, the same indices are shown in Table 5.

Table 5. The standardized factor loadings of the constructs

| CONSTRUCT | SUBFACTOR | STANDARDIZED FACTOR LOADING | STANDARD DEVIATION | TEST STATISTIC | P-VALUE |
|-----------------------|-------------|-----------------------------|--------------------|----------------|---------|
| SUSTAINED FLOW | Easy flow | 0.904 | 0.03 | 29.41 | 0 |
| | Challenge | 1.036 | 0.03 | 30.72 | 0 |
| PERSONAL BEST | Specific | 0.823 | 0.02 | 40.89 | 0 |
| | Challenging | 0.839 | 0.01 | 44.89 | 0 |
| | Competitive | 0.912 | 0.01 | 72.65 | 0 |
| | Self | 0.89 | 0.01 | 63.25 | 0 |
| BUOYANCY | SUS | 0.704 | 0.03 | 22.71 | 0 |
| | RAD | 0.742 | 0.02 | 26.05 | 0 |
| | PPE | 0.861 | 0.02 | 42.33 | 0 |
| | PAAL | 0.745 | 0.02 | 26.56 | 0 |
| APPREHENSION | RC | 0.828 | 0.02 | 41.46 | 0 |
| | PC | 0.909 | 0.01 | 58.91 | 0 |
| | PIC | 0.89 | 0.01 | 53.97 | 0 |

As can be seen, the factor loadings are at the appropriate level of more than 0.3. Therefore, the proper combination of each structure can be verified.

Table 6 illustrates the validity and reliability of each construct considered in the present study. Validity index which is shown by AVE (average variance extracted) indicator and reliability index with CR (capability ratio) indicator. For a desirable construct, the validity index is expected to be greater than 0.4 and the reliability index greater than 0.6 (or 0.7).

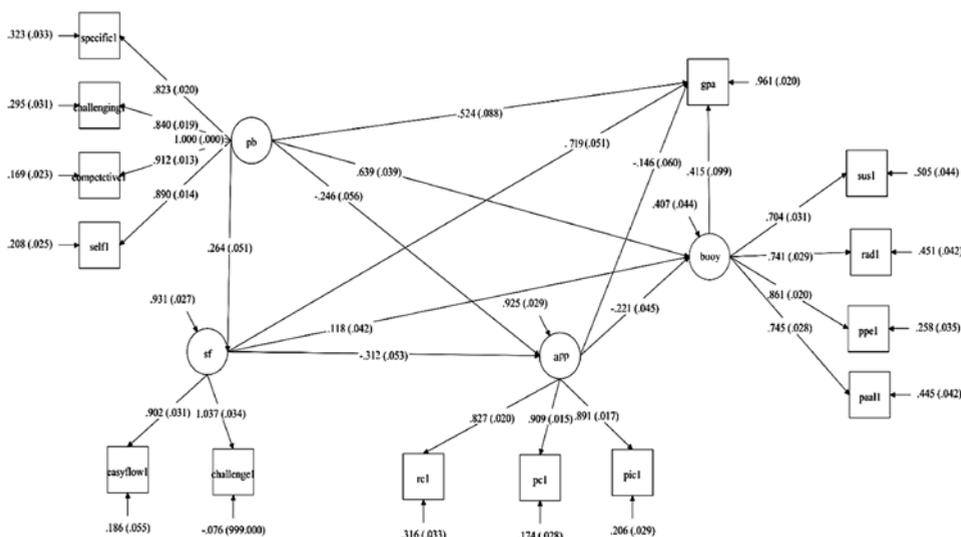
Table 6. The results of validity and reliability of each construct

| CONSTRUCT | VALIDITY INDEX (AVE) | RELIABILITY INDEX (CR) |
|-----------|----------------------|------------------------|
| 0.68 | 0.983 | 0.68 |
| 0.75 | 0.995 | 0.75 |
| 0.59 | 0.989 | 0.59 |
| 0.76 | 0.993 | 0.76 |

As expected, due to high values of factor loadings, the reliability and reliability indices of each construct are also in a desirable level.

To evaluate the model fit, the following fit indices were scrutinized: the chi square/*df* ratio which should be lower than 2 or 3, the Normed Fit Index (NFI), the Good Fit Index (GFI), Adjusted Good Fit Index (AGFI), the Comparative Fit Index (CFI), and Tucker-Lewis Index (TLI) with the cut value greater than .90, and the Root Mean Square Error of Approximation (RMSEA) of lower than 0.1. The values of chi square/*df* ratio, GFI, AGFI, and NFI are influenced by extrinsic and unknown factors (such as sample size and number of items) rather than due to defects in model fit. That is, if there is no good fit in the analysis, it is due to external factors. The most common of these indices is the probability index of the chi-square statistic which illustrates the importance of the difference between the fitted model and the covariance matrix of the observed sample. The values of TLI, CFI, RMSEA, and SRMR, on the other hand, are not affected by extrinsic factors, and the result is most likely to indicate a defect in the fit of the model; that is, if not well-suited to the analysis, it is due to the nature of its model and less affected by extrinsic factors.

