

## Appendix C

### *Research on TPR Storytelling (TPRS)*

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In the last ten years, there has been an explosion of research on Teaching Proficiency through Reading and Storytelling (TPRS). As a researcher studying second language acquisition and implicit and explicit learning, I present this research at the national TPRS conference (NTPRS), and maintain a collection of it at <http://forlangs.niu.edu/~klichtman/tprs.html>. A similar collection of research can be found at the TPRS Academy, maintained by Kirstin Plante in the Netherlands and accessible at <https://tprsacademy.com/en/tprs/research-on-tprs/>. Hillary Tejada has also written a good summary of just the comparative TPRS studies available at <http://www.crookedtrailslearning.com/blog-2/2017/1/14/what-does-the-data-say-does-tprs-really-work>.

The first published piece on TPRS came out in 1998. Around 2009, empirical, quantitative studies with more rigorous research designs started to appear in peer-reviewed journals. My first NTPRS presentation in 2011 included all the research available to date: only six articles. I would not have predicted that my 2018 NTPRS presentation included over ten times as much research as that first 2011 presentation!

The foundational ideas behind TPRS are supported by research. Total Physical Response (TPR), on which TPRS was originally based, was studied by Dr. James Asher (e.g. 1966, 2009), professor emeritus of psychology at San José State University. Terminology used to explain and support key ideas in TPRS — including the importance of *comprehensible input*, the distinction between natural language *acquisition* and traditional, effortful language *learning*, and the importance of lowering the affective filter — comes from the research of Stephen Krashen (1981; 1982), professor emeritus of education at the University of Southern California.

TPRS provides an ideal research context because, despite its evolution, the method has always been clearly defined and described. (In contrast, it would be impossible to summarize “research on the effectiveness of Comprehensible Input”—you might as well try to summarize all research on language teaching and learning!) Still, it is important to remember that TPRS is implemented in different ways by different teachers. Researchers studying TPRS generally identify the method based on core concepts such as the co-construction of a story with students, using high frequency vocabulary, and providing lots of input in the target language with small amounts of translation for clarity. In contrast, most researchers identify “traditional” teaching as use of a grammar-based syllabus and textbook, exercises demanding student output and grammatical accuracy, and teaching a larger set of (often thematically organized) vocabulary.

Although there will always be gaps in the research and a need for replication of the results we already have, the overall picture remains quite favorable toward TPRS — as you will read in the updated research summary below. The previous version of this research summary (Lichtman, 2015), in the 7th edition of *Fluency Through TPR Storytelling*, contained 14 published articles and 21 theses; this version includes 32 articles and 44 theses. Publications new to this edition are marked with an asterisk (\*) in the references section. The body of research continues to grow in size and sophistication.

Studies are included in this summary if they contain the search terms TPRS or TPR Storytelling (and are about that teaching method rather than just mentioning it); if they can be found using LLBA (Linguistics & Language Behavior Abstracts), Google scholar, or IJFLT (the International Journal on Foreign Language Teaching); and if they are published articles, doctoral, master’s, or bachelor’s theses. Course papers and papers not available in English or Spanish are excluded. Unless otherwise mentioned, the studies here were conducted in the United States with high school students (grades 9-12 or students approximately ages 14-18). Native English speakers who are learning Spanish are the most common “foreign” language students in the U.S.

I have organized the work below into three categories: (1) empirical studies comparing TPRS to another teaching method, (2) empirical studies on TPRS without a control group, which can provide evidence that TPRS is effective but not that it is more effective than another method, and (3) descriptive pieces.

While each study may have individual limitations (as any research study must), the majority of the research to date has found that TPRS students outperform traditional students on some measures of language skills. The thirty comparative studies reviewed here all support the use of TPRS: twenty-one show advantages for TPRS over another teaching method, seven show mixed results (TPRS performed better in some areas and worse in others, and two show no difference between TPRS and other methods.

### **1. Empirical studies comparing TPRS to another teaching method**

#### *Published articles*

In 2009, two research studies on TPRS came out in the *International Journal of Foreign Language Teaching (IJFLT)*, a peer-reviewed journal. Watson (2009) compared two beginning high school Spanish classes taught with TPRS to one class taught with more traditional methods. Students' written final exam tested listening comprehension, vocabulary and grammar, and reading comprehension, and they also took a district-wide oral exam. TPRS students scored significantly better than traditional students on both tests, with large effect sizes.

