The impact of language learning strategies and motivation on L2 writers' lexical accuracy in response to WCF

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Abstract

The role individual differences play in developing learners' L2 has received sufficient attention, but only few studies have addressed the relationship between these differences and learners' lexical development. Accordingly, this study investigates the influence of two learner differences, namely language learning strategies (LLS) and motivation on reducing 63 L2 learners' lexical errors revised in response to coded teacher feedback. Data was collected from a pretest essay and a survey about students' motivation to learn. Students received training sessions on how to apply LLS to revise lexical errors in response to coded teacher feedback and filled in a questionnaire about the strategies they used for error correction. After training, students wrote an immediate and delayed post-test essays which were used to monitor any development in their lexical performance. Analysis of students' errors on the three testing sessions revealed that LLS significantly reduced "connotation", "unnecessary", informal, and "general" word errors at different post-tests. Moreover, different factors (feedback method, revision techniques, and sources of revision) influenced students' lexical error revision. Finally, motivation subscales and total scores showed significant associations with the different types of lexical errors at the pretest; however, at the post-test, a higher total score was significantly associated with lower frequency of "collocation" errors.

Introduction

The role that individual differences play in learners' L2 development has been receiving increased research attention from advocates of the student-centered approach to learning. Recent research has demonstrated that individual differences may lead to successful L2 learning (Dörnyei, 2005; Chan & Lam, 2023; Hong & Chien 2023; Kurk, 2021; Lowie & Verspoor, 2019; Pawlak, 2022; Shaofeng, Hiver & Papi, 2022; Söderholm, Jaana Viljaranta, Tuominen, Lappalainen & Holopainen, 2023;

Turker, Seither-Preisler, & Reiterer, 2021) and "minimal differences between learners, even when they go through similar learning experiences, lead to very different learning outcomes" (De Bot and Larsen-Freeman, 2011, p.10). Hence, awareness of the role that individual differences play in student learning is necessary for teachers of L2 writing as it makes them realize that good writing may be attributed not only to the success of a given teaching method, such as teaching students to respond to written corrective feedback (WCF), but also to the influence of students' individual differences. Han and Hyland (2015) examined L2 students' participation in WCF and found that the efficacy of metacognitive and cognitive operations students engage in when revising their errors is "largely subject to individual factors and recommended that teachers understand students' backgrounds and beliefs to improve their engagement with WCF and produce better writing" (p.40). Thus, the significance of individual differences in students' L2 writing is established; however, few research studies have investigated the impact of individual differences on the field of WCF (Bakri, 2015; Rahimi, 2015). The present study addresses this gap. It examines the relationship between two learner differences, language learning strategies (LLS) and motivation, which influence L2 learners' performance (Dörnyei, 2005) on one hand and the effectiveness of WCF on the other hand (Brown, Liu & Nourouzian, 2023; Mawlawi Diab, 2016).

By providing WCF on learners' writing, teachers provide them with the opportunity to notice, reflect on, and revise their errors, thus developing their L2 (Bonilla López, 2020; Lee, 2017). However, the way learners engage with WCF to correct these errors depends on the learners themselves as each learner is an "individual thinker" (Black & William, 2009, p.23). Moreover, L2 learners' uptake of WCF is influenced by the intensity with which they process WCF (Lee, 2017).

To facilitate students' engagement with WCF and processing of language errors, teachers have been training students in the use of LLS. Oxford (1994) has long argued that the conscious and tailored use of LLS is linked to language achievement and a numerous studies have reported the impact of LLS on writing (Charoento, 2017; De Silva & Graham, 2015; Rajasekhar, 2019; Teng & Huang, 2019; Teng & Zhang, 2018; Thomas & Rose, 2019; Pongsukvajchakul, 2021).

Another individual learner factor that may be responsible for successful engagement with WCF is learners' motivation to respond to feedback and correct their errors. Gan (2020) concluded that different L2 motivational constructs result in different feedback experiences for students and that students' "feedback preferences and involvement in feedback processes are mainly mediated by their attitudes towards the immediate learning environment/experience and their intended learning effort" (p.12).

To increase learners' motivation for error correction afforded by WCF, some researchers have recommended using focused feedback, which is feedback on specific

language errors (Bitchener and Knoch, 2010; Ellis, Sheen, Murakami, & Takashima, 2008; Lee, Luo, & Mak, 2021; Mao & Lee, 2020). Of all the language errors students make, lexical errors are perhaps among the most important for teachers to address as they are largely responsible for miscommunication and have been considered a determinant of writing quality (Carrió-Pastor & Mestre-Mestre, 2014; Stringer, 2019). Moreover, lexical errors raise learners' awareness to "the gaps between their lexical knowledge and their communicative needs" (Pilar Augustine Llach, 2017), which is the path towards successful learning (Schmidt, 2001). Lexical errors also alert learners to the need to apply strategies to correct these errors.

Few studies have researched the impact of learner differences on lexical errors (Mawlawi Diab & Awada, 2022; Papi, 2018; Zheng, 2012, 2016) but no study to the knowledge of this researcher has investigated the impact of LLS and motivation on influencing students' willingness to address lexical errors marked by coded WCF. Accordingly, this study examines the impact of LLS and motivation on Lebanese students' response to WCF that addresses their lexical errors. This would help determine whether the influence of LLS and/or motivation reduces the type and frequency of L2 lexical errors. The study takes place in an L2 naturalistic classroom and collects data from real course assignments, which increases its ecological validity and may generate "practical and practitioner knowledge" on how learner differences influence students' lexical error revision and reduction (Yu & Lee, 2015, p.117).

Literature Review
Language Learning Strategies (LLS)
Studies investigating the impact of LLS on reducing lexical errors in writing are scarce, have different research designs, and report different conclusions (ALahmadi & Foltz, 2020; Eyckmans, Boers, and Lindstromberg, 2016; Fan, 2020; Hu and Nassaji, 2014; and Zheng, 2016). ALahmadi and Foltz (2020) investigated the application of vocabulary LLS on developing L2 students' vocabulary size and found that two strategies affected vocabulary knowledge and acquisition, namely reading comprehension and note-taking. Moreover, Eyckmans, Boers, and Lindstromberg (2016) studied the effect of using different strategies to process and recall L2 lexical phrases composed of a verb and a noun phrase. Results revealed that the group that looked for alliterations recalled lexical phrases better than the group that compared the English lexical phrase to its L1 counterpart. Fan (2020) studied the relationship between vocabulary-targeted strategies and students'gain in vocabulary knowledge with reference to proficiency, gender, and discipline. Results point to a link between strategy, gender, discipline and EFL context. Another study (Hu and Nassaji, 2014) investigated L2 students' use of inferential strategies to infer lexical meanings. They concluded that students who noticed their lexical errors and attempted to understand word meanings using context clues were successful learners. On the other hand, Zheng (2016) used four lexical measures (sophistication, diversity, density, use) to determine long-term lexical development (single words and lexical bundles). Results revealed

that learner differences influenced the relationship between the four lexical measures that constitute the complex, dynamic lexical system. Since the use of different strategies in these studies yielded different results, there is a need for more research to monitor the impact of different LLS on learrners' ability to develop their lexical accuracy.