The structural model using Mplus (Version 7.4) is presented in Figure 3. As can be seen, the chi-square/*df* ratio (2.70), the RMSEA (0.07), SRMR=0.041, and the CFI=.97, GFI=.95, AGFI=0.93, and TLI=0.96 all reached the acceptable fit thresholds. Overall, it can be concluded that the proposed model had a perfect fit with the empirical data.



$\chi^2/df= 2.70$, RMSEA=.07, SRMR=.041, GFI=.95, AGFI=.93, TLI=.96, CFI=.97

Figure 3. The Final Model Representing the Relationships Among the Variables in Questions

The results of SEM indicated a significant effect of PB on SF (p-value = 0.00 <0.05). Also, according to the regression coefficient on the arrow, it is concluded that the effect of PB on SF is direct and equals 0.26. Regarding the effect of PB on evaluation apprehension, the PB construct with p-value less than 0.05 (p-value = 0.000 <0.05) had a significant effect

on the dependent construct (apprehension). The standardized coefficient of -0.25 indicates the significance in the negative direction. In other words, high levels of PB results in low evaluation apprehension. As far as the third research question is concerned, it was found that the PB construct has a significant effect on the dependent variable of buoyancy (p-value = 0.00 < 0.05). Examination of standardized regression coefficient also reveals that PB with the coefficient of 0.64 has a direct effect on buoyancy.

Table 7 shows the regression results of structural equation modeling shown in Figure 3.

Table 7. The regression results of the structural equation model

| EXOGENOUS VARIABLE | ENDOGENOUS VARIABLE | STANDARDIZED COEFFICIENT | STANDARD DEVIATION | TEST STATISTIC | P-VALUE |
|-----------------------|---------------------|--------------------------|--------------------|----------------|---------|
| PERSONAL BEST | SF | 0.26 | 0.05 | 5.21 | 0 |
| | Apprehension | -0.24 | 0.05 | -4.40 | 0 |
| | Buoyancy | 0.63 | 0.03 | 16.58 | 0 |
| | GPA | 0.52 | 0.08 | 6.14 | 0.003 |
| SUSTAINED FLOW | Buoyancy | 0.11 | 0.04 | 2.77 | 0.006 |
| | Apprehension | -0.31 | 0.05 | -4.59 | 0.021 |
| | GPA | 0.71 | 0.05 | 6.90 | 0 |
| APPREHENSION | Buoyancy | -0.22 | 0.04 | -4.90 | 0 |
| | GPA | -0.14 | 0.06 | -2.41 | 0.016 |
| BUOYANCY | GPA | 0.41 | 0.09 | 4.05 | 0.032 |

The results also indicated that the independent variable of PB has a direct and positive effect on students' GPA (p-value = 0.003 < 0.05) with the standardized regression coefficient of 0.53. besides, about the influence of SF on buoyancy, it was found that the SF construct has a significant effect on the dependent variable of buoyancy (p-value = 0.006 < 0.5). Examination of standardized regression coefficient also reveals that SF with the coefficient of 0.12 has a direct effect on buoyancy. In a similar vein, the SF construct with p-value less than 0.05 (p-value = 0.021 < 0.05) had a significant effect on the dependent construct (apprehension). The standardized coefficient of -0.32 indicates the significance in the negative direction. In other words, high levels of SF results in low evaluation apprehension. The model also revealed that the independent variable of SF has a direct and positive effect on students' GPA (p-value = 0.000 < 0.05). The standardized regression coefficient of 0.72 indicates that enhancing students' SF increases their GPA. Regarding the influence of apprehension on buoyancy, it was found that the independent construct has a significant effect on buoyancy (p-value = 0.000 < 0.5). Examination of standardized regression coefficient also reveals that evaluation apprehension with the coefficient of 0.23 has a direct effect on buoyancy. Concerning the independent variable of apprehension, a p-value of 0.016 was

obtained. Therefore, the significant effect of this construct on GPA is confirmed. The resulting regression coefficient for this construct is -0.15. In other words, high level of students' apprehension reduces their GPA. Finally, the model illustrated that buoyancy affects GPA directly and significantly (p -value = 0.032 < 0. 5) with the regression coefficient of 0.42.

