KARAP, ZSUZSANNA[1]

The possible benefits of using comic books in foreign language education: A classroom study

Comic books are experiencing a steady rise in popularity. Not only are they being investigated as subjects of literary studies and other fields of research (e.g., McCloud, 1993; Wolk, 2007; Darius, 2012), they are also getting recognised as instructional resources to improve literacy skills and maintain motivation (O'English, Matthews, Lindsay, 2006). They also have several advantageous features that support foreign language learning. The present study aimed at investigating some of these (guessing meaning of new words; lowered anxiety; better recall) by the use of comic books in the classroom. Three groups of students were recruited (n=14; 14; 8) in a secondary grammar school, as part of the author's 11-week-long formal English teaching practice.

1. Introduction

The present paper will argue that the use of comic books could be beneficial in foreign language learning. First of all, these works embody all the advantages of written texts, and have an additional educational appeal: comic book authors have a tendency to apply a constant register within their works (Williams, 1995). This fact results in similar lexical items and level of formality in each of their narratives, which serves as built-in, incidental vocabulary revision on the foreign language learner's part.

Furthermore, comic books seem an obvious choice for 'pleasure reading' (Krashen, 1993), an activity which is pursued for its own sake and is emotionally self-rewarding. This type of reading supports engagement with the material, and can prove to be a gate-opener to other readings and higher literacy (Krashen, 1993).

In addition, as combinations of images and the written word (Eisner, 1985), these works have a strong visual aspect, which facilitates readers' imagination and helps anchor the expressions used by not only putting them in context but making the medium multimodal. Memory formation is also aided by such visual details.

A further advantage of this visual aspect is that comics can also convey, by ways of symbolic cues (whose use is rooted in a treaty between readers and author), information that is

---

[1] MA, University of Pécs, Faculty of Humanities, Institute of English Studies, *zsu.karap@gmail.com*

not part of the written text nor could it be portrayed simply via images. The mood and emotions of the characters may be hinted at by brush strokes or circles in or around their faces, as seen in the example below (Image 1). Here, the vertical lines above the hunter's head express startled surprise.

Emotionally loaded pauses and breathing breaks can also be indicated in comics to bring the reading experience even closer to that of encountering real-life speech (Williams, 1995). Likewise, the author(s) can leave clues as to how a line is supposed to sound when spoken by the use of specific letter fonts: the same line appearing to be coated with ice, or sticky and bloody may sound stern or angry (Eisner, 1985; McCloud, 1993).

Image 1. Comic books use visual cues to convey emotions (Tobin, Querio, 2014, p. 15)

Finally, including comic books in students' foreign language learning experience might have advantageous psychological effects. It is possible that the use of comics reduces students' Foreign Language Anxiety (Horwitz, Horwitz, Cope, 1986). This type of anxiety, if high, could prevent information intake and therefore inhibit the learning process. However, when deeply engrossed in a comic book story, attending to both text and image, students may learn to read for pleasure, develop a liking to their target language, and experience less anxiety in the classroom.

Related studies

There are few well-documented classroom-based studies that set out to demonstrate the advantages of comic books in the foreign language classroom. One of them dates back to as early as the 1970s (Marsh, 1978), in which intermediate learners of French were exposed to

target language comic books for approximately twenty minutes a week for a semester. The related findings show that (1) student satisfaction was high as demonstrated by a student feedback survey at the end of the semester; (2) comic books were capable of reinforcing study material focusing on new vocabulary, new grammatical points (especially tenses and moods), cultural content, and facilitating writing and conversation based on the material.

A similar study (Popa, Tarabuzan, 2015), likewise concerned with teaching French through comic book content, found that regular exposure to comics for 8 weeks significantly reduced students' test anxiety compared to that of a control group (n=29 overall), as measured by the Motivation Strategies for Learning Questionnaire (Pintrich, De Groot, 1990).

Another attempt at exploiting the advantages of comic books focused on student composition and grammatical points (Kılıçkaya, Krasjka, 2012): for a period of 5 weeks, 25 pre-intermediate English as Foreign Language learners were asked to create their own web-based comic strips. These participants were instructed to feature in their work the new grammatical feature they had previously learned in each class. At the end of the programme self-reported student motivation was high and the programme received a positive rating by the learners.