Motivation

Hulstijn (2003) argues that vocabulary learning occurs intentionally through vocabulary lists but also incidentally through class activities. Thus, it could be strongly influenced by individual learner differences, such as motivation (Csizér, Albert, and Piniel, 2021; Papi, 2018). Moreover, SLA researchers have considered motivation as an amount (quantity) of energy responsible for the incentive to embark on an activity, the time spent on this activity, and the effort exerted to accomplish it (Papi, 2018). An example of L2 motivation theories which regard motivation as a quantity of energy is Gardner's (1985) integrative orientation (interest in L2 people and their culture) versus instrumental orientation (pragmatic gains resulting from learning L2). Another model examining motivation as a quantity is Dörnyei's (2005) L2 Motivational Self-system (Ideal Self, Ought-to Self, Learning experience). In this motivational system, one is motivated to learn L2 if the person they consider their ideal speaks that language (Ideal Self); if L2 is one of the attributes they believe they should have (Ought-to Self); and if their learning experience or environment motivates them to learn L2 (Learning experience). Studies investigating the link between motivation and L2 lexical accuracy are few (ALBodakh & Cinkara, 2017; Lee, Ahn &Lee, 2022; Papi, 2018; Zheng, 2012. ALBodakh and Cinkara (2017) investigated the correlation between L2 students' motivation and vocabulary size using a vocabulary test and a motivation questionnaire. Results revealed no correlation between motivation and the size of vocabulary. However, females had better intrinsic and extrinsic motivation scores than males. In contrast, Lee, Ahn & Lee (2022) examined the relation between motivation, vocabulary learning along with size and depth of vocabulary. Findings showed that intrinsic motivation had a higher impact on vocabulary knowledge and strategies for learning vocabulary than extrinsic motivation. On the other hand, Papi (2018) examined students' motivation to learn vocabulary through engaging them in two conditions: a gain task and a loss task and used a questionnaire to determine their motivation orientation. Results demonstrated that students with prevention orientation learned in the loss task significantly more vocabulary; however, there was no vocabulary gain for students with promotion orientation. An earlier study (Zheng, 2012) examined the effect of L2 motivation on students' vocabulary development and found that students tended to use simple words and ignore difficult ones. Moreover, students' vocabulary development was affected by several factors, particularly what they want to do and what they ought to do when using learning resources. Moreover, the shift in students' motivation (ought to do/wish to do) "mediated their exploitations of learning opportunities and impacted their vocabulary development" (p.116).

The Study

The present study examines the relationship between teacher feedback on lexical errors and students' use of LLS to correct these errors. It also investigates the relationship between error revision and lexical errors as well as the impact of motivation on reducing lexical errors. Dörnyei's (2005) L2 Motivational Self-system will be used to analyze and determine any differences in learners' motivation resulting from their engagement in lexical error correction in response to teacher WCF. Using a mixed-method quasi-experimental design with a pretest and two post-tests, this study answers the following research questions:

RQ₁: Do language leaning strategies reduce the frequency and type of lexical errors?
RQ₂: Is there interaction between lexical error type and students' error revision?
RQ₃: Does motivation reduce the frequency and type of lexical errors?

Participants

Participants in this study are Lebanese students aged 18-23, attending four sophomore level ESL writing courses at four universities in Lebanon. Students enrolled in these courses should have scored 111 and above on the Internet-Based TOEFL, 640 or higher on SAT I Evidence-Based Reading and Writing, or 8 or higher on IELTS. The students were taught by four experienced EFL teachers who hold an MA in Teaching English as a Foreign Language. The original student sample included 87 students, but only 59 students accepted to participate in this study, signed the consent form, and participated in all the assignments. The majority of participants (35) were females (59.3%) and the remaining 24 were males (40.7%). Moreover, the majority received financial aid (76.3%) and most came from the School of Arts and Sciences (64.4%) and the School of Business (16.9%).

Method

Before the start of the semester, the researcher trained the four experienced EFL teachers in the coding of lexical errors found in four former student essays. Lexical errors were classified into six types: "collocation", "connotation" "unnecessary", "redundant," "general" and "informal" word errors which were coded as "col.", "con.", "unn.", "red.", "gen.", and "inf." respectively. Error codes "(1) enable learners to understand the nature of the error, and (2) provide learners with opportunities to self-correct, thereby facilitating reflection on partially acquired knowledge of an L2" (Zhang, Chen, Hu, & Ketwan, 2021, p.2). Thus, the above-mentioned lexical codes reflect the reasons why these words are wrong choices in their context. The researcher practiced with the teachers the coding of these lexical errors and discussed the disagreement teachers had in the number and type of errors they had spotted per essay. In few cases, two codes could be used to label an error as in the following example: "The man is a nice fellow"; the word "fellow" was coded "unn." ("unnecessary") by one teacher and "inf." ("informal) by another teacher since both "unnecessary" and "informal" word error codes apply. In this case, it was agreed to label "fellow" as "unn." since it does not add new meaning to the sentence and would

teach students to avoid wordiness. Moreover, to ensure that all students in the four writing classes received the same training, the researcher gave the four teachers several exercises on coded lexical error correction to use with students in the classroom. The researcher also gave the teachers five reading texts on the theme "social media" to discuss in class with the students and asked teachers to assign five argumentative essay topics (mentioned below) for their students to write on in class. These measures (same training exercises, readings, and essay topics) were meant to ensure a uniform writing experience for the students in the four sections.

In the first week of the semester, teachers explained to students the present research study and sought their voluntary consent to participate in it. Next, students wrote a diagnostic essay (pretest) on the following topic: Argue for or against the saying, "Regular use of social media improves a user's language skills". Students also filled at home an electronic questionnaire (Appendix A) about their motivation. Next, the teachers spent three class periods training students in the use of correct, rich lexis. They explained how using correct collocations, connotations, formal" and specific rather than general words result in clear and vivid communication, and how "redundant" and "unnecessary" words make sentences wordy and weak. Teachers also modeled to their students how to code lexical errors which former student had made on their essays and correct them through applying metacognitive, cognitive, social, and compensation strategies (Oxford, 1990). The students worked in pairs and in groups with their teachers to spot and revise the above lexical errors. They also did exercises on lexical errors.