5. DISCUSSION

The results indicated that enhancing students' PB goals increases their SF experiences. As mentioned earlier, goals have been considered as one of the most significant prerequisites and sources of individuals' motivation (Clark, Gill, Prowse, & Rush, 2017; Najafzadeh, Ghanizadeh, & Jahedizadeh, 2018). Additionally, the more students adapt PB goals in their language learning process, the more intrinsic motivation they experience (Najafzadeh, Ghanizadeh, & Jahedizadeh, 2018). Similarly, the positive role of goals in enhancing learners' motivation (Martin, 2007) and negative association of academic goals and flip side of motivation have been established (e.g., Ghanizadeh, Jahedizadeh, & Allahdadi, 2016). The important role of goals has been reflected in different achievement goal theories (Elliot & McGregor, 2001; Ghanizadeh, Jahedizadeh, & Allahdadi, 2016; Martin, 2007). PBs, as a new concept in the educational field which was used in sports for the first time and then entered the academic arena, are not exceptions. In addition, SF is a brief surge directed toward a certain goal (Ibrahim, & Al-Hoorie, 2019) implying that without a goal, one may not experience SF. This is in line with previous research which support the association between PB goals and students' motivation (e.g., Locke & Latham, 2002; Martin, 2006, 2011). Martin et al. (2014), for instance, conducted a correlational study to explore the relationship between PBs and students' motivational outcomes. The researchers found that the more learners adapt PBs in the process of learning, the more motivational growth they experience. The connection between the two concepts can be attributed to three important components of PBs. First, challenging and enjoyable tasks increase students' motivation and engagement. Second, students can concentrate on particular goals which in turn enhances their motivational behaviors. Third, learners get more energy and have more engagement and immersion when they are assigned self-competitive tasks to motivate them try better than their previous performance (Martin, & Liem, 2010). More importantly, PB goals are associated with the concept of flow as the basis of SF (Csikszentmihalyi, 1990).

The results of the study also revealed that PBs have a significant and negative effect on students' evaluation apprehension. In other words, when students adapt personal best goals in their language learning process their levels of apprehension will be reduced. Due to the fact that language apprehension reduces students' performance (Atef-Vahid, & Kashani, 2011), adapting appropriate goals by introducing suitable tasks seems essential. Previous studies delving into the relationship between goals orientations and anxiety have also supported this association (e.g., Cakici, 2016). However, other studies with the aim of finding the connection between goal orientation and competitive anxiety did not find any relationship between the two concepts (e.g., Behzadi, Hamzei, Nori, & Salehian, 2011). The inconsistency between the two sets of research can be attributed to different contexts and students' disciplines (science, mathematics, sports, language, etc.). Hence, when students feel that the tasks they do in the classroom are challenging demanding competitive self-referenced goals by which

they try their best to perform better than before, they would be less apprehended regarding others' judgments, since their attention would be attracted to their attempts and therefore are not anxious about their classmates, friends, and teachers' perceptions.

The third research question asked about the relationship between PBs and students' academic buoyancy. The results revealed that the two constructs are associated and PB affects buoyancy positively and significantly. Since challenges and failures are inevitable parts of learning without which success is impossible (Simpson, & Maltese, 2017), it is difficult to prevent pressures with debilitation, depression, fear, and anxiety (Heyd-Metzuyanim, 2015). In this regard, students should be aware of the ways by which they can boost their buoyancy. The finding illustrated that adapting PB goals can be a technique to achieve their everyday resilience. In fact, students' resilience is highly related to PB goals (Najafzadeh, Ghanizadeh, & Jahedizadeh, 2018). Theoretically, learners are able to perform as well as or better than their previous attempts. Thus, when students perceive that success is accessible to them, it is not necessary to maneuver in failure-avoidant ways and there would be more reasons to think optimistically and hopefully in difficult situations (Martin & Marsh, 2003; Martin, Marsh, & Debus, 2001). In a similar vein, resilient students' motivation is closely related to their PBs (Locke & Latham, 2002; Martin, 2006, 2011). Yu and Martin (2014) aimed at predicting the role of PBs in students' motivation, engagement, and buoyancy in the Chinese context. The findings of their study supported the important role of PBs in learners' buoyancy which is in line with the results of the present study (Martin & Liem, 2010; Martin & Marsh, 2009). Hence, PB-orientation can result in heightened persistence which enable students to overcome difficult situations successfully. Consequently, setting beneficial goals builds students' resilience. Another important issue is that students should feel they have control over their goals which in turn enhances their resilience. This can be achieved by the teachers who introduce PB-oriented tasks and provide personal support (Wang, & Gordon, 2012).

The next significant relationship was found between students' PBs and their academic achievement (Martin, & Elliot, 2016). Research in the realm of goal-setting supported the role of students' goals in their academic success, especially when they can set their goals themselves (e.g., Burns, Martin, & Collie, 2019; Moeller, Theiler, & Wu, 2018). In this regard, higher performance can be attained by setting specific and challenging goals as two aspects of PBs (Locke, & Latham, 2002).

