

Research Article

Assessing the Impact of Audiovisual Translation on the Improvement of Academic Literacy

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Abstract

Audiovisual translation (AVT) or screen translation is a term used to refer to any language and cultural transfer aimed at translating original dialogues coming from any acoustic or visual product. Academic Literacy (AL) is viewed as the ability to cope with the reading, thinking and reasoning demands required of a student entering a higher education institution. An assessment of the impact of AVT on the academic literacy (AL) of freshmen at the University of Buea by exposing them to different types of subtitled popular films namely dramas and documentaries within four months showed a statistically significantly higher improvement in AL levels of groups that saw subtitled films than of a control group that did not see films. Data was collected from the Test of Academic Literacy Levels (TALL) pre-test and post-test developed in South Africa and from observations. The specific areas of improvement in AL were in vocabulary, text comprehension and text editing abilities. A further assessment of possible differences in AL among Anglophones and Francophones who were tested separately showed the same level of improvement thus confirming the fact that intralingual subtitling could be used effectively for the improvement of AL regardless of the film genre and whether English is being studied as a second language (for Anglophones) or third language (for Francophones).

Key Words: Audiovisual translation, screen translation, Subtitling, intralanguage subtitling, academic literacy,

RÉSUMÉ

Encore appelée traduction des médias, la traduction audiovisuelle est un terme qui désigne tout transfert de contenus linguistiques et culturels en vue de la traduction de tout dialogue de source acoustique ou visuelle. La littératie académique (LA) est considérée comme la capacité, pour un étudiant qui entre dans une institution d'enseignement supérieur, à répondre aux exigences de lecture, d'analyse et de raisonnement de ce niveau d'étude. L'évaluation de l'impact de la traduction audiovisuelle (TAV) sur la LA des nouveaux apprenants de niveau universitaire après leur exposition aux bandes télévisuelles sous-titrées pendant 4 mois, indique d'importantes marges quantitatives dans les niveaux de LA des groupes ayant regardé les films sous-titrés, par rapport à ceux du groupe témoin qui n'avait pas regardé ces films. Les données ont été recueillies à la suite d'un test préliminaire et d'un test final du Test of Academic Literacy Levels (test de niveau de littératie académique, TALL) et suite à des observations. Des améliorations ont été enregistrées au niveau des compétences spécifiques de LA suivantes: le vocabulaire académique, la compréhension de texte et la correction des textes. La séparation des cohortes anglophone et francophone a donné les mêmes niveaux de LA atteints par chaque groupe confirmant ainsi que le sous-titrage intralingual pourrait être utilisé efficacement pour tout genre cinématographique.

Mots clés: Traduction audiovisuelle, traduction des médias, sous-titrage, sous-titrage intralingual, littératie académique.

Introduction

The relationship between language proficiency and academic performance for learners at all levels is well known (Borras & Lafayette, 1994). In institutions such as the University of Buea (UB) where the language of instruction differs from the home language of the majority of the students, this relationship is even clearer. In an attempt to prepare students for the linguistic demands of the academic environment, an academic literacy (AL) programme consisting of a number of French and English courses, has been introduced. However, the high failure rate in these courses signals a problem. This has necessitated an investigation of ways in which to effectively promote the AL levels at this institution. Rogner (1992), Bird & William (2002), Kothari et al. (2002), Kruger & Verhoef (2002) and Markham & Peter (2003) demonstrated that subtitling could be used in language teaching, literacy programmes and language proficiency. Caimi (2006) and Gambier (2003) proved that subtitling could be used as an accessibility aid for a target audience which is deaf or as a didactic aid for those who are not familiar with the language spoken in the audiovisual text.

Such intralingual subtitling is a form of audiovisual translation which involves the transfer from oral language into written language as seen in the wide variety of public and commercial television programmes including news, documentaries, dramas, films and advertisements which have been subtitled. However, the specific methodology for utilising subtitling to address specific problem areas in AL learning in particular contexts still has to be established. No research has been carried out yet to support this aspect of proficiency in AL programmes within the Cameroonian context, and the studies that have been done on this issue in other countries, do not address the use of subtitled film as part of existing AL programmes - in other words, as an integrated aid.