After the first training session, teachers coded the lexical errors, which all students had made on their pretest. Students corrected their lexical errors in class in response to their teacher's WCF. Next, they filled a questionnaire about their experience with error correction (Appendix B). This questionnaire inquired about students' preferred feedback method, their method of error revision, and the sources they used to correct their lexical errors. Students repeated the process of error correction followed by filling the error correction questionnaire after the second essay they wrote in class on the topic "Argue for or against the saying that regular use of social media harms family relations". Finally, students filled that same questionnaire after writing the third essay on the topic "Argue for or against the saying that regular use of social media develops a user's social skills. When training ended, students sat for an immediate post-test, which was another argumentative essay on the topic "Argue for or against the saying that regular use of social media leads to addiction". Towards the end of the semester, students wrote another essay (delayed post-test) on the topic "Argue for or against the saying that regular use of social media develops a user's cultural awareness". These writing post-tests (with no WCF) were used to determine whether students transfer the lexical information they had learnt during training. Between the immediate and delayed post-tests, students carried out their regular course work, which included writing a term paper.

Data Collection

Data was collected from unmarked photocopies of students' pretest, immediate, and delayed post-tests as well as students' responses to a questionnaire on motivation and their error revision questionnaires. The researcher and one of the teachers cooperated to code all students' lexical errors ("collocation" errors, "connotation" errors, "informal" word errors, "redundant" word errors, "unnecessary" word errors, and "general" word errors) made on the three testing sessions (pretest, immediate post-test, delayed post-test). When they disagreed on errors (spotted/coded), they discussed them until they agreed on the number and type of all lexical errors per essay. Percentage of each type of lexical error was calculated for each test. Moreover, the motivation questionnaire responses and students' error revision questionnaire responses were analyzed and tabulated.

Data Analysis

For question 1, "Do language leaning strategies reduce the frequency and type of lexical errors?", data were analyzed using Statistical Package for the Social Sciences (SPSS) version 25.0. A descriptive analysis was conducted to evaluate the sample's characteristics (Table 1). Moreover, for bivariate analysis to determine any changes in students' lexical performance at the immediate and delayed post-tests, paired means of each type of lexical errors were compared using paired sample t-test (Table 2). Cochrane Q test was performed to compare the percentages of students who made each type of error.

For question 2, "Is there interaction between lexical errors and students' error revision", the dependent variables (lexical errors collected from students' essays at the three testing sessions) were classified according to type of error, tabulated, and calculated as percentages. On the other hand, the independent variables were students' socio-demographic characteristics, such as age, gender, major, and financial aid status. Additional independent variables were students' responses to a four-item error revision questionnaire detailed below. Given the small sample size, some of the below variables were dichotomized.

The error revision questionnaire included the following questions and possible answers: Question 1, "Do you revise your lexical errors before submitting your assignment?" had the following possible answers: Never; Rarely; Sometimes; Most of the times; Always. However, the possible answers were dichotomized to "Yes" versus "No" options. Moreover, question 2, "What method of feedback would help you most revise your lexical errors?" had the following possible answers: Underlining; coding and direct method (i.e. provide the correct word). Question 3, "What revision technique do you use when revising your lexical errors?" had the following possible answers: "Restructure"; "Change repeated words"; "Change wrong words"; "Search for repeated words" and "Search for "informal" words". This variable was dichotomized into "Restructure a sentence" vs. "Change a wrong word", which included the other

options: "Change repeated words"; "Change wrong words"; "Search for repeated words," and "Search for "informal" words"). Question 4, "What sources do you use when you do not know how to revise a lexical error?" had the following possible answers: "Ask a student"; "Search online"; "Ask a teacher"; "Restructure" and "Use a dictionary". This variable was also dichotomized as follows: Seek help from teacher/student, which included "Ask a student" and "Ask a teacher") versus "Search myself for a possible replacement" (which included "Search online"; "Restructure" and "Use a dictionary").

Moreover, six MANCOVA models were carried out taking each type of lexical error at the immediate and delayed post-tests as dependent variables and the factors influencing students' error revision as independent variables (see Appendix C). A p-value lower than 0.05 was considered significant.

L2 English Learners' Motivating Behavior Scale

For Q3, "Does motivation reduce the frequency and type of lexical errors?", a new motivation scale titled "L2 English Learners' Motivating Behavior Scale" was developed consisting of 20 items selected from previous studies (Kormos & Csizér, 2014; Shen, Bai, & Xue, 2020) and adapted to suit the Lebanese L2 English-speaking student sample. The adaptations were made through an exploratory factor analysis (McDowell, 2006; Nunnally & Bernstein, 1994) for the following reasons: First, a concept or dimension relevant to the new group may be missing from the tool constructed previously on a different population. This may affect the extent by which the new group may define or perceive the concept differently; thus the original measure may lack content validity for the new group. Another reason is that the terms used may generate a variety of interpretations, and words may be confusing to the new group, especially for non-native English-speaking students whose L1 is Arabic. Furthermore, concerning the process of responding to the questions, evidence has shown that systematic differences may exist across racial/ethnic groups in their response to survey question items (Bachman & O'Malley, 1984). Finally, the study context or mode of administration may differ from the original setting. Any of these reasons may lead to findings that the previously used measures do not meet psychometric criteria in the new group or that the measures demonstrate variance across groups (Gregorich, 2006).

A construct validity test was performed on the adapted" L2 English Learners' Motivating Behavior Scale" using the rotated component matrix technique (Appendix D). Moreover, to ensure the model's adequacy, Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity were calculated. Factors with eigenvalues values larger than one were retained and the scree plot method (Ellis, 2017) was used to determine the number of components to extract. Only items with factor loading larger than 0.4 were considered. Moreover, the internal consistency of the scale was assessed using Cronbach's alpha. Correlations between continuous

variables (motivation scale and subscales scores with the mean of each type of lexical errors) were assessed using the Pearson correlation test. A p-value lower than 0.05 was considered significant.

Results
Results of Q1

Table 1
Socio-demographic Characteristics

Baseline Characteristic	n	%
Gender		
Male	24	40.7%
Female	35	59.3%
Financial Aid		
No	14	23.7%
Yes	45	76.3%
School		
Architecture	1	1.7%
Arts and Science	38	64.4%
Business	10	16.9%
Engineering	3	5.1%
Pharmacy	1	1.7%
Medicine	6	10.2%

Table 2 presents the variations in the of the six types of lexical errors at the pre-test, immediate post-test and delayed post-tests and shows that there was a significant decrease in the means of "informal" word errors and "unnecessary" word errors when comparing student performance on these errors at the three testing sessions.