Another nexus in the present study indicated that there is a negative significant association between students' SF and their evaluation apprehension. In other words, when students have experiences of SF during the process of language learning, they are not concerned with others' evaluations to feel apprehended when performing a task in the presence of others. Due to the fact that affective anticipations (e.g., apprehension) make the educational environments more complex (Miller & Stone, 2009), exploring factors (like SF) that reduce the apprehension seems crucial.

Previous psychological theories supported the negative association between anxiety/apprehension and motivation in an EFL context (e.g., Alhakami & Baker, 2018). Consequently, EFL learners with the experiences of easy flow (as a manifestation of motivation) and challenge (two dimensions of SF) would have less concerns regarding others' perceptions. This negative relation is due to the goal-oriented nature of SF letting students flow in the

language learning process which in turn allows them not to think pessimistically about others' judgments (Dörnyei et al., 2014).

The results also revealed a significant relationship between students' SF and academic buoyancy. This connection implies that when language students have SF experiences they would be more capable of overcoming everyday challenges and setbacks. This finding is in line with previous studies that corroborated the association between student resilience/buoyancy and motivation (Martin, 2002). There are many situations in language classes that can create challenges for the students. The everyday challenges learners face are in direct relation to the challenging aspect of SF. In other words, experiencing high levels of motivation always brings challenges for the individuals. Thus, the more challenges they experience (SF), the more capable they become in dealing with such difficult situations (buoyancy). In a similar vein, an individual who is experiencing high and intense levels of motivation (SF) to achieve a certain goal (PB) may be highly competent to deal with everyday failures and can conquer them. Datu and Yang (2019) have explained this attribution in terms of the direct effects of intrinsic motivation on academic buoyancy.

In addition, this study was concerned with the effect of SF on students' GPA. The results revealed the significant association between the two concepts implying that the more SF students experience, the more success they achieve in the process of language learning. Motivation provides reasons for students to join, engage in, and put effort in learning and achieving in academic contexts. Thus, exploring motivating factors seems crucial to guide learners towards their goals and virtually academic success. The positive role of motivational aspects on learners' success is not a new investigation, and the existing literature has demonstrated that a high level of motivation is generally associated with high levels of both general and EFL academic achievement (Eccles & Wigfield, 2002; Ghanizadeh & Rostami, 2015). Furthermore, according to the flow theory (Csikszentmihalyi, 1997, 2000), when challenging tasks that match students' skills are incorporated into class activities, learners' success and involvement will enhance (Ghanizadeh, Al-Hoorie, & Jahedizadeh, 2020; Schweinle, & Helming, 2011). Flow is a period of deep, intense involvement in activities which are challenging the person physically or intellectually but do not overwhelm the person's level of skill (Jonson & Christensen, 2008). In this regard, as experiences of SF contain both challenging and vision-orientedness aspects, students' academic achievement would be accessible in language classrooms.

The next association was found between students' evaluation apprehension and academic buoyancy. Indeed, higher levels of apprehension predicted lower buoyancy among EFL students. Some students become overwhelmed with everyday challenges. In this case, they would have great amount of stress/apprehension affecting their mental and physical health (Fletcher & Sarkar, 2013). Therefore, low buoyancy can be resulted from high apprehension (Davydov, Stewart, Ritchie, & Chaudieu, 2010). The negative relationship found in this phase of the study is in line with previous research that revealed the same connection between learners' resilience and anxiety (e.g., Moksnes, & Lazarewicz, 2019).

Regarding students' evaluation apprehension and their GPA, a significant and negative relationship was found between the two variables. The more students experience evaluation apprehension, the lower their academic success. Previous studies have shown that high levels of communication/evaluation apprehension predict low GPA (e.g., Cristobal, & Lasaten,

2018). Moreover, the negative link between students' foreign language anxiety and academic performance has been verified (Horwitz, 2010). Some other studies have also investigated the effect of foreign language anxiety on a specific skill, such as reading (Wang, & Li, 2011) and speaking (Cheng et al., 1999).

The last relationship was observed between students' academic buoyancy and their achievement. The results showed that buoyancy comprising four dimensions (sustainability, regularity adaptation, positive personal eligibility, and positive acceptance of academic life) affects students' academic achievement. In other words, if students perceive positive beliefs regarding their personal merits and life, their achievement will be enhanced. Previous studies have also displayed the same findings in which academic self-efficacy is considered as the strongest single predictor of higher education students' academic achievement and performance (e.g., Martin & Marsh, 2008a, 2008b) and should be cultivated to equip students with resilient efficacy beliefs, positive personal attitudes, intellectual tools and intrinsic interests (Bandura, 1997).

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