Varguez (2009) compared four beginning high school Spanish classes: two with traditional instruction and two with TPRS instruction. One TPRS class also had lower socioeconomic status. Students took the standardized Second Language Proficiency Examination (SLPE) which measured listening comprehension and reading comprehension, and a longer reading passage adapted from the New York State Regents exam. The poorer TPRS class performed statistically the same as the richer districts on all three tests, which is surprising since socioeconomic status is usually a strong predictor of academic success. And, the TPRS class

that matched the traditional classes in socioeconomic status significantly outperformed the traditional classes on all three tests.

A less well-known paper was presented by Kariuki and Bush (2008) at a conference the previous year. This study divided a high school Spanish 1 class into a TPRS group and a traditional group for one week. After a week of instruction, the TPRS groups scored significantly higher than traditional students on tests of both Spanish-English translation and vocabulary.

Dziedzic (2012) compared four sections of Spanish 1: two that he taught traditionally, and two that he taught using TPRS. Both groups also participated in sustained silent reading. At the end of the year, 65 students with no previous exposure to Spanish took the Denver Public Schools Proficiency Assessment. The TPRS and traditional students did equally well on listening and reading. However, the TPRS students significantly outperformed the traditional students on writing and speaking, with large effect sizes on these two production measures.

Oliver (2012) compared final exam scores of beginning college Spanish students in four traditional classes and two TPRS classes. The TPRS students significantly outperformed the traditional students on a traditional final exam testing reading, writing, and grammar. Additionally, Oliver describes positive effects on speaking, listening, and motivation, which were not tested by the exam. This article was published in *The Language Educator*, which is distributed to all members of the American Council on the Teaching of Foreign Languages (ACTFL), reaching a very wide readership.

Roberts & Thomas (2014) detail testing results from two groups of adult students who learned Spanish using TPRS at the Center for Accelerated Language Acquisition (CALA). Both groups learned Spanish very quickly through TPRS. In the first group, after 22.5 hours of instruction, 325 adult CALA students scored an average of 28.16 points on the National Spanish Exam, whereas over 20,000 high school students scored an average of 35.61 after about 180 hours of instruction. The CALA group, therefore, gained vastly more “points per hour” of instruction than the high school students, who presumably, for the most

part, experienced more traditional teaching. In the second group, 16 CALA students took the computer-adaptive WebCAPE college placement exam after just 35 hours of instruction. All tested out of 1-4 semesters of college Spanish, significantly outperforming high school students with two years of Spanish and equaling students with one or three years of Spanish.

Çubukçu (2014) compared Turkish high school students learning English words through TPRS or through a textbook. Both groups improved on a vocabulary test, but the TPRS group improved significantly more.

Working with a different age group, Demir and Çubukçu (2014) studied preschoolers learning English vocabulary in Turkey through TPRS or Communicative Language Teaching. TPRS students performed better on a test of vocabulary.

Muzammil and Andy (2015) compared TPRS and control groups of college freshmen learning English in Indonesia. Students were assessed on speaking, with subscores of pronunciation, vocabulary, grammar, and fluency. The groups were equal at pretest, but after eight lessons, the TPRS group scored significantly higher. The largest advantage was on pronunciation.

Pippins and Krashen (2016) investigated how TPRS students performed on the AP Spanish exam, as compared to the national distribution of AP scores. These students had TPRS only for Spanish 2, 3, and 4, followed by a typical AP class. The TPRS students' scores were nearly identical to the national sample, showing that TPRS students performed as well on the AP exam as students with more traditional instruction.

#### *Theses and dissertations*

While theses and dissertations are less accessible to all than published articles, many contain studies as large and rigorous as the studies that do reach publication. Many theses and dissertations are also made publicly available either through universities, or more widely on the ProQuest Dissertations and Theses database.

Garczynski (2003) taught two groups Spanish school vocabulary and structures using either TPRS or the Audiolingual Method during a short 6-week intervention. The two groups performed the same on tests of listening comprehension and reading comprehension, but the students significantly preferred TPRS.