Table 2
Trend of Variation of the Six Lexical Errors at the Three Testing Sessions

	Pre-test		Immediate Post-Test		Delayed Post-Test		P Value
	n	%	N	%	n	%	
Collocation Errors	60	92.3%	62	95.4%	57	87.2%	0.232
Connotation Errors	8	12.3%	6	9.2%	3	4.6%	0.150
Informal Errors	39	60%	31	47.7%	20	30.8%	0.003*
Redundance Errors	33	50.8%	32	49.2%	35	53.8%	0.865
Unnecessary Words	55	84.6%	50	76.9%	44	67.7%	0.050*
General Errors	22	33.8%	27	41.5%	24	36.9%	0.643

Table 3
Bivariate Analysis: Paired Comparison of Lexical Errors at the 3 Testing Sessions

Lexical Error type	Pre- Test		Immediate Post-Test		Delayed Post-Test		P Value
	Mean	SD	Mean	SD	Mean	SD	
Collocation Errors	1.61	1.44	1.32	1.26			0.061
			1.32	1.26	1.48	1.11	0.337
	1.61	1.44			1.48	1.11	0.501
Connotation Errors	0.03	0.10	0.02	0.09			0.600
			0.02	0.03	0.04	0.03	0.204
	0.03	0.10			0.04	0.03	0.016*
Informal Errors	0.45	0.58	0.02	0.05			<0.001*
			0.02	0.05	0.14	0.39	0.015*
	0.45	0.58			0.14	0.39	<0.001*
Redundance Errors	0.33	0.50	0.24	0.45			0.265
			0.24	0.45	0.27	0.43	0.699
	0.33	0.50			0.27	0.43	0.404
Unnecessary Words	0.87	0.85	0.60	0.64			0.006*
			0.60	0.64	0.48	0.52	0.102
	0.87	0.85			0.48	0.52	<0.001*
General Errors	0.14	0.28	0.15	0.28			0.894
			0.15	0.28	0.005	0.008	<0.001*
	0.14	0.28			0.005	0.008	<0.001*

Table 3 presents the paired comparisons between the pretest and the immediate post-test, the immediate and delayed post-tests as well as the pretest and delayed post-test for the six lexical errors under study. Results showed no significant differences in "collocation" errors and "redundant" word errors from the pretest to the immediate post-test, from the immediate to the delayed post-test as well as from the pretest to the delayed post-test. However, "connotation" errors demonstrated a significant difference only from the pretest to the delayed post-test. "Informal" word errors showed a significant decrease from the pretest to the immediate post-test, from the immediate to the delayed post-test as well as from the pretest to the delayed post-test. There was also significant reduction in "unnecessary" word errors from the pretest to the immediate post-test as well as from the pretest to the delayed post-test. Likewise, "general" word errors showed a significant reduction from the immediate post-test to the delayed post-test and from the pretest to the delayed post-test.

Results of Q2
To answer research Q2: "Is there any interaction between lexical errors and students error revision?", six MANCOVA models were carried out, each examining one type of lexical error as a dependent variable, while revision techniques, sources of revision, and method of teacher feedback were used as covariates along with student's age, gender, and being on financial aid.

Only students who reported that they revise their lexical errors before submitting their assignments were asked about their preferred method of feedback, the technique they use when they revise their lexical errors, and the sources they use when they do not know how to revise a lexical error. There responses were as follows: With respect to error revision, 44.4% of students affirmed that they sometimes revised their errors before submitting the assignment; however, 42.9% mentioned that teacher's coded feedback would help them most revise their lexical errors. With respect to error revision techniques, 33.3% stated that they restructure a sentence that includes a wrong word and 25.4% change the wrong words. Finally, when asked about the sources they use when they do not know how to revise a lexical error, 34.9% said that they ask another student; 19% reported that they ask a teacher; and 19% search online.

Results of the interaction between lexical errors and students' error revision (Appendix C) revealed the following: In model 1 examining "collocation" errors, a younger student (Beta=-0.374) was significantly associated with higher frequency of "collocation" errors at the immediate post-test. In contrast, the method of teacher feedback (coding (Beta= 1.168) vs. direct feedback method) was significantly associated with higher level of "collocation" errors at the delayed post-test. In model 2 examining "connotation" errors, no significant association appeared at the immediate and delayed post-tests. In model 3 examining formal errors, the method of teacher feedback (coding (Beta= 0.036) and underlining (Beta=0.038) vs. direct feedback method) was associated with significantly higher level of "informal" errors at the immediate post-test. No significant association appeared at the delayed post-test. In model 4 examining redundancy errors, no significant association appeared at the immediate post-test. However, "seeking help from teacher/student" vs. "searching myself for a possible error replacement" (Beta= -0.316) was associated with lower frequency of redundancy errors at the delayed post-test. In model 5 examining "unnecessary" word errors, the method of teacher feedback ("Underlining" (Beta= 0.669) and "Coding" (Beta= 0.832) vs. "Direct feedback method") were associated with higher frequency of "unnecessary" word errors at the immediate post-test, while "Restructure a sentence" vs. "Change a wrong word" (Beta= -0.385) was associated with fewer frequency of "informal" word errors at the immediate post-test. In addition, the method of teacher feedback ("Underlining" (Beta= 0.481) and "Coding" (Beta= 0.451) vs. direct feedback method along with being a Female (Beta= 0.328) vs. a Male were associated with higher frequency of "unnecessary" word errors at the delayed post-test. In model 6 examining "general" word errors, being on financial aid vs. not being on financial aid (Beta= -0.280) was associated with a lower frequency of "general" word errors at the immediate post-test. In contrast, the method of teacher feedback ("Underlining" vs. "Direct feedback method" (Beta= 0.007)) was associated with higher frequency of "general" word errors at the delayed post-test.

Results of Q3

To address Q3, "Do motivational factors reduce the frequency and type of lexical errors?", a factor analysis using the rotated component matrix technique was used to test the validity of the "L2 English Learners' Motivating Behavior Scale" constructs and confirm the adequacy of the model. All scale items could be extracted from the list; no item was removed as none over-correlated with each other (r > 0.9), had a low loading on factors (< 0.4) or a low communality (< 0.4) except for two items from the original tool. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.796 and Bartlett's test of sphericity was significant (p<0.001). The total Cronbach alpha was 0.822. (Table 4).

