

LANGUAGE USE AND LEXICAL ATTRITION: DO THEY CHANGE OVER TIME?

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ABSTRACT: *The issue of language use has already been assumed to be an important predicting factor for language attrition. Intuitively, it makes perfect sense that second or foreign language learners who make little use of a language experience more attrition than ones who use the language more frequently. Therefore, the availability or the lack of opportunities to use the language could influence the amount of language attrition, let alone an essential variable like vocabulary knowledge. Such language use factors must be considered in any model concerned with explaining FL attrition, and the primary purpose of the present study is to provide evidence about this. It attempts to examine a population of college acquired English among college leavers who vary in the extent to which they have been able to maintain contact with the target language over time. The findings demonstrated that participants rated many of their patterns of contact with English and vocabulary in particular somewhat lower after the end of formal instruction. Furthermore, the most powerful predictor appears to be the use of the internet which is strongly linked to better retention of productive vocabulary test over time.*

KEYWORDS: Language Attrition, Vocabulary, English, Literature, Language

INTRODUCTION

As the area of second language acquisition (SLA) emerges as a discipline in its own right, numerous subfields take shape, providing new avenues for researchers and scholars. Studies of the psycholinguistic and memory mechanisms determining which components, and how much of a foreign/second language, can be retained by learners over time are forming the basis of a new subfield known as foreign/second language attrition. In fact, the field of foreign/second language attrition has only a brief history as it is a relatively young one. After decades of neglect, Foreign Language Attrition (FLA) has become in the past 25 years or so an object of considerable interest among researchers (see, among others: Alharthi, 2012; Bahrick, 1984; Cohen, 1986, 1989; de Bot & Weltens, 1995; Hansen, 1999; Lambert & Freed, 1982; Weltens, 1987, 1989; Weltens & Grendel, 1993). Despite the increase in attention given to the decline of language skills, the number of relevant studies specifically addressing cases of FLA is still relatively low. As Schmid and Mehotcheva (2012, p. 3) noted “Empirical studies exploring L2/FL attrition remain limited, as does the knowledge and understanding of the phenomenon”. Initially the notion of language attrition attracted the attention of language scholars in the late 1970s and the inaugural conference on language attrition skills, held at the University of Pennsylvania in May 1980, was a turning point for investigations in this field. Prior to that, attention was paid only to pathological language loss associated with brain lesions resulting in aphasia or to processes connected with dementia (Weltens, 1987). Language attrition involves

the loss of various language components and skills, including vocabulary, grammar, syntax and phonology, reading, writing, listening and speaking, the order in which they are lost, the rates at which they are lost, the variables affecting L2 loss and the amount and timing of attrition. In the area of FL, the growth of vocabulary has been specifically focused on as a subject of scientific inquiry for a long time and as every language learner knows, vocabulary also seems to be very easily forgotten. A point has been reached, however, where there is a need for more clarity and standardization in describing key processes and how quickly or slowly vocabulary is forgotten. Hence our study focuses on this.

Reviews of the literature in the language attrition field were published by Oxford (1982a, 1982b), Weltens (1987) and Bardovi-Harlig and Stringer (2010).

In her article “Research on language loss” Oxford (1982a) focused on studies carried out with normal and healthy individuals, i.e., focusing on the decline of their FL skills when they are not used rather than language loss via aphasia or other physical causes. Moreover, Oxford discussed a number of technical issues affecting research on language skill attrition, including research designs, predictor and criterion variables, reliability and validity, all of which should be taken into account to obtain more meaningful and comparable data. Weltens (1987) provides an elaborate review of FLA. He discussed in some detail studies that have investigated L2A and FLA in relation to three categories of variables controlling the process of language attrition: the acquisition process, the attrition period and learner’s characteristics.

Most recently Bardovi-Harlig and Stringer (2010) presented the most comprehensive overview of research of L2A and FLA. The review addresses the failures of the earlier literature on attrition from a methodological perspective, prompted by the fragmentary and contradictory nature of findings in the field. The ultimate purpose and contribution of this article is the authors’ detailed explanation of selecting and defining predictor variables, i.e., linguistic factors. These include a description of language systems, literacy and receptive and productive skills, extra-linguistics factors including age, level of peak attainment, motivation and attitude, duration and nature of input and contact with language, to name but a few that are involved in the process of attrition. Throughout this account, the authors analyse step-by-step the problems involved in the construction of an appropriate research design, namely, a longitudinal approach able to get a genuine sense of natural L2A and FLA where baseline data has to be established for given individuals, and where reliable test tools suitable for the measurement of skill changes need to be devised, and where the selection of the sample population is of some importance. Bardovi-Harlig and Stringer’s (2010) most valuable contributions to the field are their detailed explanations of all the methodological problems that confront L2/ FL attrition researchers.