Another finding of note is that of Cimermanová (2015), who conducted a case study on four Slovak students, exposing them to English comic book material for two months (approximately 8-12 lessons). All four students experienced higher motivation and improved attitudes to reading in English by the end of the programme.

In summary, there is growing evidence that foreign language learners can benefit from the use of comic books in terms of motivation, grammar and vocabulary.

2. Hypotheses and research question

Comic books operate with symbolic and contextual cues that may help foreign language readers infer meanings of yet unknown words. Therefore, it can be assumed that foreign language readers will be more successful at guessing the meaning of new lexical items when the source material is in comic book format than from traditional written text. As the related visual cues are present in comic books, it not only helps readers infer meanings but also supports the grounding and anchoring of new words, it can also be hypothesised that memory recall for vocabulary learned from comics is better than for vocabulary learned from traditional written texts. In addition, as comic book related activities have been found to be motivating and

anxiety-reducing, it can be surmised that students' Foreign Language Classroom Anxiety level at the beginning of a programme with a regular comic book component will be higher than at the end of the programme.

Therefore, the present work's hypotheses regarding such a study programme can be summarised as follows:

Hypothesis 1: Students' Foreign Language Classroom Anxiety is higher at the beginning of the programme than when tested with the same questionnaire at the end.

Hypothesis 2: Students demonstrate a higher rate of correct guesses for the meaning of unknown words encountered in comic books than words encountered in traditional written texts.

Hypothesis 3: Students show a better recall for the meaning of words learned from comic books than words learned from traditional written texts.

Explorative research question: Is there any observable tendency among students at the group level to guess and recall the meaning of certain words better than others in the related comic book tasks?

3. Material and methods

Participants

Three groups of students attending a secondary grammar school in Budapest, Hungary were recruited for the study. These were from small to medium convenience samples regularly taught by the author's mentor teacher and therefore easy to access during the former's teaching practice course.

The first group of students were all zero beginners (equivalent 'The Common European Framework of Reference for Languages' or CEFR level: A1) at the very beginning of the programme (n=14; 8 females) and have just started their first year (year 9) at the school. This group was a class of students who had been attending an English and German specialization programme of the school, and were taught six 45-minute-long English lessons a week.

The second group consisted of intermediate level learners (CEFR B2) (n=14, 9 females) who were at the time in their third year of studies (year 3), and were taught four 45-minute-long English lessons a week.

The third group was a small class of pre-intermediate (CEFR B1-B2.1) learners in their fourth year (n=8; 6 females), with three 45-minute-long English lessons a week.

None of the students were reported to be outliers regarding SES; all participants' first language was Hungarian, and there were no early bilinguals in the sample.

Foreign Language Classroom Anxiety Scale (FLCAS)
Designed by Horwitz, Horwitz and Cope (1986), the inventory consists of three scales (33 items): Communication apprehension; Fear of negative evaluation; Test anxiety. The scale operates as a Likert scale of 5. A Hungarian version (validated by Tóth, 2008) had been used with all three groups to control for foreign language proficiency effects. There was a test at the beginning and at the end of the programme for each group, administered anonymously (using code names).

Guessing Habits and Ability Questionnaire
This self-developed test battery consisted of three parts. However, due to page limitations, only findings related to the third part of the questionnaire will be reported in the current work. This unit was an 8-item guessing test using one or two sentences as text per item, based upon which students had to guess the meaning of an unknown word in each case (8 multiple choice items: a-d). The questionnaire was administered to each group at the end of the programme. Due to a printing error, for group 1 part 3's item 1 was excluded; item 8 was excluded from analysis in group 2 following an experimenter error.

Tasks (tests) and post-task memory checks (re-tests)
The comic book-based tasks all required participants to guess the meaning of new words relying on comic book materials. This novelty criterion was ensured by targeting terms which were of a too low frequency level for the given group to have encountered in the past.

The post-task tests (re-tests) were based on the same task sheet and format as the related comic book tasks; the only difference was that in re-test sessions students were not given comic book excerpts. They had to guess (remember) the meanings of the same words without looking at comic book panels.