The scale yielded 5 factors with the first explaining 25.34% of the total variance, the second 12.84%, the third 8.14%, the fourth 5.77%, the fifth 5.13%. The total variance explained was 57.20%. Factor 1 covered "Language learning ability": "I know how to write good English"; "I feel confident when writing in English"; "I can watch movies in English"; "I find it easy to improve my English language"; "I speak English with my friends"; "I get good grades in my English courses". Cronbach alpha= 0.779. Factor 2 is about "Motivated language learning": "It is important to write well in English"; "I will be using English writing skills at work"; "It is important to learn another language"; "I will get a good job because of my language skills"; "It is important to get high grades in English courses". Cronbach alpha= 0.709. Factor 3 explained "Autonomous language learning": "I use websites at home to learn English"; "I can evaluate my progress in learning English"; "Studying English is important to learn a new culture"; "I follow a plan when studying". Cronbach alpha= 0.618. Factor 4 focused on "Independent language learning": "I am an independent learner"; "I use the techniques that help me learn the most"; "I can edit my own English assignments." Cronbach alpha= 0.613. Factor 5 is about "self-confidence in language learning": "I will be able to develop my writing skills by the end of the semester"; "I know how to study for English class". Cronbach alpha= 0.636.

Table 4
Pre-Post Comparison of the "L2 English Learners' Motivating Behavior Scale" Constructed Factors

	Pre-Test		Post-Test		P Value
	Mean	SD	Mean	SD	
Total Scale	76.33	8.46	82.33	10.28	<0.001*
Language Learning Ability	25.53	3.30	25.58	3.14	0.909
Motivated Language Learning	21.79	2.31	22.09	2.78	0.340
Autonomous Language Learning	13.67	3.10	14.44	3.19	0.077
Independent Language Learning	11.58	2.10	11.70	2.34	0.747
Self-Confidence in Language Learning	7.74	1.48	8.51	1.56	<0.001*

*Significant value

Correlation of Motivation and Lexical Errors

At the pretest level, motivation subscales and total score showed significant associations with the different types of lexical errors as follows: higher score on

language learning ability was significantly associated with higher frequency of "collocation" errors. A higher score on autonomous language learning was significantly correlated with higher frequency of "informal" word errors. A higher score on independent language learning was significantly correlated with higher frequency of redundance errors. A higher score on motivated language learning and total score were significantly associated with higher frequency of total errors. However, the occurrence of "connotation" word errors, "unnecessary" word errors and "general" word errors showed no significant association with the motivation construct (Table 5). In contrast, at the post-test, a higher total score was significantly associated with lower frequency of "collocation" errors. No other significant association was found with the other types of lexical errors (Table 6).

Table 5

Correlations of the Type of Lexical Errors with Motivation Construct at Pretest Level

	Col		Con		Inf		Red		Unn		Gen		Tot	
	r	P value	r	P value	R	P value	R	P value	R	P value	r	P value	r	P value
Language Learning Ability	0.347	0.007*	0.217	0.099	0.069	0.604	0.138	0.290	0.104	0.432	-0.097	0.465	0.193	0.144
Motivated Language Learning	0.149	0.259	0.072	0.589	-0.004	0.975	0.236	0.072	0.255	0.052	0.177	0.179	0.306	0.018*
Autonomous Language Learning	0.077	0.563	0.098	0.461	0.265	0.043*	0.062	0.641	0.112	0.400	0.086	0.518	0.172	0.192
Independent Language Learning	0.122	0.357	0.240	0.067	0.113	0.396	0.268	0.040*	-0.001	0.992	0.105	0.428	0.109	0.412
Self Confidence in Language Learning	0.205	0.119	0.122	0.357	0.188	0.155	-0.002	0.988	0.105	0.430	-0.003	0.983	0.207	0.116
Total Score	0.250	0.056	0.200	0.128	0.193	0.143	0.175	0.186	0.158	0.229	0.068	0.609	0.285	0.029*

*Significant value

Abbreviations: collocation errors (col); connotation errors (con); informal errors (inf); redundance errors (red); unnecessary errors (unn); general errors (gen); total errors (tot)

Table 6
Correlations of the Type of Lexical Errors with Motivation Construct at Delayed Post-Test Level

	Col		Con		Inf		Red		Unn		Gen		Tot	
	r	P value	r	P value	R	P value	r	P value	r	P value	R	P value	r	P value
Language Learning Ability	-0.062	0.086	0.072	0.642	0.125	0.419	0.223	0.145	-0.087	0.573	-0.050	0.746	0.017	0.915
Motivated Language Learning	-0.291	0.055	0.164	0.289	-0.048	0.756	0.108	0.485	0.123	0.429	0.269	0.077	0.080	0.605
Autonomous Language Learning	-0.121	0.433	0.127	0.411	0.124	0.423	0.236	0.123	0.041	0.790	0.127	0.412	0.073	0.638
Independent Language Learning	-0.287	0.058	0.020	0.899	0.140	0.365	0.097	0.533	-0.066	0.672	0.068	0.662	0.019	0.905
Self Confidence in Language Learning	-0.251	0.101	0.147	0.340	0.171	0.268	0.168	0.276	0.078	0.614	0.258	0.093	0.210	0.171
Total Score	-0.300	0.045*	0.133	0.390	0.122	0.431	0.219	0.153	0.017	0.915	0.152	0.326	0.086	0.580

*Significant Value

Abbreviations: collocation errors (col); connotation errors (con); informal errors (inf); redundance errors (red); unnecessary errors (unn); general errors (gen); total errors (tot)

Discussion

With respect to the results of Q.1, "Do language leaning strategies reduce the frequency and type of lexical errors?", Table 3 shows that students significantly reduced their "informal" word errors from pretest to immediate post-test, from pretest to delayed post-test and from immediate post-test to delayed post-test. Moreover, 'unnecessary" word errors were also significantly reduced from pretest to the immediate post-test and from pretest to delayed post-test. Likewise, "general" word errors showed significant reduction from the immediate post-test to delayed post-test and from pretest to the delayed post-test. Finally, "connotation" word errors were significantly reduced from the pretest to the delayed post-test. The above significant results indicate that students seem to have benefitted from their training in the use of academic lexis. They were able to monitor their word choice and decide for themselves when a word was considered wrong as per their training in academic writing. They were able to apply LLS (remember the different codes, their meaning, and how each code may be addressed) in order to revise and replace the words they consider wrong, even without receiving any external feedback. It is also possible that the increased writing practice (without TCF) between the two post-tests, such as writing the term paper which was part of regular course work but not part of this study, had led students to reduce lexical errors. In fact, Kormos (2012) reports that Manchón (2011) and Williams (2012) consider "L2 writing … conducive to second language development, because it helps learners to notice and internalize new linguistic knowledge, provides opportunities, and thereby promotes automatization, knowledge consolidation, and hypothesis testing" (p. 392). However, another possible explanation could be avoidance of these errors through restructuring (see discussion of question 2 below). This may be the case with "connotation" errors which are generally difficult to replace, so students may have opted to rewrite the sentences including such words to avoid looking for alternatives On the other hand, "redundant" word errors were not significantly reduced at any post-test. Neither were "collocation" errors. With respect to redundant word errors, it could be that the effort students exerted in monitoring their lexis depleted their concentration powers, so they did not notice these errors to correct them. Zheng (2016) argues that "at a less advanced stage, the multidimensional lexical system needs to mobilize more resources in order to develop, which may in turn intensify the competition for available resources between the subsystems" (p.51). As for "collocation" errors, students in general find them difficult to correct as this requires a rich knowledge of vocabulary. This agrees with Zheng's (2012) finding that students tended to recycle few simple words and neglected difficult academic words when producing L2 vocabulary.