Further fundamental concerns have been raised by attrition researchers (e.g., Bardovi-Harlig & Stringer, 2010; Köpke, 2007; Olshtain, 1989; Schmid & de Bot, 2004; Schmid & Dusseldorp, 2010; Weltens & Cohen, 1989; Weltens & Grendel, 1993) concerning the variety of factors suggested as influences on the emergence of L1 and L2A and FLA in general and of vocabulary in particular. For instance, extra-linguistic factors have traditionally been assumed to be relevant for research on FL vocabulary attrition. These are related to the effect the amount of contact the individual has with the FL on attrition at the lexical level, e.g., Bahricks’s (1984) subjects’ rehearsal of the FL, whether little or none, did not account for longer retention, while studies looking at a range from three months to fifty years of ceasing formal training showed significant attrition in learners’ lexicon (Bahricks, 1984; Bierling, 1991; Morshedien, 2008).

While many investigations in the domain of FL vocabulary attrition and maintenance have been undertaken (e.g. Abbasian & Khajavi, 2010; Alharthi, 2013, 2014a, 2014b, 2015a, 2015b, Cohen, 1989, Hansen, 2011; Weltens & Grendel, 1993), no study to date has attempted to examine the relationship of the existing vocabulary contact with the amount of attrition in FL vocabulary, and certainly not done so in the Saudi context. Notable gaps therefore remain in the field of FL lexical attrition and retention, and it is logical that researchers begin to explore extra-linguistics variables in external and social situations which may shed light on various dimensions of post-instructional competence, particularly that are believed to affect maintenance or attrition of vocabulary knowledge. The present study will try to fill this gap by thoroughly examining the above mentioned relevant variable before and after the end of formal college instruction.

To arrive at a holistic picture of the attritional processes affecting vocabulary, the following discussions try to shed light on FL vocabulary exposure and practice that are expected to affect EFL graduate learners' vocabulary attrition.

LITERATURE REVIEW

One of the traditions in attrition research has involved identification of the possible factors which could predict short and long term maintenance of the global FL skills and knowledge. Predictor variables have contributed much to our understanding of what might make say FL vocabulary learning and teaching successful and within this area, two set of factors are distinguished namely inter-learner and external ones. The former includes age at the onset of attrition, the degree of attained proficiency and motivation and attitude. The latter comprises a period of disuse, level of training and length of exposure to the FL. If substantial advances are to be made in the field of FL maintenance, the characteristics of learners' language contact and use will have to be considered more carefully. Ideally, researchers will be able to control for learning variables which may influence long term competence change. Although such control has received very little attention in relation to FL vocabulary attrition, it is useful to examine the contact with the language as particularly important indicators of long term maintenance once the learners have ceased their formal instruction.

In extensive reviews of the relevant literature, Bardovi-Harlig and Stringer (2010) and Schmid and de Bot (2004) mentioned that factors such as the exposure of language and the opportunities to use it could influence the amount of FL attrition. Gardner et al. (1987, p. 31) succinctly stated that, "To the extent that the individual sought opportunities to use the language either socially or alone, it seems probable that attrition would be less (if it occurred at all) than if no attempts were made to maintain the skill." Köpke has strongly supported the necessity of examining the impact of language use on attrition. She asserts that "The issue of language use and contact certainly needs to be investigated further in the context of attrition" (Köpke, 2007, p. 25). It appears logical to believe that more FL exposure and practice leads to better learning and proficiency. The same is frequently held to be true of maintenance: more instruction and better performance predict longer retention of FL vocabulary knowledge. It can be claimed that vocabulary attrition on various occasions to be a sensitive phenomenon for example, where graduate students end their formal instruction or have limited communicative practice with the target language over a period of attrition which we believe is true in an EFL environment like the present one.

