The Role of Realia in Memory Enhancement

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Abstract

Memory plays a crucial role in the learning process. Accessing stored information is a daily struggle, and learners who manage to retrieve information in the needed time are more likely to do better in language learning. Using Realia is one way of input that has a specific effect on the way our brains process information. This experimental study explores the importance of using realia in enhancing long term memory in foreign language classrooms.

Key words: realia, memory, learning, stored information, brain

Résumé

La mémoire joue un rôle crucial dans l'apprentissage. Les apprenants qui parviennent à récupérer des informations dans les délais requis ont plus de chances de réussir dans l'apprentissage. Utiliser Realia est un moyen de saisie qui a un effet spécifique sur la façon dont notre cerveau traite les informations. Cette étude expérimentale explore l'effet de l'utilisation de realia pour améliorer la mémoire à long terme dans les langues étrangères.

ملخص

تلعب الذاكرة دورا حاسما في عملية التعلم حيث يشكل الوصول إلى المعلومات المخزنة مشكلا يوميًا ويرجح أن يكون أداء المتعلمين الذين يتمكنون من استرداد المعلومات في الوقت المطلوب أفضل في تعلم اللغة.كما يعد استخدام الأدوات المستقدمة من الواقع أحد

طرق الإدخال التي لها تأثير خاص على الطريقة التي تعالج بها أدمغتنا المعلومات. تستكشف هذه الدراسة التجريبية أهمية استخدام هده الأدوات في تعزيز الذاكرة طويلة المدى في الفصول الدراسية للغات الأجنبية.

Introduction

The complexity of our minds' functioning is due to the interconnection of the human systems taking part in the mental activities. " The cognitive processes available to our awareness make up only a small fraction of all the information processing which goes on in our system" (Dakowska, 2013, p. 10). Psycho-linguistics, then, is the ordinary umbrella under which many specialties converge to explore and find out how to better make good use of our minds and brains' capacities in the learning process.

In education, the role that memory plays is beyond doubt. Encoding items or information to be stored and recalling them for later use are the main important steps cited in cognitive literature about memory. However, in addition to the problem of the short term memory constraints, students face the limitations on retrievability. For these reasons, it is natural to focus on improving this interaction of encoding and retrieving activities by bringing, among others, real objects in the classroom in order to enhance the building of a long term memory necessary in the process of second language learning.

Cognition, Memory and the Brain

Cognition is related to psychology and defined as "the process by which knowledge and understanding is developed in the mind" (Hornby, 2010, p. 285). According to Longman dictionary of education, Cognitive process is explained as "any mental process which learners make use of in language learning, such as inferencing,

generalization, deductive learning, monitoring, and memorizing (Richars, Richard , HeLidi, & Youngkyu , 2002, p. 84).

With its complex system, the human brain's structure of Neurons, synapses and chemical neurotransmitters is commonly known to process different kinds of information including storing in memory. For such theories, "Researchers in psychology are already well-advanced in the use of brain imaging techniques for investigating working memory" (Alan & DeKeyser, 2005, p. 447).

The term cognition is central to the field of foreign language didactics. " Educational intervention in foreign language teaching takes the form of external (environmental) stimulation of the learner's cognitive processes, such as selecting input materials, designing specifically calibrated tasks, stimulating memory processes, grading the materials and tasks for skill learning ,etc."(Dakowska, 2013, p. 18).

In the cognitive theory, as mentioned by Hutchinson 1987, "we learn by thinking about and trying to make sense of what we see, feel or hear."(Huchinson, T & Waters, A, 1987, p. 43)"The context, ras the Authors add, in which the language will appear, the relative weighting and integration of skills, the number and type of exercises to be spent on any aspect of language, and the degree of recycling or revision can have their effect on whether and how well something is learnt."(Huchinson, T & Waters, A, 1987, p. 81).

Information Processing

Processing and storing information is not like organizing a bookshelf, or using a tape recorder. Instead, as Bjork cited the reasoning formulized by Thorndike (1914) in his 'law of disuse', that "although use of habits leads to strengthening of them, the passage of

time without practice, that is, disuse, weakened them."(Bjork, Recency and Recovery in Human Memory, 2001)

Memory , Bjork stated, is a 'byproduct' of processing--- "The information in our long-term memories that is, and is not, accessible at a given point in time is heavily dependent on the cues available to us, not only on cues that explicitly guide the search of the information in question, but also on environmental, interpersonal, mood-state, and body-state cues."(Bjork, Memory and Meta-memory Considerations in the Training of Human Beings, 1994)This "retrieval effectiveness is usually not merely a matter of an isolated cue being successful or not, but of operating within a retrieval system."(Van Dijk & Kintsch, 1983, p. 335)

Seemingly, Brown (2001) explained an important concept that differentiates two types of learning as long as memory is concerned: "meaningful learning subsumes new information into existing structure and memory systems where the resulting associating links create stronger retention. In contrast rote learning-taking in isolated bits and pieces of information that are not connected with once existing cognitive structures which has little chance of creating long term retention.(Brown, 2001, pp. 56-57)