Perna (2007) compared three methods: TPRS, traditional, and “instruction through primary-, reinforced by secondary-, perceptual strengths,” a teaching method where students can choose to go to auditory, kinesthetic, tactual, or visual learning stations based on their individual learning styles. Perna taught five classes Italian for five weeks, switching between teaching methods every four days. She found that all three methods worked equally well for grammar lessons, but that perceptual strengths was the most effective for vocabulary lessons, followed by TPRS, with traditional instruction being the least effective. Since TPRS does not typically break lessons into grammar lessons vs. vocabulary lessons, Perna’s instruction may not have been typical of TPRS classrooms.

Arnoldus (2009) taught Spanish I and II classes a four-week TPR/TPRS unit, followed by a four-week textbook unit. 68% of the students preferred *Cuéntame más* over the regular textbook, *Ven conmigo*. Student grades were significantly higher with TPR/TPRS than with the textbook: 87% vs. 80%, on average. Students found TPRS easier and engaging but noted that the stories didn’t always make sense. Students liked that the textbook was organized, had listening activities, and taught grammar rules, but they also found it difficult. Anxiety, as measured by the Foreign Language Classroom Anxiety Scale, was the same with both methods.

Jennings (2009) taught three groups of Spanish 2 students: two groups using TPRS, and one control group using typical teaching methods. Control students initially scored significantly better on a unit mid-test testing vocabulary, listening, and writing, but TPRS students scored significantly better on the final unit test, which measured vocabulary, listening, reading, writing, and speaking. TPRS students also scored significantly better on the final exam for the year.

Koetz (2009) compared three classes of traditional Spanish students to three classes of TPRS students, using a timed reading comprehension quiz based on *Patricia va a California*. The quiz was given as a pretest in September (after four weeks of school) and as a posttest in November. The traditional students scored 24% correct on the pretest and 42% on the posttest, whereas the TPRS students scored 41% on the pretest and 60% on the posttest.

Mohammed (2009) compared a TPRS group and a control group of English learners in a school in Egypt. The TPRS group learned and retained more vocabulary than the control group, and also developed positive attitudes towards learning the English language.

Spangler's (2009) dissertation study tested a total of 162 participants from five high school and two middle school Spanish classes. Students took the standardized STAMP test (STAndards-based Measure of Proficiency), a computer-based test measuring reading, writing, and speaking. TPRS students equaled traditional students on the reading and writing sections and on a separate measure of anxiety. But on the speaking test, TPRS students significantly outperformed traditional students, with a large effect size.

Castro (2010) compared TPRS to grammar-translation for vocabulary learning in adults learning English as a second language. Students experienced each method for just three days, and learned statistically equal numbers of previously unknown words through both teaching methods, although they preferred the TPRS lessons.

Nijhuis and Vermaning (2010) studied French as a second language in the Netherlands, comparing a small sample of TPRS and traditional students' scores in French 1 and 2 on a conversation exam. The TPRS students scored significantly better than the traditional students— doubling the conversation exam scores of the traditional students in French 1.

Foster (2011) compared not just TPRS and traditional high school classes, but also processing instruction (VanPatten, 1996), a more explicit input-based teaching method, yielding mixed results. This study

looked at performance on just one grammatical structure: Spanish constructions using *gustar*. TPRS students outperformed traditional classes on two measures (grammaticality judgments and writing fluency), and equaled traditional classes on three other measures (speaking, writing accuracy, and reading). Processing instruction students and TPRS students performed equally on two measures (grammaticality judgments and reading). Processing instruction students significantly outperformed both other groups on two measures (speaking and writing accuracy), but TPRS students significantly outperformed the other two groups on writing fluency.

Beal's (2011) dissertation surveyed a very large sample of 821 middle and high school students within one school district whose teachers used TPRS regularly, occasionally, or not at all. He found that use of TPRS did not affect anxiety or plans to continue with Spanish. Overall, the traditional group scored the highest on the district final exam, followed by the regular TPRS group, and the occasional TPRS group scored the lowest. This was mediated by grade level: in middle school, TPRS students did better on the final exam than traditional students, but in high school, TPRS students did worse than traditional students. Unfortunately, the study doesn't include any measures to establish whether the TPRS and non-TPRS groups were similar at the beginning of the school year, which is problematic because the students were also not randomly assigned to classes.

