School of Education

English Pedagogy

“Using Total Physical Response through Storytelling (TPRS) to enhance vocabulary learning in High School”

This research was carried out to obtain a university degree as a teacher of English

Degree Seminar

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Abstract

This classroom-based research explores the effectiveness of the application of the Total Physical Response through Storytelling (TPRS) approach in order to enhance 9th grade learners’ vocabulary learning. This study took place in an EFL classroom in a technical public high school in Recoleta, Santiago. The intervention consisted on enacting three stories using physical movements, gestures and aural input. This research uses a quantitative methodology, therefore data was collected using as pre and post implementation achievement tests, a survey and an observation protocol. The outcomes of this research concluded there was an increase in students’ capability to recognize unit-related target vocabulary words from an arranged set of lexis.

Keywords: Total physical response, vocabulary learning, teaching approach, TEFL
Introduction

The site where this research was undertaken was “Juanita Fernández Solar”, a secular technical public high school located in Recoleta, Santiago, whose student body consists of 672 pupils from 9th up to 12th grade. Students come from a socio-economically disadvantaged lower-middle class families. The school implements socio-emotional and educational programs to reduce students’ drop-out, drugs and alcohol consumption, and crime rates. Specifically, the study was focused on a class group made up of 22 students (12 female and 10 male 9th grade students). This grade has a tutor teacher who works along with a teacher-trainee, and a teaching partner who helps 4 disadvantaged students that are part of the School Integration Program (SIP). Based on systematic observation and exploratory inquiry, it was concluded that students seemed to lack motivation to participate or learn in the English class due to the repetitive use of the Grammar Translation (GT) method, as well as other social factors beyond school boundaries that impacted on students’ willingness to participate in classes (such as family relatives’ imprisonment, poverty, drug traffic or domestic violence).

Therefore, the aim of this investigation was to broaden current knowledge of the effectiveness of Total Physical Response through Storytelling (TPRS) in students’ vocabulary learning. The term Total Physical Response (TPR) was initially used by Asher (1969) to theorize that listening comprehension combined with physical responses and commands were the basis for all other skills development (speaking, reading, and writing) in effective vocabulary language learning. Previous work has frequently been limited to young learners and TPR. Nonetheless, Asher also conjectured that adults studying a second language would demonstrate comparable impressive gains as well (Nilson et al, 2008). TPRS is a related model, however, that correspondingly includes storytelling by the teacher (Slavic, 2007). This method was originally
promoted as an extension of TPR by Ray (2004), a high school Spanish teacher in the 90s, who sought to situate TPR in real-life contexts using reading and storytelling techniques to help students create meaning and sense of the language. This teaching method is used to teach abstract vocabulary that cannot only be enclosed through TPR but also used in real life application (Miller et al., 2008). As a result, “TPR Storytelling is completely planned and methodical. Stories are invented, using specific vocab [sic] items/expressions. TPR is wonderful for long term (memory) retention of individual vocab items, and the storytelling helps the learner contextualize the vocab and use it in relevant ways” (Gaab, 1997). For this reason, this research was designed to benefit two groups: 9th grade students and English teachers at the school. On one hand, students will benefit as it will help them potentially acquire more vocabulary that will impact on their confidence and affective filters when it comes to learning (Krashen, 1988). In addition, this approach can influence on the substantial language construction that will aid students to achieve more abstract and complex language structures. On the other hand, the teachers of English at school will have a deeper understanding on how effective this teaching model is while being strictly related to the school and classroom contexts. This will provide them some insights concerning the implementation of this approach in the English curriculum. Furthermore, this investigation will allow critical reflection on the outcomes of this initiative in order to contribute teachers’ professional development and flexibility. Having acknowledged such elements of the rationale for this initiative, the design of this research followed a systematic and logical step-by-step implementation of a quantitative-oriented method to pursue a long-term change in students’ learning according to Burn’s (2010) advice.
This investigation sought to address the following research question: “How effective is using the Total Physical Response by Storytelling (TPRS) approach in enhancing the vocabulary learning in a 9th grade EFL class?”