With respect to question 2, "Is there interaction between lexical errors and students' error revision?", in model 1, younger students had significantly more "collocation" errors at the immediate post-test, while at the delayed post-test students whose

preferred teacher feedback (TF) is coding rather than direct feedback had significantly more "collocation" errors than students who preferred direct TF. This is an expected result as collocation errors are generally difficult to replace (Hartshorn and Evans (2015; Mawlawi Diab & Awada, 2022). Moreover, younger students generally have less writing experience compared to older ones, so the collocations they may have learned during their training early in the semester could have been forgotten at the delayed post-test. In model 3, learners whose preferred TF methods are coding and underlining made significantly more "informal" word errors at the immediate post-test than those who preferred the direct feedback method. This finding may be due to the fact that some "informal" word errors, such as phrasal verbs are difficult to notice since they are used to encountering them in some formal writing, but not in academic writing. In contrast, in model 4, students who preferred to seek help from a teacher or a student, rather than search themselves for ways to revise their lexical errors had significantly fewer redundant word errors at the delayed post-test. This result may indicate that these learners may have had a positive experience with teacher feedback during their training as well as with peer feedback when they requested it, thus their preference for such feedback. These results also show that students have little confidence in their lexical repertoire, which makes them prefer to seek teacher or peer's help. In model 5, students who preferred to restructure a sentence rather than change a wrong word had significantly fewer "unnecessary" word errors at the immediate post-test. These students may have understood what makes a word unnecessary and thus did not include them in their writing. An alternative explanation could be that students may be steering away from using words whose meaning they were not certain of (Mawlawi Diab, 2016). In contrast, students whose TF preference is for underlining and coding rather than direct correction were associated with significantly higher frequency of "unnecessary" word errors at the immediate post-test. Moreover, students whose preferred TF methods are coding and underlining compared to direct TF and who were females had significantly higher frequency of "unnecessary" word errors at the delayed post-test. This finding may be interpreted by females' tendency to write more than males which could result in a higher percentage of lexical errors. Finally, in model 6, students who were on financial aid had significantly lower frequency of general errors at the immediate post-test. This is a rather expected finding as students on financial aid usually cannot afford to pay their full tuition, so they work hard to get very high grades and avoid losing their financial aid. On the other hand, learners whose TF preference is for underlining rather than direct correction were associated with significantly higher frequency of general errors. It is worth mentioning that learners who considered codes and/or underlining as their preferred method(s) of feedback ended up making more lexical errors, ("collocation", "informal", "unnecessary" and "general" word errors) on the immediate and /or delayed posttest (s).

This may shed light on learners' false perceptions of their writing abilities. Accordingly, "Taking full advantage of the nature of the feedback offered in addressing

a particular target structure is one of the many issues awaiting further empirical research. Both the problematicity and the learnability of the target structure, based on the participants' L2 proficiency, need to be taken into account when selecting target structures" (Reinders & Mohebbi, 2018, p.4).

In the case of Q3. "Does motivation reduce the frequency and type of lexical errors?", the five motivational factors at the pretest may have provided the learners with a false perception of having good linguistic abilities (language learning ability) and encouraged them to hold the belief that they are capable of taking part in their own learning (motivated language learning). Moreover, the positive impression learners hold about their English language skills could be a result of being motivated to become autonomous and independent language learners. As a result, students may have been prompted to experiment with lexis and often forgetting about the rules of academic English, thus leading to higher frequency of lexical errors.

In contrast, at the delayed post-test, students managed to reduce "collocation" errors despite the difficulty of these errors. This result may be due to the effort students exerted to use correct collocations and/or to the regular writing practice students had between the pretest and the delayed post-test. Moreover, restructuring and avoidance of experimentation with words they are not sure of may be another explanation for reduced collocation errors.

The adapted "L2 English Learners' Motivating Behavior Scale" showed high construct validity, and internal consistency. It led to the differentiation between different aspects constituting learning motivation: language learning ability, motivated language learning, autonomous language learning, independent language learning and self-confidence in language learning. Thus, this scale could be a useful tool to assess learning motivation aspects in English class.

Conclusion

This study examined the influence of two learner differences (LLS, and motivation) on reducing lexical errors in new essays. Results revealed that LLS had a positive influence on developing lexical accuracy as their use significantly reduced "informal" word errors at the immediate and delayed post-tests. LLS also significantly reduced "unnecessary" word errors from pretest to the immediate post-test and from the immediate to the delayed post-test. Likewise, "general" word errors showed significant reduction from the immediate post-test to the delayed post-test and from the pretest to the delayed post-test. Also, "connotation" word errors were significantly reduced from the pretest to the delayed post-test. Analysis of students' errors on the three testing sessions revealed that LLS significantly reduced "connotation", "informal", "unnecessary", and "general" word errors at different post-tests. Moreover, different factors (feedback method, revision techniques, and sources of revision) influenced students' lexical error revision. Finally, motivation subscales and total scores showed

significant associations with the different types of lexical errors at the pretest; however, at the post-test, a higher total score was significantly associated with lower frequency of "collocation" errors.

The present study suffers from a few limitations. To start with, its sample size is small. Moreover, the fact that all the participants are Lebanese limits the generalizability of its results to a different cultural group. Second, the development of "L2 English Learners' Motivating Behavior Scale" is still in progress and many aspects of its validation require more attention to define the constructs and enhance internal consistency. Given the low sample size, and the sampling technique (convenience sampling from English class students), only exploratory analyses could be conducted. Third, a large and random sample is required to validate self-administered questionnaires. Fourth, to confirm the validity of the constructs, a confirmatory principal components analysis is necessary. Future research could involve a longitudinal study that address other learner differences (different cultural backgrounds and/or socio-economic status) to determine their effect on developing students' L2 lexis.