Holleny (2012) compared TPRS to traditional instruction in four Spanish classes for high school students with learning disabilities. Each group received TPRS instruction for two units and traditional instruction for two units. Scores were compared on the unit tests, which included vocabulary, listening, sentence translation, and fill-in-the-blank questions. The groups receiving traditional and TPRS instruction performed equally well on the tests.

De Vlaming (2013) studied TPRS vs. deductive grammar teaching for German in the Netherlands. One TPRS class was compared to two deductive grammar classes, in a pretest-unannounced posttest design. Students from the two grammar classes declined or stayed the same on



most of the structures tested, but the TPRS class improved on every structure.

Safdarian (2013) conducted a study of motivation and proficiency among 12-year-old boys in Iran learning English as a foreign language either through TPRS or traditional measures. The two groups were found to be equal in motivation, but the TPRS group scored higher than the traditional group on a posttest including grammar, vocabulary, and reading comprehension.

Ariyanti Sutijono (2014) compared third graders in Indonesia learning English either through TPRS or through word lists. The two classes were equal in ability, and the research used a pretest-posttest design. Children learned significantly more vocabulary through TPRS than through word lists.

Murray (2014) compared traditional to traditional plus TPRS instruction in two high school French 1 classes over a six-week period. The TPRS group's test scores increased significantly, driven by a significant increase in listening skills. In contrast, the control group's overall scores remained the same (increasing significantly in reading and listening, but decreasing significantly in speaking). The TPRS group also increased more in confidence in French and desire to take French 2 than the control group.

Blanton (2015) compared Spanish III students getting TPRS or Communicative Language Teaching (CLT) on motivation and the STAMP proficiency test. TPRS students had higher motivation than CLT students and equal speaking skills, but the CLT students performed better on reading, writing, and listening on the STAMP test. This is the most unfavorable result for TPRS to date. However, the groups were not equal to begin with: the TPRS school was 93% black and 83% of students received free/reduced lunch; but the CLT school was 59% white and only 12% free/reduced lunch.

Cox (2015) compared TPRS to TPRS + COLA (Context-based Optimized Language Acquisition) in a four-day study of Spanish 2 classes. Cox describes COLA as an "upgrade" of TPRS which requires more student output, repetition, and memorization than TPRS. Both groups

improved significantly on a speaking test, and the improvement was equal between groups—failing to show an advantage for COLA over TPRS alone.

Merrinage De Costa (2015) compared TPRS to traditional instruction in an introductory college French class for five days using a pretest-posttest design. TPRS students improved more in listening, vocabulary, and culture, but traditional students improved more in grammar and writing.

Simanjuntak (2015) gave a speaking test to TPRS and control groups of third grade English students in Indonesia. Although this dissertation does not provide many details, the TPRS groups scored significantly higher on the speaking test.

In order to summarize the results of the comparative studies on TPRS, I have classified each study into one of the following four categories, taking into account all measures in that study.

- **TPRS advantage:** TPRS outperforms another teaching method.
- **Equal:** No significant difference is shown between TPRS and another teaching method.
- **Mixed results:** TPRS students perform better on some measures, but students taught with another method perform better on other measures.
- **TPRS disadvantage:** Another teaching method outperforms TPRS.

For example, in Varguez (2009), TPRS outperformed traditional instruction when socioeconomic status was held constant, but a poorer TPRS class equaled a richer traditional class, so the study is classified as “TPRS Advantage.”

Figure 1 summarizes the results of these thirty comparative studies. The first thing to note is that there have been no studies to date showing a definitive *disadvantage* for TPRS, while twenty-one studies show an advantage for TPRS.

