



Cultural Schemata as a Scaffold for L2 Lexical Acquisition: A Longitudinal Study on Reversed Subtitling with Rural Polytechnic Learners

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Abstract: The students from the rural areas in polytechnics are facing difficulty in expressing their ideas in English. Frequently, students have only a limited vocabulary to enable them to comprehend technical material and to communicate their thoughts clearly. This is why vocabulary enhancement is crucial to language enhancement. In order to fill this gap, the present study looks at the effectiveness of 'reversed subtitling' as a remedial method for vocabulary development. The reverse subtitling approach is when the audio is in the native language (L1) of the learners, and the subtitles are in the target language (L2). This study is based on Dual Coding theory and recent study of Baranowska (2020) with a single group pre-test and post-test design with sample of 60 diploma students from Government Polytechnic, Yadagirigutta. The popular Telugu film Mirchi (2013) was used as the main teaching material. Structured activities are used before, during and after viewing to assist the students in relating familiar concepts in the native language with the English words. The results show a statistically significant improvement ($t(59) = 14.2, p < .001$) in the participants' capacity to recall and use complex English words in context. The study indicates that it is possible to decrease cognitive load by using reversed subtitling. The L1 sound is used as an emotional reference, and the L2 text is read to help students concentrate on L2 learning.

Keywords: Reversed Subtitling, ELT in India, Affective Filter, Lexical Mapping, Polytechnic Education, Mirchi.

1. Introduction

The opportunities to learn English are less among the rural students than the urban students in Telangana. This is particularly true of the polytechnic sector. Students who learned in the regional languages find that there is a switch to learning with English in technical courses. The researcher has been observing at Government Polytechnics that students are at a cognitive maturity and technical capability for engineering education. But they do not have the English language skills to convey these technical skills. The issue isn't that students aren't as smart. They are afraid of speaking and nervous, so they don't want to speak English fluently. This psychological barrier is known as a "high-effective filter", according to Krashen (1982).

Students from rural areas may be less proficient in English as they do not have the opportunities to speak or hear English in their daily life. With such limited exposure, many traditional English Language Teaching (ELT) techniques prove to be less effective. For instance, there are some tasks in the classroom where students are expected to listen to L2 texts with L2 subtitles or watch videos without any teacher assistance. These activities assume that the learners can already understand much of what is being said, and has adequate basic knowledge of English. But this is not the case for many of the intermediate level rural learners. Such techniques can work well for the more experienced language learners; however, they may be too challenging for students with fewer language experiences. Learners in rural areas are often unable to recognize words and phrases in fluent spoken language. Consequently, they cannot effectively benefit from the use of subtitles, thus reducing the learning value of the audiovisual material.



The following study is one attempt to meet these challenges, and in this study, a different approach is taken in the use of audiovisual materials in learning English. It does not use English audio with English subtitles but rather reversed subtitling by which students watch a familiar Telugu movie with Telugu audio (L1) and English subtitles (L2). The well-known Telugu film 'Mirchi' was chosen for this study because most of the students are familiar with the story, characters and dialogues of the film. Learners are able to follow the spoken Telugu since the content is easily understood. This will enable them to concentrate on the English subtitles and highlight the way in which the thoughts in Telugu are conveyed in English. The film takes on a deeper meaning for the viewer. It is a valuable language learning tool for students to develop their vocabulary, understanding of sentence structures, and links between their native language and English in a comfortable and less daunting setting.

2. Literature Review

2.1 The Evolution of Subtitling Research

Over the years the role of subtitles in the process of language learning has undergone significant changes. The use of the target language (L2) was generally discouraged in the early years of language teaching. In the opinion of many, repeated contact with the target language would result in improved language learning. Consequently, L1-based support (such as subtitles) was not regarded as being effective for language development. This perspective has slowly been altered over time. However, research has revealed that the first language can be helpful in the acquisition of the second language if it is used properly. L2 support should not hinder learning but should enhance the way in which meaning is understood and help to make new words and expressions in L2 easier to access in terms of their connotations for the learner. This process will promote meaningful connections between the learner's L1 and L2. These links can enhance vocabulary development, comprehension and language development in general. The findings give a solid foundation for the study of approaches including reversed subtitling, particularly for the learner with limited knowledge of English.