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Appendix A
L2 English Learners' Motivating Behavior Scale

	Language Learning Ability
1	I know how to write good English
2	I feel confident when writing in English.
3	I can watch movies in English.
4	I find it easy to improve my English language
5	I speak English with my friends
6	I get good grades in my English courses
	Motivated Language Learning
7	It is important to write well in English
8	I will be using English writing skills at work
9	It is important to learn another language.
10	I will get a good job because of my language skills
11	It is important to get high grades in English courses
	Autonomous Language Learning
12	I use websites at home to learn English
13	I can evaluate my progress in learning English
14	Studying English is important to learn a new culture
15	I follow a plan when studying
	Independent Language Learning
16	I am an independent learner
17	I use the techniques that help me learn the most
18	I can edit my own English assignments
	Self-confidence in Language Learning
19	I will be able to develop my writing skills by the end of the semester
20	I know how to study for English class.

Appendix B
Questionnaire on Students' Error Correction

What Factors Influence Students' Error Revision?	N	%
Do you revise your lexical errors before submitting your assignment		
No	8	12.7%
Sometimes	28	44.4%
Always	27	42.9%
What method of feedback would help you most revise your lexical errors?		
None	8	12.7%
Coded	28	44.4%
Underlining	11	25.4%
Direct	16	25.4%
What revision technique do you use when revising your lexical errors?		
None	8	12.7%
Restructure	21	33.3%

Change repeated words	2	3.2%
Change wrong words	18	25.4%
Search for repeated words	6	9.5%
Search for informal words	8	12.7%
What sources do you use when you do not know how to revise a lexical error?		
None	8	12.7%
Ask a student	22	34.9%
Search online	12	19%
Ask a teacher	12	19%
Restructure	3	4.8%
Use a dictionary	6	9.5%

Appendix C
Factors influencing students' lexical error revision

Model 1 MANCOVA Taking Collocation Type of Lexical Errors (Immediate vs. Delayed Post–Test) as Dependent Variables

Test	Parameter	Beta	95%CI	P value
Immediate Post-test	What revision technique do you use when revising your lexical errors?			
	Restructure a sentence vs. Change a wrong word	-0.578	-1.449; 0.293	0.188
	What sources do you use when you do not know how to revise a lexical error?			
	Seek help from teacher/student vs. Search myself for a possible replacement	-0.511	-1.347; 0.325	0.224
	What method of feedback would help you most revise your lexical errors?			
	Underlining vs. direct method	0.836	-0.222; 1.895	0.118
	Coding vs. direct method	0.481	-0.425; 1.387	0.290
	Age of the student (years)	-0.374	-0.713; -0.036	0.031*
	Gender (Female vs. Male)	-0.263	-1.051; 0.524	0.504
	Being on financial aid (yes vs. no)	0.658	-0.290; 1.605	0.169
Delayed Post-test	What revision technique do you use when revising your lexical errors?			
	Restructure a sentence vs. Change a wrong word	-0.135	-0.807; 0.536	0.686
	What sources do you use when you do not know how to revise a lexical error?			
	Seek help from teacher/student vs. Search myself for a possible replacement	-0.492	-1.136; 0.152	0.131
	What method of feedback would help you most revise your lexical errors?			
	Underlining vs. direct method	0.784	-0.022; 1.599	0.059
	Coding vs. direct method	1.168	0.470; 1.867	0.002*
	Age of the student (years)	-0.047	-0.306; 0.214	0.719
	Gender (Female vs. Male)	-0.225	-0.832; 0.382	0.460
	Being on financial aid (yes vs. no)	0.521	-0.210; 1.251	0.158
*Significant result				

Model 2 MANCOVA Taking Connotation Type of Lexical Errors (Immediate vs. Delayed Post–Test) as Dependent Variables

Test	Parameter	Beta	95%CI	P value
Immediate post-test	What revision technique do you use when revising your lexical errors?			
	Restructure a sentence vs. Change a wrong word	0.020	-0.048; 0.089	0.550

	What sources do you use when you do not know how to revise a lexical error? Seek help from teacher/student vs. Search myself for a possible replacement	-0.033	-0.099; 0.033	0.316
	What method of feedback would help you most revise your lexical errors?			
	Underlining vs. direct method	0.042	-0.041; 0.125	0.314
	Coding vs. direct method	0.017	-0.054; 0.088	0.636
	Age of the student (years)	-0.013	-0.040; 0.013	0.316
	Gender (Female vs. Male)	-0.032	-0.094; 0.030	0.298
Delayed post-test	Being on financial aid (yes vs. no)	0.037	-0.037; 0.112	0.318
	What revision technique do you use when revising your lexical errors? Restructure a sentence vs. Change a wrong word	0.009	-0.014; 0.032	0.439
	What sources do you use when you do not know how to revise a lexical error? Seek help from teacher/student vs. Search myself for a possible replacement	-0.009	-0.031; 0.014	0.445
	What method of feedback would help you most revise your lexical errors?			
	Underlining vs. direct method	-0.023	-0.051; 0.006	0.114
	Coding vs. direct method	0.001	-0.023; 0.025	0.939
	Age of the student (years)	-0.003	-0.012; 0.006	0.520
	Gender (Female vs. Male)	-0.010	-0.031; 0.012	0.367
	Being on financial aid (yes vs. no)	-0.005	-0.030; 0.021	0.715
*Significant result				

Model 3 MANCOVA Taking Informal Type of Lexical Errors (Immediate vs. Delayed Post–Test) as Dependent Variables

Test	Parameter	Beta	95%CI	P value
Immediate post-test	What revision technique do you use when revising your lexical errors? Restructure a sentence vs. Change a wrong word	-0.016	-0.044; 0.012	0.266
	What sources do you use when you do not know how to revise a lexical error? Seek help from teacher/student vs. Search myself for a possible replacement	-0.001	-0.028; 0.026	0.929
	What method of feedback would help you most revise your lexical errors?			
	Underlining vs. direct method	0.038	0.004; 0.072	0.028*
	Coding vs. direct method	0.036	0.006; 0.065	0.018*
	Age of the student (years)	0.007	-0.004; 0.017	0.231
	Gender (Female vs. Male)	-0.009	-0.035; 0.019	0.458
	Being on financial aid (yes vs. no)	-0.014	-0.045; 0.016	0.345

Delayed post-test	What revision technique do you use when revising your lexical errors?			
	Restructure a sentence vs. Change a wrong word	0.104	-0.094; 0.302	0.295
	What sources do you use when you do not know how to revise a lexical error?			
	Seek help from teacher/student vs. Search myself for a possible replacement	-0.056	-0.246; 0.134	0.555
	What method of feedback would help you most revise your lexical errors?			
	Underlining vs. direct method	-0.076	-0.316; 0.165	0.529
	Coding vs. direct method	-0.055	-0.260; 0.151	0.595
	Age of the student (years)	-0.013	-0.090; 0.063	0.721
	Gender (Female vs. Male)	0.039	-0.140; 0.218	0.660
	Being on financial aid (yes vs. no)	0.048	-0.167; 0.264	0.652
*Significant result				