Realia: the Place of Authenticity in Language Teaching

Broughton, et al 1980 focused the importance of contextualization as one of the basic principles in foreign language teaching stating "that words and phrases are easier to learn and remember if they are meaningful and in context. For this reason, many teachers try to bring appropriate realities (called realia) into their classrooms."(Broughton, Brumfit, Flavell, Hill, & Pincas, 1980, pp. 41-43)

The concept of Realia started to be used with the emergence of what Richards (2006) called 'The Push for authenticity' "Since

language classroom, as he detailed, is intended as a preparation for survival in the real world, some argued that classroom activities should as far as possible mirror the real world and use real world or 'authentic' sources as the basis for classroom learning.(Richards, J.C, 2006, p. 20)

These sources might include language based realia, such as signs, magazines, advertisements, and newspapers, or graphic and visual sources around which communicative activities are built.(Richard & Rodgers, 2014, p. 101)Concluding the 13th chapter of their book, Herrell and Jordan stated "Introducing real objects that can be seen felt and manipulated is a powerful way to connect vocabulary to real life."(H e r re l l & Jordan, 2012, p. 91)

More advantages of using realia were cited after a survey conducted with different teachers about realia and its usage in classroom. The study claimed that realia, among others, "helps to make a language class broader, richer and more functional adding a new dimension in the language learning process…Bringing realia into classrooms has created the opportunities for students to be active learners and allowed instructors to be facilitators."The authors concluded "One of the main purposes of using realia is to motivate the learners by making the classroom activities more interesting" (Nusrat & Bably, 2017).

However, Richards 2001 pointed out that, despite their importance, using authentic material is a burden for teachers. In order to develop learning resources around authentic materials, teachers have to be prepared to spend a considerable amount of time locating suitable sources for materials and developing activities and exercises to accompany the materials.(Richards, 2001, p. 253)"The problem, as mentioned by Crawford 2002,with using authentic material which has

not been specifically produced for the purpose of language teaching is that it's very difficult to find such material which scaffolds the learning process by remaining within manageable fields"(Crawford, 2002, p. 85).

The Study

The study was conducted in 2 different Primary Schools in Touggourt between April 9th and 24th, 2019.The participants were thirty 5th primary grade students in each school. The aim was to identify the effect of using real objects in enhancing the long term memory in second language class. The first test was used to classify their short term memory with a list of 10 different items in the mother tongue and counting the number of items each student could remember. The results were used to divide the participants of each class into 2 quit equivalent groups working in 2 separate classes.

In the second test, 10 other items in French were written on a whiteboard and spelled twice. After 5 minutes the board is cleaned and the students of the first (control) group are asked to write what they can remember in a paper. In addition to the same list of 10 items, the experimental group got the opportunity to see these real items. Three days later the participants are called and asked to write again what they can remember of the second items' list in French and if they can't in Arabic. In the afternoon of the same day, the whole class got a second reminder of the French items' list written and spelled before cleaning the board then asking the students to try writing what they remember.

The results are reported in the tables bellow:

	Number of words written by each student				
Experimental group	April 9th	April 11th	April 14th morning Fr	April 14th morning Ar	April 14th Afternoon Fr
B K	4	6	6	0	8
B N	5	1	0	8	1
H A	5	4	4	4	5
B A	6	9	10	10	10
I M	6	5	5	8	6
H C	6	5	6	8	7
B N	7	4	2	5	7
RM B	7	0	0	6	1
T A	7	6	0	10	2
B Aw	7	6	7	3	9
G M F	7	2	3	6	6
B A Y	8	2	2	7	2
H M	8	2	2	6	2
M H	9	8	6	3	7
K Z	9	2	0	8	3
Means	6	4.1	3.5	5.4	5

Table : the Experimental Group N1

	Number of words by each student				
Control group	April 9thSTM Ar	April 11thSTM Fr	April 14th morning LTM Fr	April 14th morning LTM Ar	April 14th Afternoon LTM Fr after revision
L A	0	4	7	8	7
G S A	4	1	1	6	2
T A A	5	2	2	5	2
K A	6	3	4	0	7
K A	6	2	2	4	2
B M I	6	2	2	4	2
B AR	6	0	2	0	2
B M A	6	2	0	5	2
H T	7	6	5	2	7
B H S	7	5	A	A	6
B M	7	2	2	3	3
B M A	7	3	5	2	4
K M B	8	6	1	7	5
B M R	9	5	5	7	8
BI M A	10	6	3	3	7
Means	6.3	3.2	2.7	3.7	3.7