There were few studies that examined the effect of language use on FL/ L2 attrition and maintenance for instance, Bahrack (1984) and Harley (1994). Bahrack developed a questionnaire to assess Spanish high school and college students' contact with the language in the four basic skills, reading, speaking, listening and speaking. The findings revealed that "rehearsal" variables in the FL were not correlated with retention. Using can-do scales task interview, Harley further sought to explore the role of language use in L2 retention among Canadian graduates of French course. The study results showed that high contacts via listening and speaking were closely related to the success of retaining the L2. There is no doubt that the studies by Bahrack (1984) and Harley (1994) are important since they tackled the impact of language contact on language FL/L2 attrition/retention. However, some methodological concerns might influence the validity and reliability of their study outcomes.

The evidence in these reported research were based on cross-sectional approach which examined the degree of attrition by comparing between the subjects' opportunities to use the language only at one time, i.e., after ceasing the formal training. One would expect that prior exposure to the target language by an individual might not be identical during the period of reduced input or specifically in the absence of formal education afterwards. It is rather difficult to conceive careful control of such factor in anything other than a longitudinal approach that ties specific changes and fluctuations in input to particular attriters, which our study intends to adopt. Also, in Harley' study, the relevant variable was established on the basis of self-rating (can-do scales) which required the participants to rate their perceived ability to perform in French setting. This type of measurement may not yield accurate information about language contact profiles in the sense that an individual could underestimate or overestimate his/her own ability. Besides, she did not formally establish the subjects' linguistic competence using direct language testing, which we thought resulted in biased conclusions. In our case, realistic measures of language achievement such as the lexical element is implemented to ensure the reliability and validity of the results.

Apart from the above two studies, all other relevant research (e.g., Abbasian & Khajavi, 2010; Bierling, 1990; Morshedian, 2008; Weltens, 1989) did not intend to determine the target variable and its relationship with FL lexical attrition. Unlike Bahrack (1984) and Harley (1994) studies which solely relied on the self-report (questionnaire or can-do scale statements) to measure the patterns of contact with the language, the present study will apply mixed methods approach in this respect. That is after administering our questionnaire (version 1) at Time 1, and questionnaire (version 2) at Time 2 and Time 3, retrospective elicitation interviews will follow at each point of time to obtain more information and enhance our understanding about the changes and effects of the aforementioned variables on vocabulary attrition. This is definitely the approach that our study will follow. With the exception of Bahrack' work; the way of approaching this variable in our study is different from Harley in the way that we intend to explore the correlation between these variables and the attrition/retention on lexical achievement tests. One last point to mention is that the focus of these pieces of research is on general skills while our study is mainly centred on one particular aspect which is vocabulary.

The current situation has become important for investigation because language educators wish to know the most efficient ways that help learners maintain their English skills for long periods of time. At the same time, the findings of this study will provide useful clues for developing deeper insights about the present participants' current vocabulary use, with both pedagogical and social significance. If the variation of the learner-internal variables is responsible for the amount and nature of contact with EFL learner has, it is necessary to explore this variation in

the process of attrition and retention of vocabulary knowledge in more detail. The main research questions under investigation in this paper are as follows:

RQ1. What changes occur after graduation in claimed English use?

RQ2. How far does English vocabulary use relate to attrition?

METHODOLOGY

Participants

As the current study implemented longitudinal design, such approach is prone to participant attrition; unfortunately, this one was no exception. The participant pool was purposefully drawn from Alharthi's (2014a) study which initially launched with 67 individuals. Ultimately a total of 43 participants (male) took part in the present study. Additionally, they had already completed four years (BA) of college education with English as the medium of instruction. They all had studied English as a FL through intermediate and secondary school level prior to entering the college for six years in total. A background questionnaire revealed that they had never lived in any English speaking country before. Thus they had had similar instruction and shared the same cultural background.

INSTRUMENTS

Questionnaire

A self-reported questionnaire was written and prepared in English. The questionnaire comes in two versions used before and after the students' graduation. Participants were given six items which concern their use of existing vocabulary in various situations to assess the word recycling within different activities prior and after the end of formal education. Participant choose frequency rate numbering from 1 (less than once a day) to 5 (every day) to answer the question. At the follow-up times, all participants from the first time will be asked to complete another questionnaire. The format of this questionnaire bears a close resemblance to version 1, i.e., the questionnaire used before the student's graduation, so that responses can be compared over time. The wording of several items regarding language contact was slightly altered from that used in the first time. As the research was focused on people who no longer studied English as a formal course, the corresponding items in questionnaire 2 had to represent a variety of contexts for practice of English beyond the classroom.