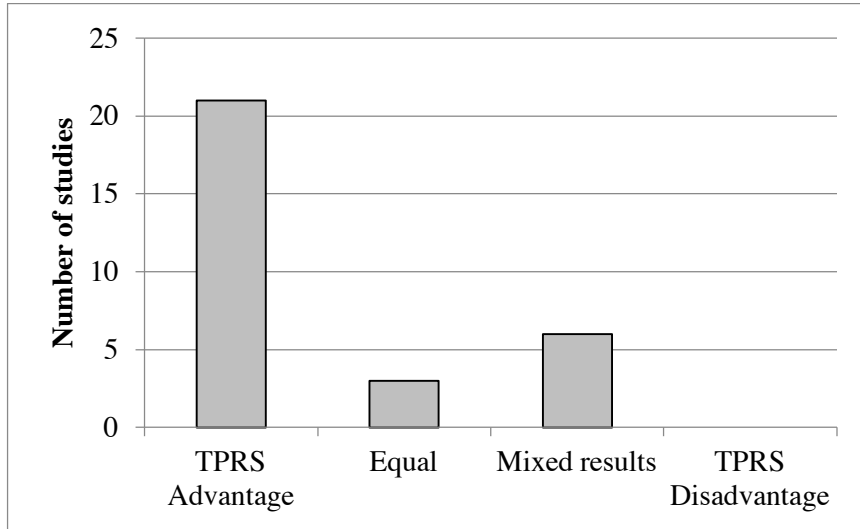


Figure 1: Results of studies comparing TPRS to other methods

Each of these studies is limited by itself — some have small sample sizes; some had the same teachers teach both TPRS and traditional classes (which may be unfair if the teacher is biased toward a particular method), while others had different teachers teach the classes (which may be unfair if one teacher is better than another). But, these studies that have directly compared TPRS to other teaching methods comprise 3,042 students in 169 classes, taught by 77 different teachers in 41 different schools, so the results cannot be attributed to any one class or teacher. Taken together, the pattern of results is quite clear. In about 2/3 of studies, TPRS students outperform traditional students; in 1/3 of the studies, the results are equal or mixed. Moreover, this pattern (2/3 of the studies favoring TPRS; 1/3 with mixed results; no studies showing disadvantages to using TPRS) has remained stable as the number of comparative studies has gone from 16 to 30.

I am also interested in the specific benefits of TPRS when individual language skills are tested. Figure 2 shows how many studies measure an advantage for TPRS in the areas of listening, speaking, reading, writing, vocabulary, grammar, and motivation or attitudes toward class. Cur-

rently, TPRS has been shown to most reliably benefit students' vocabulary, speaking, and reading more than traditional teaching. In contrast, TPRS students tend to perform the same as traditional students when tested on listening and writing.

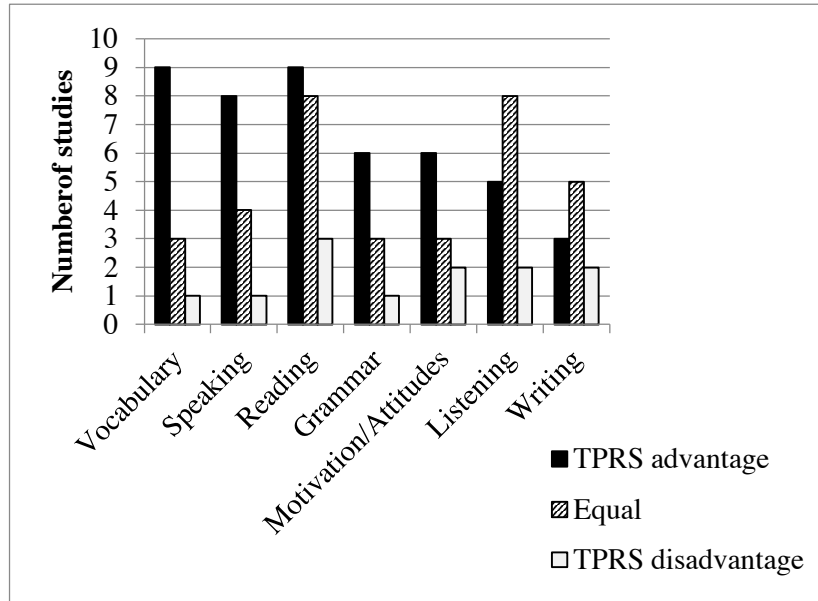


Figure 2: Specific language skills with an advantage/disadvantage from TPRS

## 2. Studies on TPRS without a control group

### *Published articles*

While the studies above comparing TPRS to another teaching method address the question of which method is more effective, it is also important to establish that TPRS is effective in and of itself — that is, that it significantly increases the language skills of its students and/or improves their attitudes toward learning the foreign language.

Braunstein (2006) researched student attitudes toward TPRS in a class of 15 adult students learning English as a second language in the U.S. After two lessons taught with TPRS, students responded that they

felt “interest,” “enthusiasm,” and “happiness,” and did *not* feel “embarrassed,” “bored,” or “stupid.” They reported that TPRS helped them to remember vocabulary and understand English.