This study therefore capitalises on the widespread availability of subtitled audiovisual material by using subtitled popular documentaries and dramas to evaluate their effect on the academic literacy levels of university students. Specifically, it is aimed at investigating whether the AL of university-level students studying through the medium of English as a Second Language (Anglophones) and university-level students studying through the medium of English as a Foreign Language or third language (Francophones), can be improved by exposing them to subtitled popular television series.

Methods

Subjects, Materials and Procedure

The subjects employed were freshmen who had registered for the Use of English (ENG 101) and had been assigned to 65 groups of about 80 each. Five groups were then chosen randomly from these 65 groups for this study with each group having an approximately even distribution of Anglophones and Francophones. The approach involved the use of the test of academic literacy levels (TALL) that was jointly developed by three South African universities (University of Pretoria, North-West University and Stellenbosch University) for both the pre-test and post-test of students.

Large television screens equipped with DVD players and films in DVD format were used for this part of the study with English same language subtitles (SLS). Group 1 watched 12 episodes of popular dramas from season 2 of *Law and Order* (Jankowski & Penn, 2004) without subtitles. Group 2 watched the same episodes as Group 1, but with subtitles. Group 3 watched episodes from two BBC documentary series, *Himalayas* (Davidson & Mills, 2004) and *Egypt* (Fairfax, 2006), without subtitles, while Group 4 watched the same episodes as Group 3 but with subtitles. Group 5 was the control group who did not watch any of these programmes. In the case of test Groups 2 and 4, each episode was shown with the original English soundtrack as well as English subtitles, while Groups 1 and 3 saw the episodes with the original English soundtrack without subtitles. Each episode was approximately 50 minutes long.

The students in all five groups were given the TALL during the first semester (prior to their exposure to the films). An open class discussion**** linked to the current AL course curriculum, was held with the students in Groups 1 to 4 after each particular episode under the guidance of the lecturer responsible for the specific group in an attempt to reinforce any learning that might have taken place. This open discussion which took place in all the four experimental groups, was aimed at ensuring a link between the knowledge acquired by viewing the subtitled films and the current course outline. At the end of the 12 sessions, { a post-test was given to all five groups using the same TALL that was given to them as pre-test}. The pre-test and post-test which were the same, were written approximately four months apart.

There is apparent ambiguity and contradiction between the last two sentences. The first of these two asserts that the post-test was the same as the pre-test. The second states that

they were not the same because the two were written four months apart. There is need for more clarity ***** There is a need to rationalise and justify the role(function) of the 'open class discussion' after each episode . in the research design. Why was this necessary? Could this 'open discussion' not be reponsible (in part at least) for the statistically significant differences between the pre-test and post-test? The point is that in controlled experiments of the type in your research design, you maintain all variables constant except the one whose effect you want to verify. Here you intoude "subtitles" as a variable but you also introduce an 'open discussion' .So the significant difference observed cannot be attributed to subtitles alone. Would you obtain the same results were you to introduce subtitles without the 'open discussion'? You need to reconcile this clearly by showing either that the open class discussion is part of your subtitle variable or else that it does not constitute another variable that is given a special treatment in one group and not the other.

Data collection and analysis

Data used were collected from the TALL pre-tests and post-tess. Biographical data (age, gender, geographical location and language) ere obtained from the academic administration. The results of students in the four test groups who saw nine or more films (more than 75%) were considered since the basis of the experiment was to determine whether sustained exposure to subtitled film has a positive impact on AL levels. Furthermore, only the data of students in the test and control groups who completed both the pre-and post-test were considered. The n-values (where n represents the number of students who saw at least nine films and wrote both the pre- and the post-tests) of the five groups after cleaning were as follows: Group 1: n=22; Group 2: n=28; Group 3: n=29; Group 4: n=27; Group 5: n= 47. Each group still had an approximately even distribution of Anglophones and Francophones.

The data was reported at either statistically significant results at a 95% confidence level where $p < 0.05$ or at statistically highly significant results at a 99.9% confidence level where $p < 0.001$ (where p represents the statistical significance testing). Furthermore, the results that revealed statistical significance were reported in terms of practical significance or effect size using Cohen's D (Cohen, 1988). Here $D < 0.2$ indicates no p ractical significance, $0.2 < D < 0.5$ indicated small practical significance, $0.5 < D < 0.7$ medium practical significance and $D > 0.7$, large practical significance . The effect size (Cohen's

D) provides information on the practical significance of the improvement of the experimental groups when compared to the control group and does not depend on the size of the sample. This information is used to support the statistical significance, especially in view of the fact that the final sample was smaller than the initial sample.