Interview

The second instrument used in the present study is retrospective interviews. It should be noted that retrospective reports and interviews are employed as complementary or supportive evidence on the issue being investigated. It was decided to utilize a semi-structured interview which came in two versions at Time 1, Time 2 and time 3 i.e. before and after the termination of English training. In our interview, a set of questions and prompts which centred on certain topics related to the ones in the questionnaires were given to the interviewee who is encouraged to provide deeper insights for each response.

Procedure

The questionnaire (version 1) sessions took place during regular class meetings in the morning and afternoon. One of the researchers distributed the questionnaire to all participants and asked them to fill in it. Participants were provided with clear explanations of how they could respond to the questionnaire. Every participant was invited to raise any questions or queries to make sure he understood every item of the questionnaire. The researchers repeated their promise of confidentiality of the participants' responses and emphasized their trust in participants' answers. Also, to try to ensure the validity of participants' responses, the researchers asked them to be truthful and honest when answering the questionnaire. Based on the piloting of the questionnaire, the time limit was 20 minutes to complete the questionnaire, which gave the participants sufficient time to recall more relevant information.

The interview (version 1) was conducted with the participants (n=14) immediately after they completed the questionnaires in the first phase. During the interviews an effort was made not to make evident what the precise focus of the research was. It was emphasized that there was no time limit for the interview and each session lasted approximately from 15 to 20 minutes.

At Time 3, nearly fifteen month after the end of formal instruction, all individuals completed the same (version 2) of the questionnaire as they had before at Time 2 in approximately fifteen minutes. All information given by subjects was in English. The researchers remained present to check they answered all the questions as well as provided the background information including their current occupations.

The researchers carried out the interview sessions. It should be noted that the interview (version 2) followed the same contents covered in the questionnaire. The interview timetable was arranged to easily enable participants to attend. Only six informants volunteered to take part in the interview and all of them were English teachers except one who was unemployed. It was elicited in Arabic and varied in length between fifteen and twenty minutes. All sessions were conducted in one of the researcher's own office.

Data Analysis

Descriptive statistics were calculated by SPSS 21.0 (Statistics Package for Social Sciences) to reveal the mean score and frequency of the responses to each questionnaire item on the five-point scale. Since the present data reported by the participants in the self reported questionnaire were normally distributed, we used a series of Friedman tests to compare the participants' questionnaire scale scores between the three times. The Wilcoxon Matched-pairs Signed-rank tests were sometimes used as post hoc to determine where the significant differences lay. Finally multiple regression (MR) analysis was performed to assess the relative contribution of all (predictor variables) to attrition scores of receptive and productive vocabulary tests. The researchers followed the same procedure as at Time 1 and Time 2 in analysing the participants' personal views and comments in the retrospective interviews which served as information for triangulation, supporting the data obtained from the questionnaire at Time 3. Therefore, the similarities and differences in respondents' answers were classified according to their relevant questions following their order in the questionnaire.

RESULTS AND DISCUSSION

It will be recalled that the results of the overall pattern of vocabulary attrition between Time 1, Time 2 and Time 3 are reported elsewhere (Alharthi, 2014a). Therefore, attention is directed to the results of comparisons of EFL graduates' self-reported questionnaire and personal interview at Time 1, Time 2 and Time 3 in order to determine the nature of any changes as a result of ceasing formal instruction.

RQ1. What changes occur after graduation in claimed English use?

We now examine any significant differences about possible opportunities where the final sample participants use the amounts of existing vocabulary after fifteen months of ceasing English course. We will be able to respond to this question by using Friedman analyses which are shown in Table 1. It will be recalled that at Time 2 the frequency ratings of various uses of vocabulary revealed small changes and mostly non significant drops.

Table 1. Friedman analyses of multiple comparisons and differences for vocabulary use over time

Vocabulary use	Chi-square	<i>p</i>
Using Eng vocabulary in college courses, vocabulary lists/notes	46.898	< .001
Using Eng vocabulary in attending private courses	1.652	.438
Using Eng vocabulary in reading English newspapers and magazines	27.917	< .001
Using Eng vocabulary in watching TV/films and listening to radio/CDs	11.676	.003
Using Eng in browsing the internet	19.218	< .001
Using Eng vocabulary in talking and writing emails to English speaking friends	5.603	.061

In effect, the data displayed in Figure 1 indicates that, in general final sample participants self ratings of informal activities of English use are declined over time. That is all variables are fairly below the mid-point of the scale except the media and the internet which are rated from the range of 'once a week' to 'several times a week'. Chi-square tests (Table 1) confirmed that most categories dropped significantly. However, the same tendency is observed in terms of self ratings of using vocabulary in private courses and in talking/writing emails to friends though not statistically significant.