**Methodology**

This investigation explored the effectiveness of TPRS in vocabulary learning by means of a quantitative methodology. For the sake of clarity, this methodology was chosen due previous empirical research done in the field of TPRS where authors have measured TPRS quantitatively.

Fahrurrozi (2017) explored how using TPR affected the vocabulary learning outcomes through one pre- and another post-test to gather data in regards of the mastery students could achieve in vocabulary learning, which sustains a substantially grounded data to compare results.

Likewise, Kariuki and Bush (2008) investigated the effects of TPRS contrasted with Grammar Translation (GT) approach impact on learning a foreign language in a high school context. Even though this research aimed at comparing these two approaches, its quantitative nature through tests enabled the attainment of information about vocabulary achievement. Similarly, Khorasgani (2017) compared another approach to TPR where he applied a quantitative methodology for data collection. Furthermore, Castro (2010) was extremely meticulous with the quantitative method in contemplation of inferential statistics to explain the outcomes. Additionally, other studies (Oliver, 2012; Varguez, 2009) quantitatively focused on the use of pre- and post-achievement tests as well. Armstrong (2008) also implemented a survey in addition to pre- and post-tests to gather a more insightful knowledge of the factors about TPRS effectiveness.
These quantitative studies allow this research to attain a research scope to seek the answer for the research question since the data collected will quantitatively prove (or not) how effective in TPRS in vocabulary learning. Moreover, the procedures undertaken and the quantitative methodology in these studies aided in the implementation of a procedural and sequential assortment of data sources, which facilitated a clearer guidance of the data analysis to accomplish a rigorous and reliable understanding.

Prior to commencing the study, ethical clearance was sought from a suitable permission form signed by the headmistress of the institution (see appendix A for entire document) for the data collection process. Data were gathered from multiple sources at various time points during the collection process. The tools designed to gather evidence were divided into three groups: Pre- and post- achievement tests, an observation protocol and a survey.

Firstly, listening achievement tests were implemented to quantify students’ vocabulary mastery pre and post implementation of the TPRS initiative (see appendix B). To attain assessment validity, the pre and post tests were identical, and focused on the listening skill through lexis recognition due to the fact that TPRS evaluates the receptive skills as a starting point towards productive skills. This is a suitable strategy to collect evidence, as Fahrurrozi (2017) stated, in that it serves to “see the increase of students’ vocabulary mastery from the pretest to the post-test” (p.120). In addition, Khorasgani (2017) administered such listening pre- and post- tests under the same conditions to avoid lack of reliability. Likewise, Castro (2010) as well as Kariuki and Bush (2008) implemented achievement tests to analyze the findings with a quantitative approach. These studies concluded evidence-grounded conclusions by justifying their findings through the statistical analysis of their outcomes, which is the supporting methodological literature for the data collection of this investigation.
Secondly, an observational protocol was used to allow observation during the implementation of the initiative based on four main criteria: Body language, Consistent focus, Student confidence, and Fun and excitement (see Appendix C). In regard to this approach to data collection, this protocol reflected different dispositions or behaviors connected with language learning factors. Ray and Seely (2004) discussed how students’ attitudinal response impact on the learning effectiveness. Thus, these authors inspired the creation of this observation protocol to gather, from an observational source, more evidence that can be quantitatively measured to respond the research question.

Thirdly, a survey (see Appendix D) was implemented in order to obtain a deeper understanding on how outcomes relate to each other. This tool focused on asking participants about previous formal English teaching experiences and elements of TPRS that might have helped or hindered their learning. Armstrong (2008) implemented a similar survey inquiring the participants about elements that they like performing in English classes concerning language learning prior and post intervention. This study enables a clear comprehension on how pupils’ knowledge and cognition about their own learning influence on the effectiveness of the TPRS approach based on statistical numerical analysis.

The triangulation of the above-mentioned data collection instruments provided sufficient and meaningful correlation of all aspects of the evidence in order to accomplish a deepened understanding of the effectiveness of TPRS in this classroom context.
Findings

Data was collected from 22 participants and what follows is an analysis of the pre- and post-tests conducted during this research.