Model 4 MANCOVA Taking Redundance Type of Lexical Errors (Immediate vs. Delayed Post–Test) as Dependent Variables

Test	Parameter	Beta	95%CI	P value
Immediate post-test	What revision technique do you use when revising your lexical errors?			
	Restructure a sentence vs. Change a wrong word	-0.142	-0.482; 0.196	0.406
	What sources do you use when you do not know how to revise a lexical error?			
	Seek help from teacher/student vs. Search myself for a possible replacement	0.106	-0.221; 0.432	0.517
	What method of feedback would help you most revise your lexical errors?			
	Underlining vs. direct method	0.234	-0.179; 0.648	0.260
	Coding vs. direct method	0.087	-0.267; 0.441	0.624
	Age of the student (years)	0.019	-0.114; 0.151	0.775
	Gender (Female vs. Male)	0.053	-0.255; 0.361	0.730
	Being on financial aid (yes vs. no)	0.257	-0.113; 0.627	0.169
Delayed post-test	What revision technique do you use when revising your lexical errors?			
	Restructure a sentence vs. Change a wrong word	0.165	-0.150; 0.479	0.297
	What sources do you use when you do not know how to revise a lexical error?			
	Seek help from teacher/student vs. Search myself for a possible replacement	-0.316	-0.617; -0.015	0.043*
	What method of feedback would help you most revise your lexical errors?			
	Underlining vs. direct method	0.176	-0.205; 0.559	0.358
	Coding vs. direct method	0.045	-0.282; 0.372	0.783
	Age of the student (years)	-0.036	-0.158; 0.086	0.554
	Gender (Female vs. Male)	-0.102	-0.387; 0.182	0.471
	Being on financial aid (yes vs. no)	-0.134	-0.476; 0.207	0.432
*Significant result				

Model 5 MANCOVA Taking Unnecessary Type of Lexical Errors (Immediate vs. Delayed Post–Test) as Dependent Variables

Test	Parameter	Beta	95%CI	P value
Immediate post-test	What revision technique do you use when revising your lexical errors?			
	Restructure a sentence vs. Change a wrong word	-0.385	-0.764; -0.006	0.047*
	What sources do you use when you do not know how to revise a lexical error?			
	Seek help from teacher/student vs. Search myself for a possible replacement	-0.272	-0.635; 0.092	0.139
	What method of feedback would help you most revise your lexical errors?			
	Underlining vs. direct method	0.669	0.208; 1.129	0.005*
	Coding vs. direct method	0.832	0.438; 1.227	<0.001*
	Age of the student (years)	-0.042	-0.190; 0.106	0.569
	Gender (Female vs. Male)	-0.303	-0.646; 0.840	0.082
	Being on financial aid (yes vs. no)	0.122	-0.291; 0.534	0.554
Delayed post-test	What revision technique do you use when revising your lexical errors?			
	Restructure a sentence vs. Change a wrong word	-0.227	-0.568; 0.113	0.185
	What sources do you use when you do not know how to revise a lexical error?			
	Seek help from teacher/student vs. Search myself for a possible replacement	-0.142	-0.469; 0.185	0.385
	What method of feedback would help you most revise your lexical errors?			
	Underlining vs. direct method	0.481	0.067; 0.895	0.024*
	Coding vs. direct method	0.451	0.096; 0.805	0.014*
	Age of the student (years)	-0.014	-0.146; 0.119	0.837
	Gender (Female vs. Male)	0.328	0.020; 0.636	0.038*
	Being on financial aid (yes vs. no)	0.218	-0.152; 0.589	0.241
*Significant result				

Model 6 MANCOVA Taking General Type of Lexical Errors (Immediate vs. Delayed Post–Test) as Dependent Variables

Test	Parameter	Beta	95%CI	P value
Immediate post-test	What revision technique do you use when revising your lexical errors?			
	Restructure a sentence vs. Change a wrong word	0.052	-0.139; 0.243	0.583
	What sources do you use when you do not know how to revise a lexical error?			
	Seek help from teacher/student vs. Search myself for a possible replacement	-0.014	-0.197; 0.169	0.881
	What method of feedback would help you most revise your lexical errors?			
	Underlining vs. direct method	0.151	-0.081; 0.383	0.197
	Coding vs. direct method	0.134	-0.065; 0.337	0.181
	Age of the student (years)	-0.058	-0.130; 0.018	0.137
	Gender (Female vs. Male)	0.090	-0.083; 0.262	0.300
	Being on financial aid (yes vs. no)	-0.280	-0.487; -0.072	0.009*
Delayed post-test	What revision technique do you use when revising your lexical errors?			
	Restructure a sentence vs. Change a wrong word	-0.004	-0.009; 0.002	0.185
	What sources do you use when you do not know how to revise a lexical error?			
	Seek help from teacher/student vs. Search myself for a possible replacement	0.001	-0.005; 0.005	0.950
	What method of feedback would help you most revise your lexical errors?			
	Underlining vs. direct method	0.007	0.001; 0.013	0.043*
	Coding vs. direct method	0.005	0.001; 0.011	0.065
	Age of the student (years)	-0.002	-0.004; 0.001	0.077
	Gender (Female vs. Male)	-0.003	-0.008; 0.002	0.188
	Being on financial aid (yes vs. no)	0.004	-0.002; 0.010	0.146
*Significant result				

Appendix D
L2 English Learners' Motivating Behavior Scale

Rotated Component Matrix of the Learning Motivation Construct	Item	Factor					H2 Communalities
		1	2	3	4	5	
I know how to write good English	25	0.870					0.714
I feel confident when writing in English.	28	0.787					0.619
I can watch movies in English.	24	0.660					0.418
I find it easy to improve my English language	16	0.540					0.513
I speak English with my friends	23	0.524					0.503
I get good grades in my English courses	27	0.499					0.637
It is important to write well in English	12		0.720				0.556
I will be using English writing skills at work	8		0.642				0.555
It is important to learn another language.	10		0.617				0.521
I will get a good job because of my language skills	9		0.606				0.536
It is important to get high grades in English courses	11		0.548				0.573
I use websites at home to learn English	19			0.670			0.537
I can evaluate my progress in learning English	20			0.663			0.616
Studying English is important to learn a new culture	13			0.542			0.529
I follow a plan when studying	18			0.468			0.412
I am an independent learner	17				0.681		0.509
I use the techniques that help me learn the most	22				0.667		0.660
I can edit my own English assignments	21				0.612		0.630
I will be able to develop my writing skills by the end of the semester	7					0.787	0.741
I know how to study for English class.	26					0.487	0.662

Total variance explained	57.20%
Cronbach alpha =0.822	
Kaiser-Meyer Olkin (KMO)= 0.796	
Bartlet's test of sphericity <0.001	