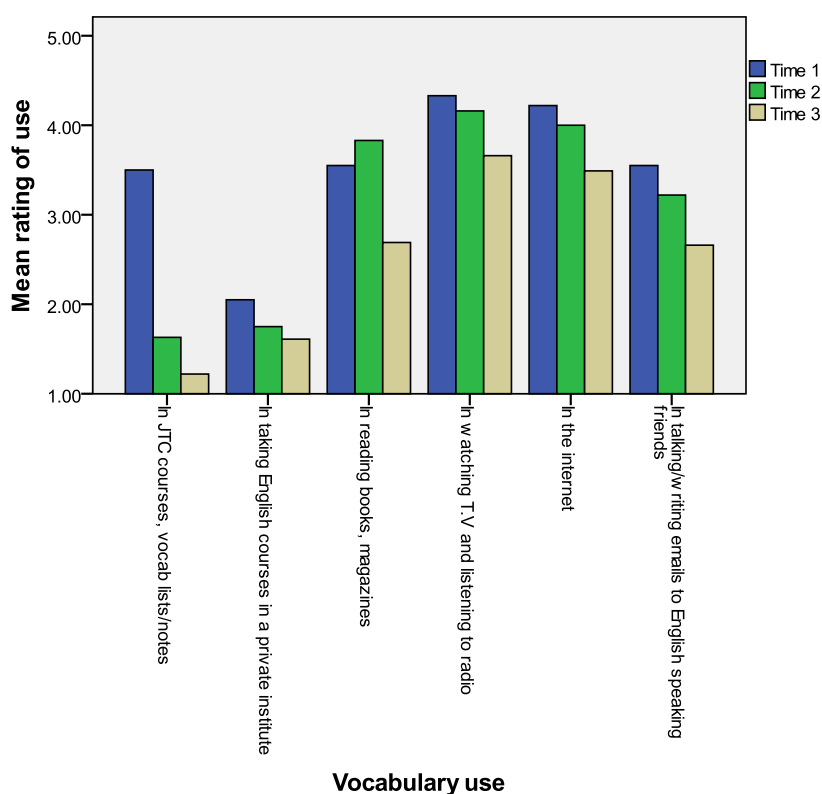


Figure 1 Final sample's claimed vocabulary use at Time 1, Time 2 and Time 3

As might be expected, the participants' reported ratings show that they are not very fond of going over college course books, notes and lists may be because these types of tasks presumably are more accessible through classroom as learners (ratings at Time 1 were above the midpoint of the scale) but not as EFL teachers when preparing lessons for their students or even with candidates competing for jobs. More importantly, the decline of this type of practice could be due to the absence of any further language evaluation. This could be observed during the qualitative protocols where the lack of formal examination was the key factor of their low ratings in this category:

"I used to revise my existing vocabulary notes, lists especially when preparing for examination. However, the importance of checking vocabulary in this method becomes less since no one would examine my English."

Some other informants expressed the fact that such materials are not available any more, hence they are not practised.

"There is no chance to look at or go over lists and materials where I recorded many previous word meanings since they are missing after I graduated."

The above statement does not only confirm the reason for the low favour in using vocabulary via the textbook input but also goes in line with results of participants' low frequency of taking vocabulary notes after the end of formal instruction mentioned earlier (Alharthi, 2014b).

A further decline in opportunity to use vocabulary through attending private courses was noted though the difference was not significant. This is attributed to the amount of this option being

quite low over the three occasions. Perhaps it is not possible to do private courses where EFL graduate teachers are surrounded by heavy teaching load for instance class preparation/organization, setting out examination and assessing students' work which explain the low use of this task. The interviewee's comment illustrates the point.

"I am trying my best to catch up the teaching load on my part, i.e., preparing the lesson every day, marking the students' homework, constructing exams... etc. than to get enrolled in private courses."

The ratings of print media, e.g., reading English newspapers and magazines reflect a lower pattern of use in the range of 'once a week' than at Time 2. It might be the case that our EFL graduate teachers at this stage prefer to use such input electronically through the internet as we will see below. In fact, this was explicitly mentioned in our interview data.

"I practise my existing vocabulary via reading articles and news in the internet as it is more easy and accessible than the print sources."