Initially, prior to TPRS implementation, a listening test was administered in order to collect evidence on how much previous knowledge students’ possessed, quantified by the numbers of words they recognize in regards of the lexis of the unit. Subsequently, post TPRS intervention the identical test was applied.

![Comparison between Pre vs. Post Implementation scores](image)

**Figure n.1 - Pre and post Tests Score Results**

As observed in figure n.1, the blue bars refer to the pre-test results whereas the orange ones represent the post-test outcomes. In the first administration of this test, 45.5% of the students, (which equates to 10 students) obtained 10 or more score points out of 16 total points in contrast with the 54.5% of the students that amounts 12 of them, obtained 9 or less points, which resulted in a failing mark (inferior to 4.0) according to the Chilean Ministry of Education normative.
Conversely, as an outcome of the second administration of this test, 91% of the students, (that is, 20 students), accomplished 10 or more score points, which lead to a passing mark whilst the 9% of the students (meaning 2) obtained a range between 6 to 9 score points. A comparison between the two results revealed that the increase of students’ minimum passing mark was doubled from 45.5% to 91%. According to Varguez (2009), the improvement effect size in vocabulary learning in TPRS is measured using the correlation \( (r) \) of the results, which in this case is 0.4. This numerical coefficient can be categorized between medium \( (r = 0.3) \) and large \( (r = 0.5) \) effect size. Based on the rising trend of the data, it can be suggested that there is a potential augmentation in regards of 9\(^{th} \) grade students’ vocabulary learning using TPRS.

![Figure n.2 – Circular graph of years of students’ formal English classes at schools](image)

Based on the previous evidence, it is relevant to note students’ previous formal input of the target language learning to explain students’ initial results. In order to gather another perspective that enables this research to explain why many students were not able to achieve the minimum passing score, participants were asked how many years they have had formal English classes at
school (see appendix D). Based on figure n.2, 59% of the students had experienced more than 6 years formally studying English. However, equally the remaining 41% of students less exposure the English language (with less than 6 years). This data explains and creates meaning for the initial results of students’ pre-test results.

The next section of the findings presents the outcomes of the observation protocol (see Appendix C), which was used during the implementation of the TPRS initiative to assess students’ behavioral and attitudinal responses and their impact on the effectiveness of language learning (Ray & Seely, 2004).

![Frequency of Students' Behaviour in the TPRS intervention](image)

**Figure n.3 – During implementation observation protocol**

This data provided the largest set of significant clusters of evidence. As seen in figure n.3, in regards of body language, 16 out of 22 students show that they were paying attention almost always during the activity based on their physical stance. This reinforced the fact that attention in language input impacts on the efficacy of the learning outcome. Correspondingly, consistent focus was shown by 16 students out of 22 as well, which exhibits that concentration and minimum disruption occurred during the development of the TPRS activity.
This study found a statistically significant increase concerning the student confidence, and the fun and excitement criteria. The ranges between 12 to 14 students, being 54.45% to 63.63% of the class, not only portrayed that pupils often displayed limited need of coaching to perform the required commands but also demonstrated student enjoyment during the language input, which is a positive revelation since the implementation attested its effectiveness based on quantified behavioral evidence using the observation protocol.

If we now turn to the third instrument used in this study, the survey (see appendix D) focused on the elements that either helped or hindered students’ vocabulary learning according to their perception.

**Figure n.4 – Survey results bar graph**

Figure n.4 is quite revealing in several ways. First, unlike the other data that have shown students’ improvement and engagement, this graph uncovers elements that helped learning, 44% of the class believed that aural input predominately aided their vocabulary learning in the course of the TPRS activity. Second, what is interesting in this information is that the percentages between
the students’ answers about executing the physical commands themselves are closely similar in the sense that 19% and 17% stated that executing the movements helped and hindered their learning respectively. This evidence supports the claim that TPRS’s aural input created a bigger impact on vocabulary learning than physical role-modeling of the words, which did not ultimately imply that it subdued TPRS approach’s foremost feature.