Test description

According to Butler (2007), the various TALL sections are described as presented in table 1

Section	Description	Marks allocated
1	Section 1 involves the recognition of text relations.	5
2	Section 2 tests academic vocabulary.	20
3	Section 3 deals with visual and graphic literacy.	6
4	Section 4 tests the ability to recognise different written text types and registers of language use.	5
5	Section 5 includes a longer text that students have to read and subsequently answer comprehension type questions on the content of the text.	49
6	Section 6 assesses a number of AL abilities such as vocabulary, word order and sentence construction.	15
7	Section 7 provides students with the opportunity to produce a short written text. This last section was not considered in this study because only a few students actually completed it. Therefore no mark was allocated to it.	-
	Total ----->	100

From the above description of the TALL, it should be evident that the test measures a series of functional AL abilities, culminating in the integration of different abilities in sections 5 and 6. These two sections constitute 64% of the marks of the first 6 sections (49% in the case of section 5 and 15% in the case of section 6), and the section on academic vocabulary (section 2) constitutes a further 20% of the marks. It can be deduced from this that the weight of these three sections provides an

indication of the relative importance of these AL abilities in the mind of the development team. Section 1 (recognition of text relations), 3 (visual and graphic literacy) and 4 (recognition of different text types and registers of language use) constitute 5%, 6% and 5% respectively.

Results and interpretation

Comparison of variation in AL levels overall and per section

A summary of the t-tests are provided in Table 2. Only statistically significant and highly significant results are reported here (the latter in boldface).

All cases where $p < 0.05$ are as indicated. All the p-values that are not highlighted in this table are reported at a 95% confidence level while those with $p < 0.001$ (the 5 highlighted cases) are reported at a 99.9% confidence level. The means graph of the average results in the pre-test and post-test (Figure 1) and table 2 including the effect sizes provide a good indication of the sections that improved due to the impact of subtitles. The differences that occurred between groups that saw subtitles and groups that did not can also be seen on table 2.

There was overall improvement from pre-test to post-test for all the groups, but the groups that saw subtitled material had statistically highly significant improvement ($p < 0.001$) while those that saw films without subtitles displayed statistically significant improvement ($p < 0.05$). The statistical significance of the groups that saw material with subtitles had a large effect size whereas the statistical significance of the groups that saw the

material without subtitles had a medium effect size.

The open discussions after viewing each episode could not really be responsible for the statistically significant differences between the pre-test and the post-test because the two groups (G2 & G4) that viewed films with subtitles performed overall better than the two groups (G1 & G3) that viewed films without subtitles. The implication here is that viewing films with subtitles improved the performance of the groups since all the four groups participated in the open discussions.