The task sheet's format was the following: for the second familiarization session, it only contained multiple choice (a-d) items for group 2 and some multiple choice items and several open-ended items (translate the word/phrase) for group 3; for the second familiarization session, it only consisted of open-ended (translate the word/phrase) items for group 1 and contained some in group 3: in both of these latter groups, there were some items in their first language

and some in English during this familiarization session (they had to find or guess the equivalent expression in the other language). For the rest of the testing and re-testing sessions, all items were open-ended and in English, asking for meanings in Hungarian.

Procedure

The teaching practice itself lasted for a period of 11 weeks, with the study embedded in it, but the latter's main components only started on week 6. All students were taught English by their regular instructor following the local curriculum and a pre-set textbook series, except for their once a week session with the author. Each lesson was 45 minutes long.

In all three groups, two separate familiarization sessions were conducted before administering the rest of the comic book based tasks (a maximum amount of one per lesson). One familiarization session consisted of students' exposure to comic book excerpts without any task given (intended as familiarization with the format and pleasure reading); the other familiarization session followed the same task sheet format as the future comic book tasks, requiring students to guess meanings using comic book panels, but this session was group-based instead of individual testing. The rest of the comic book tasks (tests) and their memory recall tests (re-tests) were all individual tasks. The re-tests were regularly administered with a one week delay following the related comic book task (a 5-day-long delay in some exceptions instead of 7 days). All analyses conducted on the resulting data relied on the statistical program SPSS 20.0.

4. Results

Considerations

The original sample size for group 1 and 2 (14 to 14) would have been acceptable for statistical analyses. However, due to dropouts, absences and in some cases: anonymously completed test batteries, the sample was at times reduced to smaller numbers, giving the planned statistical tests pronouncedly lower statistical powers than planned. Therefore, while the project had been designed as a mixed method study with an emphasis on quantitative analysis, other measures were also taken, exploring descriptive statistics and the contents of students' response sheets in more detail.

Hypothesis 1

Higher Foreign Language Classroom Anxiety among students at the beginning of the programme than at the end.

Q-Q plots indicate that there is no normal distribution in the data regarding FLCAS scores. As normal distribution could not be assumed in this way, a Wilcoxon Signed-Rank Test was run on group 1's anxiety data. The results show that **there was no significant change in group 1's students' anxiety** between the beginning and the end of the programme regarding both the subscales and the full FLCAS score. (E.g., for the two full scores, Z=-0.237, p>.05).

A Wilcoxon Signed-Rank Test was also conducted on the second group's anxiety data. The results show that **there was no significant decrease in students' anxiety** in this group either (for the full FLCAS scores, Z=-0.511, p>.05.).

Finally, the descriptive statistics performed for the small-sized group 3 (n=8) reveal that **the test and re-test FLCAS mean scores were almost the same** (92.29 and 90.67, respectively).

Hypothesis 2.

A higher rate of correct student guesses for the meaning of unknown words in comic books than in traditional (non-visual) written texts.

H2: Group 1

Aside from the very first Memory recall comic test session, **all comic book based performance scores** (both for Guessing meanings comic sessions and Memory recall test sessions) **were higher** than the mean performance score for the Guessing Habits and Ability Questionnaire's traditional text format-based meaning guessing task.