**Implications**

To begin with, the TPRS initiative at the centre of this research sought to measure how effective this approach can be in vocabulary learning. The listening pre- and post- achievement tests proved there was an upsurge in students’ vocabulary knowledge after the TPRS implementation. This claim aligns to Fahrurrozi’s research conclusion, as it made ‘the vocabulary of students physically, activate (sic) students through role-modeling that can be translated to students as the meaning of a word in the English language so that the students' understanding of vocabulary increases” (p.126). The results of this investigation can also be compared with the evidence obtained from the observation protocol where TPRS is conceived as an approach where “it can also make English language learning of students who previously daunting (sic) for even more fun so that students can follow the learning process to the optimum result.” (p.126). Other studies (such as Oliver, 2012; Varguez, 2009; Khorasgani, 2017) have settled the efficacy of implementing achievements tests to conclude a valid and reliable conclusion. However, there are certain drawbacks associated with the use of TPRS for vocabulary learning, Castro (2010) consistently concluded that “neither TPRS nor the Grammar-Translation approach proved more efficacious in vocabulary acquisition and retention, but there was far more enthusiasm in learning under TPRS” (p.42). Both of these contrasting conclusions endorsed a richer conception of the
different perspectives about the outcomes of TPRS in vocabulary learning, which for this investigation implies that even though the improvement is veritable and quantified, it did not ultimately conceive TPRS as an ultimate effective tool to teach vocabulary. In addition, a limitation of this study is that the numbers of students and tests were relatively small, which was only 22 participants.

In addition, this research was found thanks to the observation protocol. Even though the quantified data proved that more than 80% of the students were constantly aiming towards learning, by working during the activity pupils not only learned through target lexis input but also by being involved with their peers in an active way. This implies for this research an element of learning that was hidden throughout the investigation: cooperative learning, which can be understood as a limitation due the narrow factors initially planned. This claim means for this research that further study might be able to take into account even more specific learning variables that can impact on vocabulary learning whether using TPRS or any other second language learning approach. Likewise, Armstrong (2008) noted that peer-work positively impacted on students’ vocabulary learning as physically activating students whilst aiding their input-comprehension through gestures enabled them to create brain-connections for the newly learned words. These aforementioned conclusions imply for this research questions that allowing students to cooperatively work using visual and aural aids improves the effectiveness of TPRS in vocabulary learning. This articulates that vocabulary learning was immensely increased due to actively student participation stimulated in the nature of physical mobility in TPRS without hampering the English target word input.

Lastly, both formerly mentioned implications directly impact on answering how effective using TPRS to enhance vocabulary learning can be. It proved to doubly augment students’
vocabulary knowledge quantified in the tests data. Correspondingly, TPRS installed a learning opportunity where students suppressed their affective filters and lack of motivation in order to collaboratively acquire a lengthier range of target vocabulary words through gestures, aural input and physical movements. In consequence, TPRS effectively improved vocabulary learning in this classroom. For that reason, as a contribution to a broader context, this study can aid English teachers at the school to implement TPRS as another second language learning approach in order to challenge and professionally develop current English teaching methods.

**Conclusions**

Taking into account all the data and analysis process, it can be stated the TPRS initiative implemented enriched students’ capacity to learn new vocabulary. The use of varied learning sources such as gestures, physical movements and aural input during the TPRS activity prompted, as indicated in the data analysis, an enhancement in the vocabulary learning and student participation aspects of the class labelled as factors that favored learning.

This study aimed to contribute to this growing area of research by exploring the variables that define what makes TPRS approach effective. Hence, the present study confirms previous findings and contributes additional evidence, as a response to the initial research question that suggests that the implementation of TPRS positively impacts on vocabulary learning. Nonetheless, further studies need to address additional data collection tools or dynamics that might gain a deeper understanding of TPRS and vocabulary learning.
References


CARTA DE SOLICITUD PERMISO INVESTIGACION
Santiago, 04 de 09 de 2017

Sra.
Directora
Presente

Estimada Directora:

Dentro de la formación de pregrado de los profesores y profesoras de Inglés de la Universidad Alberto Hurtado, se considera muy importante la realización del trabajo de investigación al final de su formación profesional, puesto que consiste también en la problemática planteada en su posterior trabajo de tesis.