Armstrong (2008) conducted an action research project in elementary and middle school Spanish classes, collecting quantitative data on elementary students’ liking of various aspects of language classes and on vocabulary retention. While statistics were not reported, students reported greater liking of all aspects of the language class after a TPRS unit. First and second graders were able to translate (out of context) 43% of the Spanish words they had learned, but this rose to 75% of the words when TPR gestures were used.

Roof and Kreutter (2010) investigated the use of a classroom management checklist to improve classroom management during TPRS in middle school Spanish. By studying videotapes of the class, they found that clearly stating, monitoring, and reinforcing expectations for student behavior increased student engagement in the class.

Miller (2011) reports the percentile scores of eighth graders with 1.5 years of German TPRS instruction on the AATG’s level 2 national German exam. This exam includes listening, reading, and grammar, and is designed for tenth graders with 1.5 years of German instruction. Over the course of 13 years of data, eighth graders scored in the 41st percentile on average, reaching the 54th percentile in the final year of the study, with a significant increase in scores over time. It is surprising that middle school TPRS students scored as well as high school students on this test, since older learners generally learn languages more quickly during the beginning stages of instruction.

Susan (2013) studied high school English learners in Indonesia. Using a pretest-posttest design, she found that TPRS significantly improved students’ listening comprehension scores—from a score of 17 to 31.

Nguyen and colleagues (Nguyen, Yonghui, Stanley & Stanley, 2014; Nguyen, Stanley & Stanley, 2014) published two articles about a survey of teachers and learners of Chinese as a second language through TPRS

at a university in China. They report that teachers and students saw storytelling as benefitting vocabulary, cultural awareness, idioms and figurative language, grammar, pronunciation, and rate of speech.

Cartford, Holter Kittok, and Lichtman (2015) measured the development of writing fluency in 4th and 5th grade TPRS students who received only 60 minutes of Spanish class per week. Their writing fluency (as measured by timed freewrites) increased significantly over the course of two years, and was even similar to typical first-language writing fluency for children of the same age.

Chang and Chen (2015) also showed learning benefits in a summer program for children providing only 3 hours and 15 minutes of Chinese instruction. Participants learned to understand, retell, read, and write a story in Chinese during this short time. Although they varied in their ability to retell the story, receptive (listening and reading) skill performance was excellent for all participants.

Nurlaili, Nurani, and Yohana (2015) studied vocabulary scores among first graders learning English in Indonesia before and after TPRS vocabulary instruction. They found that vocabulary scores significantly improved after TPRS.

Patrick (2015) documents the growth of Latin programs using TPRS. NTPRS attendance grew from one to 46 Latin teachers in a single year, and Patrick's high school's Latin enrollment grew from 130 to 600 students in ten years. This is notable because few studies have published enrollment numbers for TPRS.

Nuraeningsih and Rusiana (2016) taught 20 Indonesian second graders two stories using a modified version of TPRS, based off books such as *The Very Hungry Caterpillar* rather than open-ended stories. After the second story, students scored 80% on a vocabulary test. 100% of the students reported feeling happy learning English through stories, and 87.5% liked the stories.

Printer (2019), investigated motivation in twelve high school TPRS students learning Spanish as a second language. Specifically, he found that TPRS contributed to student feelings of autonomy, competence, and

relatedness, which are components of self-determination theory and enhance intrinsic motivation.

*Theses & dissertations*

Webster's (2003) master's thesis describes how to implement a TPRS Spanish curriculum. It also includes numbers on enrollment growth after the implementation of TPRS in Webster's school district, including doubling the number of students who continue to the AP level, as well as some information on other school districts that have seen increases in enrollment and retention.

Brune (2004) taught three weeks of German to sixth graders using TPRS. The students scored very well on an assessment of language and culture, and over half the class expressed interest in taking German in the future. Most students found the lessons fun and easy, and stories were generally ranked above average on a question about students' preferred class activities.

Beyer (2008) taught eighteen high school Spanish 2 students the story of The Three Little Pigs in the past tense. Students reported that the storytelling was enjoyable and preferable to the textbook, and averaged 90% on a test asking them to conjugate verbs in the preterit tense in order to complete sentences from the story.