2.2 Reversed Subtitling: An Underutilized Resource

Reversed subtitling is one of the most powerful, yet least studied, methods at the ELT's disposal. It was one of the first to be recognised by Lambert et al. (1981) as a "potentially valuable direction for change". These are based on the principles of cognitive load reduction. Baranowska (2020) theorises that as the decoding of the audio diminishes, the learner has more mental energy for the decoding of the written text.

Danan (1992) had presented the compelling argument that the best effect on vocabulary recall is that of reverse subtitling. This is because the translation process creates links between two verbal systems, the auditory L1 and the visual L2, thus forming more pathways of memory retrieval. In this mode, the learner's linguistic identity is recognized and validated, and at the diploma level it acts as a scaffold to the target language.

2.3 Beyond Passive Viewing

Mere exposure to watching English films is insufficient. The amount of learning that takes place depends on the "viewing mode" and design of instruction, as Baranowska points out. Teachers need to encourage 'extensive viewing' and even add active assignments to ensure that it does not become 'passive entertainment'. The current study addresses this by implementing a rigorous TBLT (Task-Based Language Teaching) framework around the viewing experience.

3. Methodology

3.1 Participants

The total number of first year students in Diploma in Electrical and Electronics Engineering (DEEE) programme of Government Polytechnic, Yadagirigutta, Yadadri Bhuvanagiri District of Telangana, India were 60. The age range of the participants was 16-19 years. A large number of them had passed the Secondary School Certificate



(SSC) exam from vernacular medium background like Telugu and Urdu media. Their level of English was at CEFR A2 to B1 (low-intermediate level) based on their performance in the classrooms and language skills. The students, who were all previously viewers of Mirchi in Telugu were acquainted with the story and dialogues of the film. But, none of them had seen the film with English subtitles before taking part in the study.

3.2 Instructional Material

The study was conducted on Telugu action-drama Mirchi 2013 starring Prabhas. The choice of the film was made because it is well known to the participants and most of the students already knew the story, characters and dialogues of the film. It also has a number of regular expressions, as well as emotional dialogues which offer useful language-learning opportunities.

3.3 Procedure

Two weeks were used for intervention. It was made up of 10 teaching hours. The pedagogical procedure was pre-viewing, during viewing and post viewing. The key vocabulary and contextual information were introduced through pre-viewing activities. When viewing tasks were centred on comprehension and language use. Discussion, self-reflection on scenes and oral communication practice were promoted through the post-viewing activities.

A) Pre-Viewing Task

To build learners' background knowledge and to foster curiosity, pre-viewing activities were designed before the screening, which did not give learners the target English expressions.

Activity A: The instructor read some common Telugu sentences from the selected movie (e.g., veelaithe premidham dude) and asked students to guess its English translations. This task produced a useful word gap as learners knew what they wanted to say but were looking for the English equivalents, leading to an emphasis on subtitles and the words they were viewing.

Activity B: students were given a list of target words (e.g., reconciliation, immortal, vengeance, stature, and rivalry) and were asked to guess what might happen or whose character might be mentioned in reference to these words. This prediction activity helped the learners to think in anticipation and to make their visual and contextual scanning better when watching the film.

B) While-Viewing

The while-viewing phase was the focal point of the intervention. The students were not supposed to watch the movie but listen to the Telugu dialogue and pay attention to the English translation. The content of the activities was framed to ensure that the learners remain active in the meaning, vocabulary and form of the English subtitles.

- **Spot the Equivalent**

The students were provided with a Telugu word sheet from the movie from which certain Telugu words were selected. They were to identify and write the English word/expression in the subtitle that corresponds to the phrase that was spoken. In this activity, students became aware of familiar ideas that were being expressed in English.

- **Semantic Judgment**

Students were provided with red and green cards to differentiate between types of subtitle translation. The green card was raised when the literal meaning of the Telugu script was conveyed in the English subtitle and the red card when a conceptual/idiomatic adaptation was used to convey the meaning. This prompted students to make a comparison between the two languages and identify differences in their expressions.



- **Pause and Predict**

The video was paused at important moments in the movie, at a number of key points. Students were asked to write one English sentence that they thought the next subtitle would communicate. The video was then played again and students were able to compare their predictions with the transcribed dialogue. This activity prompted anticipation, contextual awareness and active use of English.