En este marco, nuestros estudiantes de 5º año cursan la asignatura de Práctica Profesional Final, en la cual los alumnos desarrollan un estudio de algún aspecto pedagógico observado en aquellos cursos en los que se encuentran haciendo clases durante el segundo semestre.

Es de nuestro interés que esta investigación se pueda desarrollar con los estudiantes y comunidad educativa en el liceo al que asisten, Complejo Educacional Juanita Fernández Solar. El objetivo de esta petición es contar con la autorización de la institución y comunidad educativa para realizar éste trabajo.

Es importante señalar que esta actividad no conlleva ningún gasto para su institución y que se tomarán los resguardos necesarios para no interferir con el normal funcionamiento de las actividades propias del establecimiento. De igual manera, no se difundirá ningún tipo de información personal obtenida en este proceso.

El estudiante que llevaría a cabo esta actividad es:
XXXXXXX: RUT XXXXXXXXXXX

Sin otro particular y esperando una buena acogida, se despide atte.

Francisca Salas Acuña

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Appendix B – Pre and post achievement test

**Listening Pop Quiz!**

Listen to the audio. Mark with an “X” in the box the image of the word you listen.

1.

2.

3.

4.
### Appendix C – Observation protocol and Criteria

<table>
<thead>
<tr>
<th>Name:</th>
<th>Never (0 times)</th>
<th>Seldom (1 to 5 times)</th>
<th>Sometimes (6 to 10 times)</th>
<th>Often (11 to 13 times)</th>
<th>Almost always (14 to 16 times)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Language</td>
<td>Student exhibits body postures that indicate they are paying attention to the teacher and/or another classmate.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consistent Focus</td>
<td>Student is focused on the learning activity with minimum disruptions.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Student Confidence</td>
<td>Student exhibits confidence and can complete the required task with limited coaching.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fun and Excitement</td>
<td>Student exhibits interest and enthusiasm, and uses positive humor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D – Survey

Mi experiencia:

1. ¿Has tenido clases de inglés, en la escuela, antes de entrar a primero medio?
   ○ Sí
   ○ No

2. Si tu respuesta anterior fue sí, ¿por cuántos años en total has tenido clases de inglés en el colegio?
   ○ Menos de 2 años
   ○ De 2 a 4 años
   ○ De 4 a 6 años
   ○ Más de 6 años

3. ¿Qué estilo de aprendizaje es el que más te ayuda a aprender?
   ○ Visual (Aprendo viendo imágenes, videos)
   ○ Auditivo (Aprendo escuchando grabaciones, repitiendo en voz alta)
   ○ Kinestésico (Aprendo moviéndome, utilizando mis sentidos)
   ○ Lógico (Aprendo usando fórmulas, razonamientos y reglas)

4. ¿Qué tipo de evaluaciones prefiero?
   ○ Escritas/Lectura (Hacer pruebas escritas)
   ○ Orales (Hacer presentaciones)
   ○ Auditivas (Escuchar audios e identificar información)

La actividad:

5. Lo que más me ayudó a entender el vocabulario fue:
   ○ Ver al profesor haciendo los movimientos
   ○ Yo hacer los movimientos
   ○ Escuchar las palabras atentamente
   ○ Ver a mis compañeros hacer los movimientos

6. ¿Qué elementos de la actividad me ayudaron a aprender el vocabulario? (Puede elegir más de 1 opción)
   ○ Realizar yo los movimientos
   ○ Ver cómo mis compañeros realizaban los movimientos
   ○ Escuchar las palabras
   ○ Yo decir las palabras
   ○ Ninguno

7. ¿Qué elementos de la actividad me dificultaron aprender el vocabulario? (Puede elegir más de 1 opción)
   ○ Realizar yo los movimientos
   ○ Ver cómo mis compañeros realizaban los movimientos
   ○ Escuchar las palabras
   ○ Yo decir las palabras
   ○ Ninguno