However, **this advantage of the comic book material was only statistically significant in one case** as demonstrated by the Wilcoxon Signed-Rank Test. For Guessing meanings comic session 2, students scored a mean of 72.8 %, whereas for the traditional text format the achieved mean was 54.08 % (see Graph 1); this difference was significant (Z=-2.341, p<.05).
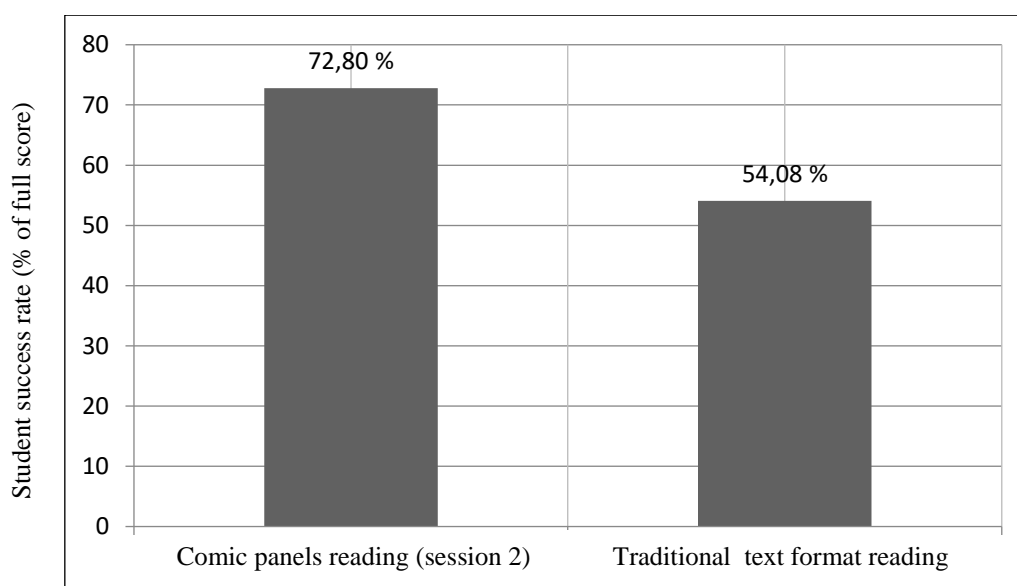
Graph 1. Group 1 – Student performance rates for comic panel vs. traditional written texts

H2: Group 2

Both descriptive statistics and the Wilcoxon Signed-Rank Test indicate no difference between the mean performance scores for the comic book based meaning guessing or memory recall tasks and the performance score for the traditional text format). In other words**, this group performed on the same level regardless of the text format** as context for the novel words.

H2: Group 3

One comic book based task sheet for the group consisted of 6 extra items of meaning guessing based on a traditional text format as reading, and 6 items based on comic book panels. Comparing these first, descriptive statistics show that **students did much better on the reading using comic book format**. These differences stand for both the guessing meanings session (a mean of 55 % vs. the traditional text's 26.67 %) and their related memory recall session (51.67 % vs. 26.67 %). On the other hand, upon comparing all meaning guessing and memory recall sessions' results to performances on the Guessing Habits and Ability Questionnaire's part 3 (meaning guessing in simple, non-comic-format sentences), it is evident that **students did not do worse on the questionnaire** (58.04 %).

Hypothesis 3.

A better student recall for the meaning of words learned from comic books than for words learned from traditional (non-visual) written texts.

H3: Group 3

The only relevant performance scores here are students' responses for Guessing meanings session 2 and the related Memory recall test session 2, as these had half their readings in a traditional text format and half of them in comic book panels.

This being quite a small group, it is worth exploring the students' individual performance profiles here. According to these, all of them were more successful in guessing meanings for comic panel words than for traditional text formats regarding achieved scores. This is also the pattern for the memory recall session (more meanings remembered for comics than for traditional text formats), except for an outlier who remembered only one meaning correctly in both sections.

After excluding those who failed to provide data for both of the sessions, it could be observed that **(1) students tended not to forget** the few correct solutions they had provided **for the traditional text items** (e.g., student 'L.': 2 correct guesses, 2 correct recalls); **(2)** while two students did **forget the meaning of one word each for the comic book word recall session,** the two other students actually performed better at the comic book word recall than at the comic book guessing task (4 vs. 3 points, and 4 vs. 2.5 points).

Question 4.

Did the meaning of certain unknown words in the comic book tasks prove easier to guess than the rest for the group?

Q4: Group 1

The results for two sets of items are applicable in this group: performance scores at Guessing meanings comic session 2 (13 items) and 4 (14 items). For the second session, all students were successful at guessing the meaning for items 1, 3, and 4, and all but one student for item 2. Item 8 seemed to divide the whole class (7 incorrect and 8 correct responses). Item 13 proved to be the most difficult one (13 incorrect). As for the fourth session's task, more items proved problematic due to a high level of difficulty: item 6 (11 incorrect, 3 correct responses), item 7 (10 incorrect, 4 correct), item 8 (11 incorrect, 3 correct), item 12 (8 incorrect, 6 correct). One item divided the class once again: item 2 (6 incorrect, 8 correct). Item 3 (13 correct) and 9 (all 14 students correct) were the easy items for this session.