C) Post-Viewing

The post-viewing part concerned consolidating the language acquired in the screening and provided the students with opportunities to practise the language on their own. The activities were shifted from comprehending the subtitles to creating English in novel scenarios. This phase also gave an opportunity to determine how well the students could use the new words and expressions that they had learned in the context of the film.

- **Dubbing the Hero**

Students were divided into groups of three and each group was given one of the selected scenes from the film. The scenes were acted without any sound, and learners were requested to dialogue in English. They were encouraged to use the target vocabulary and expressions that were introduced in the viewing activities. This task encouraged students to discuss collaboratively, practice their pronunciation and produce spontaneous language.

- **Contextual Rewriting**

Students were asked to recall “punch dialogues” from the film and compose similar dialogues for a formal context. For instance, the warning or confrontation from the film could be converted to a formal letter of complaint. The activity involved the students in changing the meaning while changing the vocabulary, tone, and level of formality. It thus served as a chance to practice register and to become familiar with the use of language that varies depending on the context.

4. Data analysis and results

A 50-item vocabulary test was used to assess students’ vocabulary knowledge before and after the intervention. The pre-test and post-test were the same assessment before and after the two week intervention. The test was given with respect to three aspects of vocabulary learning. The first was the ability to identify words by multiple-choice questions. The latter was interpreting Telugu words or expressions in English. The last one was to form sentences with new words. The students' pre-test and post-test scores were analyzed and compared to determine the vocabulary gain of the students following the intervention.

Table 1: Comparison of Pre-Test and Post-Test Scores (N=60)

Metric	Pre-Test Mean	Pre-Test (SD)	Post-Test Mean	Post-Test (SD)	t-value	p-value
Total Score	14.2	3.8	38.6	4.1	14.24	<0.001

4.1 Quantitative Findings

The comparison of pre-test and post-test scores shows a substantial improvement in students’ overall vocabulary performance following the intervention. The mean score increased from 14.20 (SD = 3.80) in the pre-test to 38.60 (SD = 4.10) in the post-test. This represents a mean increase of 24.40 points. The relatively similar standard deviations indicate that the variability in students’ scores remained broadly comparable across the two assessments. The reported t-value of 14.24, with a significance level of $p < .001$, indicates that the difference



between the pre-test and post-test mean scores was statistically significant. These findings suggest that students demonstrated significantly higher vocabulary scores after the intervention than before it.

4.2 Qualitative Observations from the While-Viewing Phase

Observations from the Semantic Judgment task indicated active engagement with the relationship between the Telugu dialogue and its English subtitles. Students frequently compared the meaning and strength of different English expressions used in the subtitles. For example, when the Telugu dialogue used the word *paga* (revenge), the English subtitle used *vengeance*. During the activity, some students observed that *vengeance* sounded “more powerful” than *revenge*.” Such comments suggest that the reversed subtitling approach encouraged students to notice differences in meaning, intensity, and word choice between related English expressions. The activity therefore provided learners with opportunities to develop greater awareness of lexical nuances through contextual exposure.

5. Discussion

5.1 The Language of the Anchor Texts

The results indicate that using L1 audio might have been of relevance for cognitive and affective support as it has been provided to learners throughout the intervention. Listening to familiar Telugu dialogue with English subtitle for the students with limited exposure to English gave them a more accessible launching pad to English. The familiar narrative and voices made the task of processing English input less challenging and freed students' attention to focus on the L2 words and phrases.

This supportive learning environment may have been further enhanced by the use of the film familiar to the participants, *Mirchi*, which is a Telugu film. Students were not learning English as a traditional classroom activity, but rather they were viewing an English-language film and paying attention to the English-language subtitles. This association helped them to relate words in Telugu with new words in English. These links could have helped to retain the vocabulary because they provided translation equivalents and context links for learners. This is in line with Hummel's observation (2010) that the translation equivalents can create multiple memory traces, which in turn aids vocabulary learning.

5.2 Incidental Exposure to Intentional Learning.

While-viewing activities, as described in this study, were developed to make incidental vocabulary learning more intentional and meaningful, but there is no doubt that the materials created in the study will allow opportunities for incidental vocabulary learning. During ‘the Spot the Equivalent’ task, students had to listen to the Telugu dialogue carefully, and match it with the English subtitles. Since the students were asked to identify and record specific words/expressions in English in relation to the films, they were required to pay attention to the language input itself and not just the film itself.