Bustamante (2009) taught a college TPRS Spanish class for one semester, finding that TPRS significantly increased student skills on every measure used in the study: reading comprehension and fluency, writing fluency, vocabulary, and grammar. Students who had previously taken a non-TPRS Spanish class unanimously preferred TPRS to their previous class.

Wenck (2010) chronicled a year of teaching German 2 students. Over the course of the study, the number of students perceiving themselves as being "good at learning German" increased from 12% to 73%, and 80% of the students planned to continue studying German beyond the required two years.

Whitaker (2010) investigated the results of teaching an eighth grade class 100% in Spanish using TPRS. Students reported that they tried to

use Spanish more, were less anxious when using Spanish, tried to use Spanish outside of class more, and gained more proficiency after the class was conducted entirely in Spanish.

Rodas Reinbach (2011) taught a group of preschool children English as a foreign language using TPRS for three months. She carefully documented videotaped assessments of each student, showing that the children were able to do TPR, follow directions, and answer yes/no and wh-questions. Older students performed better than younger students.

Dukes (2012) investigated high school student perceptions of learning German in a TPRS-only class. 95% of the students had positive feelings about TPRS. Students reported that they felt more at ease, less pressure, more comfortable, and more confident in a TPRS class than in other foreign language classes they had taken that used different methods. The teacher reported that TPRS helps build relationships with students, is effective, fun, and allows more freedom.

Megawati (2012) observed TPRS for English as a foreign language in an Indonesian kindergarten class. This study found that TPRS was workable for this age group, catching students' attention while being easy to understand.

Jakubowski (2013) studied the effect of using illustrations within a TPRS curriculum on students' short-term (four days) and long-term (four weeks) vocabulary retention. Middle school Spanish 1 students saw illustrations during one (or both) of two units of instruction. The illustrations had a significant effect only on short-term vocabulary retention during the first unit; otherwise, the groups with and without illustrations were able to correctly translate the same amount of vocabulary.

Espinoza (2015) interviewed three high school Spanish and French teachers about their experiences implementing TPRS. Teachers reported that TPRS supports an embodied learning experience and increases student participation, motivation, and language acquisition.

Baker (2017) interviewed 30 high school language teachers in three groups: group A were TPRS teachers, group B were trained in TPRS and had tried it but reduced or discontinued TPRS when they



encountered obstacles, and group C had no experience with TPRS. The goal was to identify common lived experiences of teachers who did or didn't stick with TPRS. Positive factors included dissatisfaction with student results before TPRS, training at workshops, using gestures, discussing language acquisition theory, being supported, and teaching for mastery. Negative factors included insufficient training, classroom management problems, resistance from others, and clashes with existing curriculum.

To summarize the results of studies on TPRS without a control group, we can say that every study found positive results of TPRS. Many of these studies focus on attitudes toward language class, but Bustamante (2009) is notable for showing not just positive attitudes, but also significant increases in actual language skills after a semester of TPRS.

### **3. Descriptive articles, chapters, and theses about TPRS**

#### *Published articles*

The last category of writings on TPRS is those that do not include research questions and results, but may nonetheless be useful because they expose a wider audience to TPRS, describe adaptations to TPRS that may be used for specific contexts, and/or give narrative accounts of the authors' experiences with TPRS.

The very first publication on TPRS (after the original *Fluency Through TPR Storytelling*, Ray & Seely, 1997) was Marsh (1998). Directed at early language teachers, the article details five steps that were used at the time in TPRS: TPR, paired student TPR practice, teacher-led mini-story, teacher-led longer story, and original student stories. Marsh reports that her introductory (pre-Spanish 1) middle school Spanish students scored above the national average on the 1993 level 1 National Spanish Exam.

Cantoni (1999) is a book chapter promoting the use of TPRS to teach Native American languages, because it allows students to be active learners, produces quick results, and need not involve the use of textbooks or writing.

Davidheiser's (2001) "The ABCs of TPR Storytelling" is a report of the author's experiences using TPRS in college German classes. He finds that particularly in the first few years of language instruction, TPRS improves pronunciation and vocabulary memory, reduces anxiety, promotes active learning, and is good for different types of learners. Davidheiser also integrates grammar instruction with TPRS in upper levels.

Davidheiser (2002) soon published a second article on "Teaching German with TPRS." This article, written for an audience of German teachers, gives more practical information on using TPRS, including an appendix with vocabulary.