Q4: Group 2

One session's results are applicable in this group here: their performance scores at Guessing meanings comic session 2 (11 out of the 14 students were present). From the total of 8 items, item 1 and 4 seemed to be the easiest (all 11 students guessed correctly), whereas item 2 proved impossible to guess its meaning (11 incorrect responses); item 3 was also difficult (8 incorrect), whereas item 8 divided the class (6 incorrect, 5 correct).

Q4: Group 3

Two sets of items are applicable for this analysis: Guessing meanings comic session 2 (6 items) and 4 (20 items). The reason for these seemingly unbalanced item proportions is that session 2 also included six items for non-comic format readings (traditional texts). For session 2, item 3 was the easiest (all students correct), and the rest of them divided the members of the small class (n=5 that day). For session 3 (with 7 students present), only item 8 proved to be easy (6 correct, 1 incorrect); the most difficult items were item 15 (7 incorrect), item 5, 9, 10 (6 incorrect), but even items 1, 6, 7, 11, 18-20 caused problems (5 incorrect).

5. Discussion

5.1 Summary of results and interpretation

H1: Higher Foreign Language Classroom Anxiety among students at the beginning of the programme than at the end.

As demonstrated by the tests conducted, there was no significant difference between students' FLCAS scores at the beginning and at the end of the programme. There are several possible reasons as to why the programme failed to bring about the hypothesised changes in anxiety.

1) The research programme itself was only 6 weeks long, taking up approximately 20 minutes per week of students' regular 45 minute-long lessons. It seems quite likely that to benefit from comic books in foreign language education, a well-focused programme of at least eight weeks would be needed.

2) With the current sample size, only a remarked change in student anxiety would have been statistically detectable.

3) Students' anxiety levels were already low enough: they had been observed in free interaction with their regular teacher and to act in a relaxed, contented way. In addition, upon validating the FLCAS measurement used here, Tóth (2008) found a mean of 84.36

(SD=19.26) on a sample of 117 Hungarians majoring in English, which is equivalent to the results above. All this seems to indicate that the students in question already had relatively low levels of anxiety and this could not be reduced any further.

H2: A higher rate of correct student guesses for the meaning of unknown words in comic books than in traditional written texts.

This prediction has been partially proven correct. As for mean performance scores, the first group achieved better results at guessing meanings when working with comic book readings. However, the Wilcoxon Signed-Rank Test only marked one of these differences as statistically significant (for Guessing meanings comic session 2), in which case students did 19.25 % better on the comics compared to the traditional text). This is even more impressive if we consider that the task based on the traditional text format reading was a multiple choice test one (a-d), where students had to choose a synonym for the word in question, whereas all the comic book based guessing tasks used open-ended questions.

As for the second group, they performed around the same level regardless of the reading's format. It might be worth noting here that this was a group that complained that they did not feel like standing up and reading excerpts on the wall instead of being handed material, as the layout of the room restricted their free movement. Unfortunately, for comic book readings, this 'readings on the wall' approach had to be adopted, as the available printing facilities did not allow for full excerpts for each student or pair.

In the third, smaller group, during the session divided between comic book readings and a traditional text format, students did unquestionably better on the former (a success rate of 55 % vs. 26.67 %). These two tasks were a better fit for comparison, as question items built on both text formats were open-ended (students had to supply the meaning in their first language). When the comic book panels' advantage was tested against the traditional text format with multiple choice items for the latter, students in this group performed with approximately the same success rate (58.04 %) as they did on comic book tasks. However, it is possible that their high familiarity with this test format, a variety of compensatory testing strategies available for multiple choice items, and a slightly increased motivation level that had carried over from the comic book related activities planned for the same lesson bridged the differences between the observed scores for this task and tasks based on comic book material.

In summary, there were many indications, some statistically significant, some only observed at face value that at least two out of the three groups achieved better results at guessing meanings when working with comic book panels than with traditional texts. However, the

results also show that these differences are dependent on the testing format itself (multiple choice vs. open-ended items).

H3: A better student recall for the meaning of words learned from comic books than for words learned from traditional written texts.