The purposeful interaction seemed to have promoted students' conscious perception of new words. The activity was thus a way to shift incidental learning brought about by watching movies into more deliberate learning. The results of this study support Baranowska's (2020) perspective that stimulating response to audiovisual input can improve language acquisition, which is beyond listening and watching. The findings also indicate that attention to carefully-designed viewing tasks is useful in getting learners to look, interpret, and remember words from a new text.

5.3 Lexical Salience through Dual Coding

The findings are consistent with Dual Coding Theory which focuses on the importance of multiple representations to help with learning and recall. In the reverse subtitling condition, students were exposed to the English words on the subtitle panel and the Telugu audio in the movie; the meaning was also conveyed by the movie's visuals



and storyline. This dual source of information for understanding and recalling new words gave learners a greater chance of interpreting and remembering new words.

In this instance, the word vengeance appeared in a dialogue between opposing sides, in the context of emotion in the characters and in visual action. So the word had an impact on the reader not only in terms of what it meant, but also what it sounded like, what it looked like, and what was happening around it. This context-richness could have enhanced the salience of the vocabulary words to be learned, and facilitating their retrieval on the post-test. This interpretation is in line with Ellis (2017), who emphasises the importance of salience and attention in directing learners' cognitive processing towards language items. Based on the findings, it seems that providing L1 audio in conjunction with L2 subtitles and providing meaningful L2 visual context might be conducive to vocabulary acquisition and retention.

5.4 The possibility of L2 Subtitles Redundancy

A possible drawback of reversed subtitling is that learners might not be inclined to read the L2 subtitles after hearing the L1 information. This study, however, indicates that the design of the while-viewing tasks facilitated students' attention to the English text. A major part of the activities involved comparing the English subtitles and the Telugu dialogue, highlighting similarities and differences in meaning and expression, as seen in activities like 'Spot the Equivalent' and 'Semantic Judgment.'

These tasks led to the subtitles having a clear learning goal as opposed to being used as auxiliary text. Students were given the freedom to analyze the choice of words used by the translator and contrasted with their own interpretation of the Telugu conversation. This comparison asked students to consider the meaning that the same concept might have in the two languages. This process can be linked to metalinguistic awareness as students were encouraged to be conscious and aware of aspects of language such as word choice, meaning and differences in expression. The results thus indicate that providing L2 subtitles in a suitable L2 task could make it less likely for students to ignore the L2 subtitles when listening to L1 audio.

6. Conclusion

In this study, the use of 'Reversed Subtitling' technique, which is L1 audio subtitled in L2, was looked at as a technique to support the learning of the vocabulary for diploma students. The results indicate that the method has potential to give the students an easy and meaningful access to English vocabulary through the familiar Telugu dialogue in conjunction with the written English forms. The familiar film *Mirchi* was also used as a culturally appropriate medium in which students would be exposed to and understand new words.

There was significant improvement in the overall vocabulary scores in the pre test and post test with the mean score rising from 14.20 with SD = 3.80 to 38.60 with SD = 4.10. This statistically significant difference was observed between the two assessments ($t = 14.24$, $p < .001$) showing that students performed significantly higher after the intervention. Finally, qualitative observation indicates that learners tended to focus on the English subtitles, compare the language and notice differences in meaning and language choice when engaging in the while-viewing activities.

The study thus suggests that Reversed Subtitling can be used as an additional vocabulary learning technique in the situations where the learners are exposed to minimal English, but familiar with AV materials in their native language. The value of this seems to be not only the provision of translation assistance, but the making of meaningful links between the meaning of L1 and the form of L2, and the visual context. However, the results are applicable to the context of this intervention. More and varied studies involving larger samples of students, comparison groups of students, delayed post-tests, and assessments of productive language use would provide additional evidence of the retention of the vocabulary gains over time and the transfer of them to a larger communicative repertoire.



Overall, the study demonstrates how familiar cultural and audiovisual resources can be incorporated into language pedagogy without excluding learners' existing linguistic knowledge. Rather than treating the L1 as an obstacle to English learning, Reversed Subtitling provides a structured way of using it as a bridge towards greater engagement with the target language.

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