There is one published article that is critical of TPRS, but this article (Alley & Overfield, 2008) is not an empirical study—it compares TPRS to other historical language teaching methods based on the 2nd edition of *Fluency Through TPR Storytelling* (Ray & Seely, 1998) rather than on classroom observations. Alley & Overfield consider TPRS similar to the grammar-translation method and the audiolingual method, and criticize TPRS stories for having minimal cultural content. Alley subsequently recorded classroom discourse in high school TPRS classes over the course of a year (D. Alley, personal communication, July 24, 2011), but this study has not been published.

Bernal Numpaque and García Rojas (2010) is a descriptive article on the use of TPRS to teach English in Colombia. The authors characterize TPRS as a student-centered method that is advantageous for recall and developing oral fluency with accuracy. They propose a few changes for the Colombian learning context, including the use of sequential meaningful stories rather than bizarre stories.

Shi and Ariza (2018) compare TPRS to the Natural Approach, concluding that both are based on Krashen's theory, are consistent with child psychology, come from real classroom teaching experience, are quite different from traditional teaching, and emphasize low anxiety.

I have an article in *The Language Educator* describing TPRS as a framework for creating comprehensible input and output (Lichtman, 2014). The article also addresses concerns that keep some teachers from

using TPRS: translation, grammar, and culture. Culture is the most significant of these; teachers must take the initiative to infuse culture into stories.

I also have a module describing TPRS published as part of Bill VanPatten's *Routledge E-Modules on Contemporary Language Teaching* series (Lichtman, 2018). This module explains TPRS and its principles for making the best use of class time for language acquisition. It is directed at teachers, language teacher educators, and second language researchers.

#### *Theses & dissertations*

Last, we come to descriptive theses and dissertations about TPRS. Rapstine (2003) cites inclusion of all types of learners, use of the target language, and a learner-centered classroom as advantages of TPRS, and lack of authentic cultural instruction, (oddly) lack of reading material, and possible teacher exhaustion as disadvantages of TPRS.

Dettenrieder (2006) proposes an in-service training for language teachers on TPRS, but also advocates (based on personal opinion) explicitly teaching grammar rules before each TPRS lesson.

Taulbee (2008) cites plusses and minuses of TPRS, and describes ways to integrate grammar instruction with TPRS.

Sievek (2009) details the author's modifications to TPRS for the purposes of aligning with the ACTFL standards (the "5 Cs": Communication, Culture, Connections, Comparisons, and Communities), and adding more focus on grammar.

Perez & Suin (2010) is largely descriptive of TPRS, but also recounts a two-hour application of TPRS in a seventh grade English class in Ecuador.

Oliver's (2013) dissertation chronicles her 50 years of Spanish and French teaching and the use of seven teaching methods over time. Oliver concludes that TPRS is the best method for developing speaking ability.

Rose (2013) concludes that TPRS is a suitable and effective method to teach American children Mandarin in grades K-5, based on class observations, analysis of teaching materials, and interviews with elementary language teachers. She also presents principles for developing TPRS-based teaching materials and sample lesson plans.

Myers (2014) creates a TPRS French lesson based on *Le Petit Prince*.

Welch (2014) adapts seven works of literature in Spanish to be taught using TPRS.

Marimon Gil (2015) proposes five TPRS-based units for English as a second language in Infant Education (preschool) in Valencia, Spain.

Mrháľková (2015) describes TPRS and proposes six lessons to be used along with an existing textbook for English in the Czech Republic.

Zukanoff (2015) argues for the use of TPRS in the middle school, based on a review of existing research studies.

#### **4. Conclusion**

Of course, there is much research still to be done: in particular, research on which elements of TPRS contribute the most to learner success would be useful; and there has been little research on oral fluency and retention of language knowledge over time, two areas in which the large amount of comprehensible input in TPRS should be advantageous. Existing studies should also be replicated and extended in order to give us a deeper understanding of the differences between TPRS and other teaching methods. But the research summarized here strongly supports TPRS: TPRS equals or outperforms traditional language teaching in 30 comparative studies to date. Teachers can count on TPRS to improve their students' skills in areas such as vocabulary, speaking, and reading, with the knowledge that TPRS students can keep pace with (or outscore) traditionally taught students on a variety of assessments.

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## Appendix C: Research on TPRS

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