This aspect could only be investigated on group 3's data, as a six to six items comparison. Therefore, no generalization of results is possible here. The findings show that while these students **had guessed fewer meanings correctly in traditional texts, they all successfully retained these meanings** upon re-test (a success rate of 26.67 % in both sittings). On the contrary, although **guesses made using comic book readings were better** than using the other texts, **students were more likely to forget at least one word** from these (55 % at test vs. 51.67 % at re-test). These results might be explained by a higher cognitive demand: as students guessed more words successfully in comic books, they also had a more difficult time recalling their solutions later than they did for their fewer good guesses for the traditional readings.

Another interesting observation is that two students scored higher at the memory recall than at the meaning guessing session for the comic book words (i.e. they remembered more meanings than they had actually guessed correctly). This can only be explained by assuming that at the re-test sitting, which more closely resembled the conditions of a traditional test situation, students worded their solutions more carefully than when they were reading comic panels freely and guessing meanings then. This might have resulted in answers which could receive slightly better marks: as for open-ended items it was possible to receive half a mark if a solution was close but not completely accurate. This scoring, along with students wording their answers more carefully at re-test could have therefore been responsible for the fine rise in performance for the latter.

Explorative question: Did the meaning of certain unknown words in the comic book tasks prove easier to guess than the rest?

Group 1 - In Guessing meanings comic session 2

Group tendencies have been observed for certain items: some words proved to be too difficult, some quite easy, and the rest were of medium difficulty which divided the class. In Guessing meanings comic session 2, students were, without prior teaching, introduced to novel words in the topics of body parts and extreme sports via various short comic strips. All students guessed the meaning of '*nose*' (item 1), '*leg*' (item 3) and '*tummy*' (item 2). This is understandable in the case of the former two, as they are relatively high frequency words (*nose*: a frequency of 48 per one million words, leg: 118 per one million; see the WFWSE corpus, Leech, Rayson,

Wilson, 2001). However, '*tummy*' is a rather rare and informally used word, and its frequency does not even reach 10 per a million. This goes to show how expressive the applied comic strip must have been if it could help all students discover this novel word's meaning.

Item 8's facility index was exactly 50: 7 out of the 14 students solved it. The word was '*treadmill*', and the problem was very likely not with students' guessing ability here but their ability to find the word itself in the excerpts on the wall. The related comic strip showed a turtle in the gym, struggling on a treadmill, with the instructor telling them *"Sorry Sir, but it is already the slowest speed".* 12 students guessed more or less correctly what *'the slowest speed'* meant (item 7), which shows that everyone had found the comic strip and worked with it. What those 7 students above had also found, however, was the word '*treadmill*' printed across the treadmill's footing itself… Giving students such tasks frequently could potentially improve their attention to detail, and encourage them to make use of every learning opportunity in their surroundings.

Group 1 - In Guessing meanings comic session 4
This was a very successful session in terms of student motivation as demonstrated by observable behaviour responses as well as oral and written student feedback. A full issue of Tiny Titans (Baltazar, Aureliani, 2008) had been chosen for this lesson, and these beginner students could read the whole story while working on the target words. The most difficult term proved to be '*should*' (item 6), which is understandable as auxiliary verbs' meanings are expected to be almost impossible to guess from only a few cues. (Interestingly, the same students had much less problem with 'can' in one of the familiarization sessions.) Another difficult item was 'melt, melted', for which two of the students guessed *'leesni' ('to fall down'):* this again was a predicted result. This verb was chosen to see if students were indeed eager to use the visual and narrative cues present in the text and guess based on them: it is inevitable that some strategically placed terms would trip them up and they would misinterpret a meaning. However, this was a fit built-in test inviting 'clever mistakes': the related panel showed a character crying on the ground over his ice cream, holding an empty ice cream cone, with children around him saying *"That's awful! That boy's ice cream has melted (…)"* Therefore, guessing *'falling down'* was indeed good thinking on the students' part.

A further inspiring finding is that as many as 11 students guessed the meaning of *'yep'* (item 5) correctly based on the narrative, and three of them found it important to mark the informality feature too on their sheet: '*ja'; 'igen, (ja) (szleng)'; 'igen (szlengesen)'.* These

results demonstrate that students are inherently sensitive to register cues and communicative hints, and are curious about them as long as these are not taught without meaningful context.