"I read English textbooks related to my field, e.g., linguistics through using the internet which I found beneficial to practice my existing vocabulary as I feel all information is available there."

These quotations offer evidence for reading a variety of authentic materials by making use of internet and suggest that technology provides a way for the vocabulary EFL graduates to engage with language input in ways more accessible than paper based media.

Once again watching TV/films, listening to radio and using the internet represent the least decrease among our subjects. Although significant drops noted in these activities over time, their frequency ratings are above the mid-point of our scale suggesting that vocabulary is more used in receptive tasks than productive ones. This may be a consequence of the fact that our subjects are not only majoring in English but also functioning as EFL teachers and therefore maintain their existing vocabulary in watching/listening to English programs and browsing the internet. Informants expressed these preferences in the retrospective reports as well.

"Depending on time, I am also updated with watching TV programs listening to the radio and reading some news on the internet."

"I use English vocabulary I have learned in watching educational programs on YouTube and watching movies."

These imply that subjects are aware of looking to opportunities to use former vocabulary in these sources and indicate the limited communicative contexts such as interaction with others as we will see next.

The final sample participants' self-ratings in using previous lexical knowledge through talking/writing emails to English speaking friends reflect the perceived decrease (actually below the mid-point of the scale) after graduation though not significant. With no doubt, language proficiency might play an essential role in determining the extent of being involved in such productive tasks which was supported by EFL graduate teachers' Productive Vocabulary Level Test (for further information see Alharthi, 2012). Specifically, they use English in limited social and life needs, which give them the reason to rarely practice the

language in speaking in an EFL context like SA. The fact is that the contact with the language in this type of practice is left to the subject's personal motivation.

So far, we have discussed the participants' own reports regarding their informal use of English since completing their college education. The answer to RQ1 is therefore that most reported opportunities to use vocabulary have declined significantly over time though near-significantly in talking/writing emails to English speaking friends and non-significantly in using English to attend in private courses. This result in general seems to be in keeping with Bahricks' (1984) results. However, we do not know to what extent these activities at Time 2 or Time 3 would influence the attrition scores of receptive and productive vocabulary tests. The following section is intended to clarify this aspect.

RQ2 How far do English vocabulary use relate to attrition?

Most importantly this part examines each variable related to the various uses of vocabulary at Time 2 and Time 3 to see if they appear to be relatively predictors of attrition scores. This was done by a series of multiple regression analyses to respond to RQ2 stated above. The results are presented in Table 2. As mentioned earlier the corresponding ratings for vocabulary use among the EFL graduate teachers were overall low in a period of fifteen months after ceasing the formal education.

Table 2 The effect of participants' vocabulary use at Time 3 on attrition for receptive & productive vocabulary tests

Explanatory variables Time 3	Dependent variables	Standardised coefficients Beta	p
Use over vocabulary lists/notes at JTC	RVT: T3 - T1	-.083	.705
	PVT: T3 - T1	-.009	.966
Use in private courses	RVT: T3 - T1	-.057	.807
	PVT: T3 - T1	-.064	.768
Use in reading magazines/newspapers	RVT: T3 - T1	.151	.524
	PVT: T3 - T1	.233	.293
Use in watching TV/listening to radio	RVT: T3 - T1	-.240	.291
	PVT: T3 - T1	-.326	.127
Use in browsing in the internet	RVT: T3 - T1	.109	.603
	PVT: T3 - T1	.438	.031
Use in talking/writing emails	RVT: T3 - T1	-.012	.952
	PVT: T3 - T1	-.130	.477

Interestingly, the lack of interaction effect between the predictor variables corresponding to vocabulary use at Time 2 and Time 3 and the attrition scores follow similar pattern as at Time 2. The use of vocabulary in browsing the internet at Time 3 was the only variable which affected the resisting of productive vocabulary test attrition. The Beta value (.438) shows that its contribution is significant $p = .031$. The nature of the correlation is positive, suggesting that the high frequency rating of browsing the internet, the more retention on the productive vocabulary test scores. This is supported by the results shown in Figure 1 that internet browsing still enjoyed a considerable use by our participants, being rated above the midpoint of the scale. It is indisputable that the internet has tremendously contributed to various fields including

education to provide valuable access to information resources, instructional materials and software which for example enhance the learning and teaching L2 vocabulary.