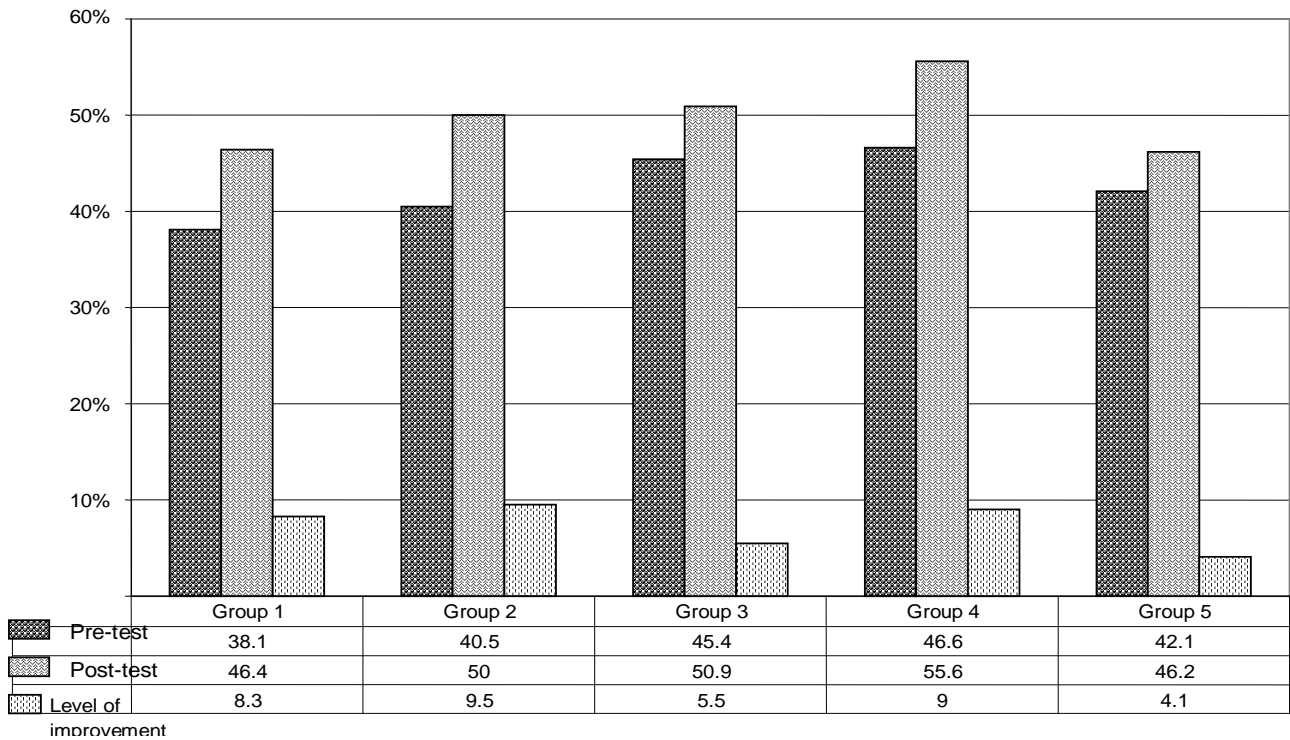
In terms of improvement in individual sections (table 1), sections 2, 5 and 6 had statistical significance.

Section 2 tests general academic vocabulary. The only groups that had statistical significance in this section were the two groups (combined) that saw subtitled films and the group that saw subtitled dramas. This seems to indicate that involved processing of film with subtitles improves academic vocabulary. The fact that G2 also showed statistically significant improvement when compared to G5 seems to suggest that the involved processing resulting from exposure to a rising line of action in the plot of a drama that makes use of a more formal register like the legal language in this series, could be instrumental in improving academic vocabulary.

Section 5 tests a variety of abilities, the main ability being reading comprehension. This section (table 2) shows that G1 that saw dramas without subtitles performed better than the rest of the groups in this section although G4 that saw documentaries with subtitles did better than G3 that saw films without subtitles. A possible explanation

Table 2: Summary of t-test results and effect sizes

	Type of data used and group(s) involved	Improved section (s)	Sig. (p)	Cohen's D	Effect size
1	No subtitles vs. With subtitles (G1&G3:G2&G4)	Section 6	0.019	0.428	Small
2	No subtitles vs. Control Group (G1&G3:G5)	Overall Section 5	0.004 0.030	0.575 0.418	Medium Small
3	Subtitles vs. Control Group (G2&G4:G5)	Overall Section 2 Section 5 Section 6	0.000 0.019 0.011 0.000	0.784 0.434 0.462 0.702	Large Small Small Large
4	G1:G5	Overall Section 5	0.015 0.019	0.561 0.596	Medium Medium
5	G2:G5	Overall Section 2 Section 6	0.000 0.003 0.000	0.804 0.653 0.870	Large Medium Large
6	G3:G5	Overall Section 6	0.023 0.040	0.487 0.461	Small Small
7	G4:G5	Overall Section 5 Section 6	0.000 0.011 0.018	0.764 0.578 0.528	Large Medium Medium



for the statistically significant improvement of G1 could be that the group that saw the dramas without subtitles could follow the audio channel better in this genre that involved the reader through a rising line of action, resulting in increased comprehension based on the auditory channel and on the non-verbal visual channel. In other words, the group that saw the dramas with subtitles could have been distracted from the action by having to read the subtitles whereas the group that saw it without subtitles had more direct access to the fast-paced action and fast editing of scenes. What is interesting here is that what is gained in one respect, i.e. capturing learners' attention, is lost in another, that of students probably being distracted regarding their concentration and thus processing ability because of the addition of subtitles to the dramas. This interpretation warrants further and more structured investigation, although it also confirms the findings of Smith (1990) concerning the improvement of vocabulary and comprehension because of exposure to language (subtitles) in context.