Group 2 - Guessing meanings comic session 2

Item 1 had a facility index of 100, which is intriguing because the related word is *'to scratch'* and its frequency level is low (12 per a million, see the WFWSE corpus). The material used for this task was The diary of a wombat by Jackie French and Bruce Whatley (2003); originally a children's book, chosen for its witticism, strong visuals, slightly repetitive language and its i+1 language level regarding the group in question (officially close to intermediate level but much lower in productive skills). These features apparently did work well for item 1, for which one picture shows the wombat scratching and narrating it quite clearly. (Meaning memory recall was also high for this term.) Another easy item (i4), *'to chew'* was a similar case.

However, the most difficult item (i2) following these in the book was *'itchy bits'* (in the panel: *"Scratched. Hard to reach the itchy bits."*). Students' failure to interpret this was probably due to the missing first language equivalent. For *'dust bath'* (item 3), the low success rate was caused by 7 students guessing *'búvóhely' ('hiding place')*. One of the reasons might be that students tended to over-generalize or overuse visual cues for words expressing a more abstract, complicated or too specific concept. However, for a similar category, item 6 *('scratching post'),* students received 7 full and 2 half scores, and overall it seemed to be their favourite term on the task sheet (behaviour responses: laughter, giggles, loud self-narration).

Group 3 - Guessing meanings comic session 2

For these pre-intermediate students, the last item *('April fools')* was possibly not a novel one; this would explain its 100 % success rate. On the other hand, *'to pull a joke on somebody'* (item 7) and *'to lie without sin'* (item 10) posed too much difficulty, mainly because of their complicated concepts. Apparently, the narrative contexts (miscellaneous comic book excerpts all focusing on April Fools' Day and pranks) did not help with these phrases.

Based on the above observations it could be argued that it would be more beneficial to employ one full comic book story of medium-length instead of several short excerpts or comic strips, to provide for more grounded contextual reference points.

Group 3 - Guessing meanings comic session 4

For this session, students were given humorous comic book excerpts from two different sources (various panels from Dirge, 1999, and Himaruya, 2006-2013). Two of the three sets of the

Himaruya material are interesting because they blend the comic book format with a longer textual explanation section, which allowed the use of texts other than dialogues. However, it might be partly for this reason that so many items proved to be too difficult for these students in this session. Item 15 was found to be impossible to guess *('in comparison'),* which is understandable considering role as a function word. Item 8 *('workout')* was on the other hand easy to solve, possibly due to its lower novelty effect. *'[T]o swipe something from someone/somewhere'* (item 18) did elicit half solutions and a correct one too. However, two rather low frequency words (less than 10 per a million), *'crooked'* (item 4) and *'straitjacket'* (item 2) worked surprisingly well with the help of the narrative context, as 4 out of 7 and 3 out of 7 students managed to solve them, respectively.

5.2 Conclusions

This study has attempted the application of authentic comic books in the English as a Foreign Language classroom. As it had been tied in with the author's formal teaching practice, it had a few methodological characteristics which had prevented the discovery of more pronounced changes in students' performance (e.g., relatively small sample sizes, the necessity to use other materials and a pre-set textbook). However, it did reveal some tendencies in the data that point toward the benefits of using comic books might have in foreign language education.

As for methodological bias, in some cases it seemed impossible to control for information circulation in the classroom: students at times shared their guesses or asked questions. In such conditions a decision between the priority of learning outcomes and controlled research had to be made.

Further consideration would be also important regarding the selection of source material: most students were engaged, but some reported that they had no interest in the chosen excerpts. As one of the greatest values of comic books lies in the pleasure reading they may offer, it is vital to either explore individual students' preferences in more details and match the material to them or allow self-selection in their reading. A systematic programme where students could make their pick of comic books might prove the optimal arrangement to achieve better learning outcomes.

On a further note, the presented meaning guessing activities contained numerous words whose frequency was much lower than that of students' current vocabulary: the objective was to ensure a novelty effect and thus make their guesses genuine, unbiased by prior knowledge. However, in an educational setting learning outcomes should be the priority, with students

presented with words closer to their own language level. It would likewise be more beneficial to help learners encounter the same words repeatedly instead of providing them with new words in each session. In addition, whereas the current research design favoured a test – re-test setting between which the solutions were not discussed with the class to check unbiased recall later, in order to maximalise effective learning, solutions would *need* to be checked together after every reading (students also expressed this preference). This would bring about an *"aha! moment"* known in psychology (Kounios, Beeman, 2009, p. 210) and would help to better anchor new lexical items.