The result suggests that our EFL graduates-teachers clearly prefer the tool of technology to the traditional media such as newspapers and magazines to practice the already known words, which is shown to be confirmed and asserted by the subjects' preference to technology in reading skill in the previous section. Also, it implies that motivated learners can have a good tool to practice using chat programs either in oral or written communications, which lead to a better chance of their productive vocabulary test scores being retained.

However, this interpretation remains speculative since no one in the interview explicitly indicates that chatting is implemented in their language practice. The improvement in some individual scores at productive vocabulary test has been noted and the qualitative analysis has shed some further light on these. That is, those interviewees indicated a strong commitment to maintenance of their existing vocabulary in terms of their engagement to speaking and reading authentic materials online which obviously helped their productive vocabulary test scores retained between Time 2 and Time 3.

The current result therefore demonstrates the advantage which internet browsing in the target language has in helping individuals to maintain the productive vocabulary knowledge in a FL such as English.

Even more strikingly that none of the predictor variables of vocabulary use (except browsing the internet) emerged as significant predictors of maintenance in receptive/productive vocabulary test over time. We would attribute the lack of effect of vocabulary use on the attrition of receptive/productive vocabulary test to the small number of participants in the final sample; hence most predictors used in the regression analyses were kept to a minimum. When comparing our finding with available literature in this respect, our findings go in line with Bahricks (1984) findings in the sense that language use made no additional significant contribution in the retention of the target language. The present result differs from Harley's (1994) findings that availability of opportunities to use the language was associated with French maintenance. However, the data in her study lacked a measure of the subjects' performance in achievement or proficiency tests. She collected self-assessment of numerous tasks in French but no objective proficiency measure was administered. This might not provide an accurate and a reliable picture of how variables of language use relate to second language attrition or retention.

Yet, our result regarding the impact of internet browsing on the retention of productive vocabulary test presents an innovation in language attrition research particularly in vocabulary aspect. No study, to the best of the researcher's knowledge has included the technology media (internet) as a predicting factor in FL vocabulary attrition. Therefore, it is impossible to compare our result in this regard with those of Bahricks (1894) and Harley (1994).

In short, from the above results, we found no impact of the vocabulary use on the attrition/retention of receptive/productive vocabulary test over fifteen months after the end of formal instruction. The most powerful predictor appears to be the use of the internet which is strongly linked to better retention of productive vocabulary test over time.

CONCLUSION

In this paper, we sought changes in participants' claimed use of English outside of EFL classes since leaving the college. The most frequently used activities in this category for our subjects were English in their classroom courses and word lists, watching TV/listening to the radio and browsing the Internet at Time 1. This might reflect the experience of having learned English while pursuing a BA at the college. The results however, show that once the participants finished their formal education, most use of the language decreased, except for reading L2 texts like magazines and newspapers which increased a little. A significant decline was observed in the case of classroom course materials/notes and word lists. There seem to be reasonable factors to explain this drop, such as the unavailability of course materials and lack of further examination as indicated in the qualitative analysis section. It should be remembered that the receptive use of reading, media and technology input were still above the midpoint of our scale, suggesting that individuals maintained passive contacts rather than active ones with the language. A very consistent picture emerged at Time 3 in terms of the final sample participants' informal use of English. Chi-square tests confirmed significant attrition in most categories, except for use of English in private courses and in talking and writing emails to English speaking friends. Nevertheless, it can be seen that broadcast media and technology are by far the least declined modes or situations through which the final sample participants maintain contact with English. These receptive activities were still rated above the midpoint of the scale, and this may be due to how L2 communication is restricted generally in the FL environment (i.e., in Saudi Arabia and particularly in EFL classroom instruction).

The results obtained through the MR test surprisingly indicated that the use of English in talking/writing emails to English speaking friends was the only variable affecting receptive vocabulary test attrition. However, the outcome was not as clearly interpretable as one anticipated it should have been. Perhaps our participants are capable of getting involved in fairly simple communication when talking or writing emails, which would not adequately stretch their vocabulary repertoire very much. A further interesting result of the current study was the absence of any effect that the MR analyses detected for the informal vocabulary use of predictor variables, either at Time 2 or Time 3, in relation to the attrition of receptive/productive vocabulary tests scores. The most powerful predictor variable at Time 3 of the resistance to attrition in productive vocabulary test was Internet browsing.

In short, language use in general and vocabulary in particular in most informal situations during the fifteen months after the end of formal instruction appears to have very limited protective function with respect to receptive and productive vocabulary tests attrition.

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