The various AL aspects tested by section 6 include vocabulary, word order and sentence construction. In this section there was statistically highly significant improvement in G2&G4 combined when compared to the control group (Subtitles vs. Control Group) with large effect size; in G2 when compared with the control group (G2:G5) with large effect size; as well as in G4 when compared to the control group (G4:G5) with large effect size. Since section 6 tested various

interrelated abilities, and based on the fact that the improvement of the groups that saw subtitled dramas in particular and subtitled films in general was statistically highly significant, it could be said that adding subtitles to dramas will lead to an improvement in performance on AL tasks where students need to make use of their abilities in an integrated manner, especially where a coherent context is created for such integrated tasks. This correlates closely with the results for section 5 of the TALL.

The fact that the improvement for students who saw dramas with subtitles was slightly higher than those who saw documentaries with subtitles, connected to the fact that these dramas contain a lot of action and are usually captivating, implies that a high level of information processing was involved. The students were probably so captivated by the subtitled drama films that they needed to concentrate in order to process the information they were seeing. The interviews conducted with these students confirmed this. There was neither statistical significance nor practical significance when comparing the two groups that saw subtitled films with each other (G2 and G4) thus, either subtitled dramas or documentaries could be used to improve AL.

G2:G4: $t = 0.181$ [df = 53, $p > 0.05$]; no practical significance

This is equally true in terms of comparing Anglophones and Francophones:

Anglo: $t = 0.61$ [df = 30, $p > 0.05$]; no practical significance

Franco : $t = -0.70$ [df = 21, $p > 0.05$]; no practical significance

The students' positive attitudes towards viewing dramas, is an indication that dramas may actually be the better film genre for use in terms of improving AL levels based on the engaging nature of these texts even if the subject matter may be further removed from students' fields of study. The formal nature of the language used as well as the argumentative structure used in the specific dramas do, however, show a close affinity to how English is used in a tertiary academic environment.

The fact that exposure to audiovisual material in general involves more processing of language that results in increased AL levels, as well as the fact that the groups that saw films with subtitles in general improved more than the groups that saw films without subtitles, indicates the presence of more involved processing. This implies that the students were able to attend to and fully process both the text they were viewing as well as the sound. This is demonstrated by their performance in sections 5 and 6 that test a range of integrated AL abilities. The present results indicate that information developed from text and sound both add up to improvements in the processing of spoken words. The fact that the group that saw dramas consistently improved significantly seems to indicate an even higher degree of involved processing that could be related to the fact that the drama series (and the genre in general) has a rising line of tension that inevitably involves the viewer more.

Discussions

The outcome of this study confirms the view of Baltova (1999) who demonstrated that bimodal (sound and text) video is an effective way of improving learners understanding of authentic texts and their learning of content and vocabulary in the second language. Bimodal video provides simultaneous exposure to spoken language, printed text, and visual information, all conveying the same message. Thus subtitling which makes it possible to present speech, text and supportive visual context simultaneously, thereby making lessons accessible to students who use different types of learning strategies, can be used with heterogeneous groups of students as equally confirmed in this study (Spanos & Smith, 1990). This is more so because the

UB students come from diverse (heterogeneous) backgrounds and therefore may have different learning strategies.

According to Smith (1990) subtitles (captions) facilitate the identification of the written types of vocabulary that is easily recognised by the students, and reinforce the meaning in an audio and video presentation as demonstrated in this study. This is further confirmed by Vanderplank (1990) who demonstrated that subtitling provides easier access to the target language (by virtue of the fact that it appears on the screen to be read) resulting in greater comprehension and learning.

Conclusion

The findings of this study could therefore be said to indicate that subtitles do have a positive effect on students' AL levels in higher institutions. This is most evident in the overall improvement of AL levels, as tested by the TALL as a whole. The fact that the groups specifically also improved in those areas tested in sections 2, 5 and 6 of the TALL where a range of integrated AL abilities are involved, is an indication that the increased linguistic processing that results from prolonged exposure to audiovisual material in English (especially with English subtitles), has a positive effect on the English AL levels of tertiary students.

A comparison between the subjects in G2 that viewed subtitled dramas and those in G4 that viewed subtitled documentaries gave no statistical significance. This means that any of the two audiovisual genres could be used to improve AL.

A comparison between the Anglophone and Francophone students as separate groups gave no statistically significant difference.

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