Finally, a word on the study as a practical implementation: for future research as well as educational use local technological and financial resources need to be considered. The main reason the above setup applied the 'readings on the wall' design as well as copies per student pairs was that the frequent use of a projector could not be arranged. Excerpts and comic strips were also favoured over full issues, as the printing of longer narratives would have been problematic. Therefore, in cases where such technological demands are left unsolved, the application of comic books in foreign language learning and home assignments are recommended instead of in-class use in education.

Dedication and Acknowledgments

REFERENCES

Baltazar, A. and Aureliani, F. (2008). *Tiny titans,* 1(1). Burbank: DC Comics.

Cimermanová, I. (2015). Using comics with novice EFL readers to develop reading literacy. *Procedia - Social and Behavioral Sciences,* 174, pp. 2452–2459. DOI: 10.1016/j.sbspro.2015.01.916

Darius, J. (2012). *And the universe so big: Understanding Batman: The killing joke.* Edwardsville: Sequart Research & Literacy Organization.

Dirge, R. (1999). *Lenore, the cute little dead girl,* 1(1-2). San Jose: Slave Labor Graphics.

Eisner, W. (1985). *Comics and sequential art*. Tamarac: Poorhouse Press.

French, J. and Whatley, B. (2003). *Diary of a wombat.* Boston: Clarion Books.

Himaruya, H. (2006-2013). *Hetalia: Axis Powers.* (Selected web comic strips.) [online] http://www.hetarchive.net/scanlations/. [11 August 2016]

Horwitz, E. K., Horwitz, M. B. and Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal,* 70(2), pp. 125–132. DOI: 10.1111/j.1540-4781.1986.tb05256.x

Kılıçkaya, F. and Krasjka, J. (2012). Can the use of web-based comic strip creation tool facilitate EFL learners'grammar and sentence writing? *British Journal of Educational Technology,* 43(6), pp. 161–165. DOI: 10.1111/j.1467-8535.2012.01298.x

Kounios, J. and Beeman, M. (2009). The Aha! moment. The cognitive neuroscience of insight. *Current Directions in Psychological Science,* 18(4), pp. 210–216. DOI: 10.1111/j.1467-8721.2009.01638.x

Krashen, S. (1993). *The power of reading.* Englewood: Libraries Unlimited, Inc.

Leech, G., Rayson, P. and Wilson, A. (2001). *Word Frequencies in written and spoken English: Based on the British National Corpus.* Abingdon on Thames: Routledge. DOI: 10.4324/9781315840161

Marsh, R. K. (1978). Teaching French with the comics. *The French Review,* 51(6), pp. 777–785.

McCloud, S. (1993). *Understanding comics: The invisible art*. 2nd ed. New York: HarperCollins Publishers, Inc.

O'English, L., Matthews, J. G. and Lindsay, E. B. (2006). Graphic novels in academic libraries: From Maus to manga and beyond. *The Journal of Academic Librarianship,* 2, pp. 173–182. DOI: 10.1016/j.acalib.2005.12.002

Pintrich, P. R. and De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology,* 82(1), pp. 33–40. DOI: 10.1037/0022-0663.82.1.33

Popa, N. L. and Tarabuzan, E. O. (2015). Using comic strips in teaching and learning French as foreign language: Changes in motivational beliefs. *Review of Artistic Education*, 10, pp. 273–278.

Tobin, P. and Querio, J. (2014). *The witcher,* vol. 1. Milwaukie: Dark Horse Books.

Tóth, Z. (2008). A foreign language anxiety scale for Hungarian learners of English. *Working Papers in Language Pedagogy,* 2, pp. 55–78.

Williams, N. (1995). The comic book as course book: Why and how. In: *Annual Meeting of the Teachers of English to Speakers of Other Languages.* Long Beach: EDRS. [online] http://files.eric.ed.gov/fulltext/ED390277.pdf [11 August 2016]

Wolk, D. (2007). *How graphic novels work: Reading comics and what they mean.* Cambridge: Da Capo Press.