Table 2 the control group N1

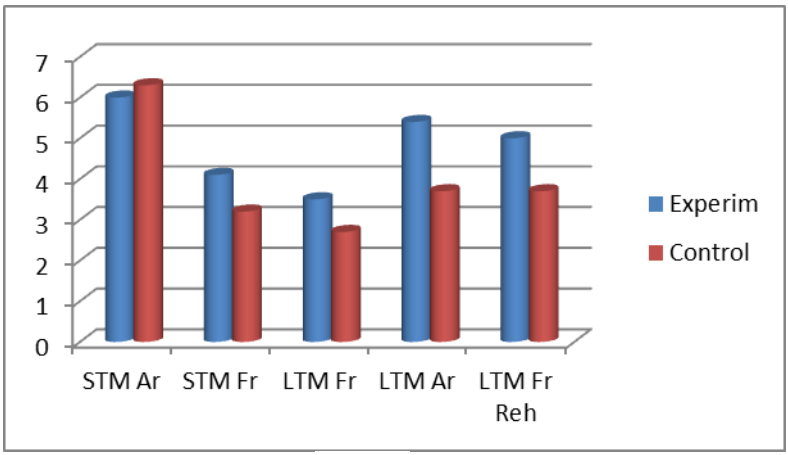

Chart 1

	Number of words written by each student				
Experimental group	April 22th am	April 22th pm	April 24th morning Fr	April 24th morning Ar	April 24th Afternoon Fr
A A	10	1	1	1	1
B AM	9	8	7	7	8
S AC	9	5	6	6	7
H A	9	2	0	3	2
B SK	9	3	0	4	1
K A	9	7	6	7	9
R T	8	7	9/10	10	9
H AR	8	8	8	8	9
A W	8	1	2	2	A
S LA	8	5	6	6	4
B I	9	1	0	0	A
B K	7	3	5	5	5
K S	7	0	0	0	1

T SH	6	5	3	5	4
B AM	6	3	3	4	1
Means	8,38	4,3	4,15	4,92	4,69

Table 3 the Experimental Group N2

	Number of words by each student				
Control group	April 9th STM Ar	April 11th STM Fr	April 14th morning LTM Fr	April 14th morning LTM Ar	April 14th Afternoon LTM Fr after revision
G I	10	6	5	4	5
B R	9	3	3	3	5
T A	9	2/1	3	0	1
B A	9	2	2	2	2
FA	9	A	8	8	3
H H	8	3	1	7	5
B S	8	1	1	1	3
G A S	8	2	3	3	5
B M	8	A	4	4	5
B A	9	1	0	0	0
B MT	9	1	1	3	3
B M	7	3	A	A	A
K N	8	3	2	2	1
G H	6	4	5	5	6
M M	7	1	1	3	3
Means	8,30	2,3	2,38	2,81	3,53

Table 4 the Control Group N2

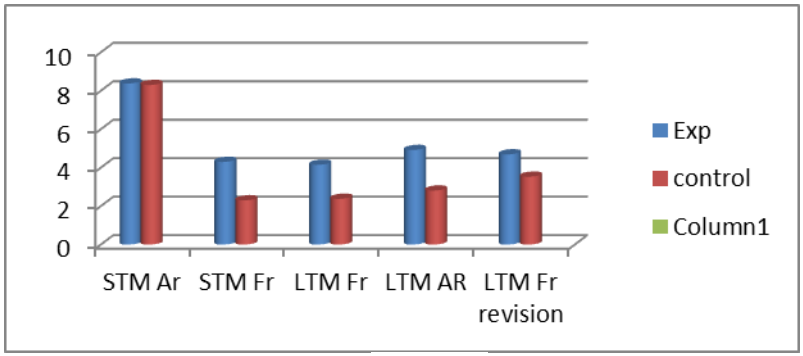

Chart N2

Interpretation

According to the means of the words remembered in each group, the charts show that both experimental groups got higher scores in remembering the French list exploring the short term memory. The experimental groups keep this advantage in the long term memory exploration and after the revision of the list presented for both groups. These results could partly be explained by the effect of using real objects on the process of memorization.

Limitations of the Study

This study was conducted to explore the role of using realia on the building of long term memory in second language teaching. The sampling, however, focused on the short term memory using the mother tongue.

The participants' levels in the foreign language have not been previously evaluated. Many students found difficulties to write correctly the items even if they manage to remember them. A short list of ordinary items was used to minimize the effect of this variable on the results.

Lastly, a restricted number of participants could not convince teachers by the results of the study and to suggest the use of realia unless the study will be conducted on a larger scale.

Conclusion

Realia is proposed as an additional way of input in language learning. Its role among others is to enrich the capacities of our brains to build a long term memory. The results of this study come to confirm this hypothesis. Students taught with realia have, at least, the opportunity to remember the items in their mother tongues adding another encoding cue that will support the retrieval process later and may help to remember them in the second language. Bringing real objects to the classroom is a burden on the language teachers that is time consuming and needs additional effort of selection. It is preferable that psychologists and linguists undertake further and deeper studies to set the appropriate educational context serving to expend the use of this educational technique in foreign language teaching.

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