The Positive Impact of World Language Study on Special Needs K-5 Children: A Mixed Methodology Research Study

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Abstract

The present research study was conducted to explore how structured Spanish instruction (30 minutes, twice a week, for a semester) impacts the level of class participation and on-task behavior and the reading fluency rate of a group of self-contained, special needs, elementary school children (grades K-5). Data for this mixed methodology study were elicited over the course of one semester from three sources: semi-structured interviews with the CDC (Comprehensive Development Classroom) teachers; a series of class observations (using an interactive analysis protocol) of the children, both in and outside of the Spanish class; and CBM (Curriculum-Based Measurement) scores. Results of the research reported that the children involved in this project benefited from second language instruction in several ways. It had a positive influence on their degree of engaged participation and on-task behavior; it enhanced their reading fluency; and, it made them feel happy and special.
Introduction

“Ever since ‘integration’ became ‘inclusion’ educators have been trying to ensure no child is denied access to the full curriculum. This includes, of course, access to foreign language learning” (McColl, 2005, p. 103). The ACTFL Foreign Language Guidelines, ¹ in fact, recommend that world language study be available to all U.S. students, which by extension, includes both mainstream and special populations. In the U.S., ² however, children with special needs are typically not given the chance to engage in early second language instruction. Many feel that children with learning (and especially language-based) disabilities will be greatly challenged by studying a world language (Barr, 1993; Duval, 2006; Ganschow & Schneider, 2006), yet, what would the benefits be for these children, if given the opportunity?

This paper investigates this very question and describes a pilot world language FLES program, offered to students in a self-contained, CDC³ (Comprehensive Development Classroom), in a small, urban elementary school in the southeastern U.S. Results, analyzed from triangulated data sources, collected during a semester-long research project conducted with these children and their teachers, are also presented and discussed.

Setting for the Study

For over 25 years, an integral component of the Track 1 master’s program⁴ in FL/ESL Education, at The University of Tennessee, in Knoxville, TN, has included a 3 semester hour world language (WL) teaching practicum in local elementary schools, during which an appropriate curriculum is designed for the intended target population, by the graduate students, in concert with the practicum’s professor and the local schools’ principals and
classroom teachers. WL instruction is then offered to the children at those schools approximately 30 minutes, twice a week, for 12 weeks.

During the spring of 2010, a small local EastState, urban school, with a richly-diverse population of 280 students (75% having free or reduced-meals and 90% considered in the poverty level), was selected as the venue for a very unique FLES Spanish program. At this school, two different populations of students were taught by one University of Tennessee practicum student: 2 classes each of traditional 1st and 2nd graders and 1 class of CDC (Comprehensive Development Classroom) students (grades 1-5). The latter population of students became the focus of the present research study.

**Description of the FLES Spanish Program**

**Curriculum**

If the goal of a FLES curriculum is to establish basic levels of world language proficiency that can be scaffolded into and articulated to WL classes offered in the upper grades, then, the WL class needs to be content-based. The literature reports a variety of content-based models that may be appropriate for the second language classroom, ranging from totally content-driven (where subject content is the vehicle for promoting language acquisition) to language-driven (where the second language is the medium for delivering content). In the middle of this content-based instructional continuum are “theme-based…modules” (Strykera & Leaver, 1997, p.3), that “may be drawn from the academic content of the school” (Stoller & Grabe, 1997, p. 83). Thus, themes based on content from single subject areas (e.g., math or science) become the curricular focus for the WL language class. Likewise, cross-curricular samplings from two or more of the other subjects (e.g., music and fine arts; math and science) may become themes and actually tie content material across the entire elementary school curriculum. After careful consideration, a modified themes-based model was used for Spanish instruction in the current research study.
Given the special culture of the CDC classroom, where the FLES program was going to be implemented, it was necessary to first establish realistic goals that could be articulated into a meaningful experience for the CDC children (classified as being DD, ED, FD, ID and/or OHI) during the 12-week long FLES program. These goals would need to both reinforce and enrich the subject area content that was being concurrently delivered to these students.

In order to identify the content, scope and sequence of the FLES Spanish curriculum for the CDC group of grades 1-5 students, and the developmentally and cognitively-appropriate instructional strategies that would need to be used for this special population, the specific goals of the program and the on-site school resources available (i.e., materials, technology, CDC teacher support) to implement it, needed to be determined. Following a series of visits to the FLES school site, by the principal investigator, with the principal, CDC classroom teachers and children who would receive Spanish instruction, it was decided by the principal of the school and the researcher that the curricular content of the FLES Spanish program would align itself with the existing curriculum and offer reinforcement of basic academic concepts already in place, yet, also offer additional enrichment experiences for the children.

Thus, the following topics were selected to be taught in the research classroom over the course of 24 lessons: basic greetings and expressions of courtesy (including using direct address with *Señorita, Señora* and *Señor*); the Spanish alphabet song (using a *Teachertube.com* video); essential classroom vocabulary and expressions; simple math; colors; calendar vocabulary (i.e., day, week, month, and year); seasons; weather expressions; body parts; world geography (map skills showing where Spanish is spoken in the world); and daily cultural tidbits from the Spanish-speaking world (including music, dance, and seasonal customs). All activities were highly inter-active, fast-paced, student-centered and scaffolded
from the very first class meeting. A typical class session, therefore, would begin with, *Buenos Dias, ¿cómo están? ¿Qué tiempo hace hoy? ¿Cual es la fecha? ¿Qué día es hoy?* and give all students the opportunity to interact with the teacher as a group and with each other. Then, following this class opening ritual, the teacher would *warm-up* the children with a little *Simon Dice* to practice body parts and then lead them in the *Alfabeto* song (a march-based, slow to fast-cadence song), prior to introducing the new content for the class period. Each class would follow the same routine in order to quickly engage the students and keep them engaged throughout the entire lesson. At all times, the FLES teacher would be ready to move to another activity if a significant number of students became off-task; at no time, however, would an activity last longer than a few minutes.

**Instructional Strategies**

Research reports that at-risk and special students can benefit from language instruction that is both structured and multi-sensory (Ganschow & Sparks, 2005a, 2005b; Schneider, 1999; Schneider & Crombie, 2003; Sparks, Artzer, et al., 1998). Thus, teaching language through commands, Total Physical Response (Asher, 1982), was a primary instructional medium, augmented by chanting, singing, dancing, *Simon Dice* (Simon Says) and role-playing activities. In addition, the teacher used a laptop and SmartBoard (interactive electronic white board) on a daily basis in order to connect to authentic cultural videos (e.g., Flamenco dancers), and websites and show mini Power Point presentations and visuals. Throughout each lesson, the teacher was so in touch with her students that she was able to differentiate her instruction by slowing down or speeding up the pace of her instruction and moving seamlessly from one activity to another---a necessity for keeping her 12 special needs students highly engaged in the learning process.

In the history of the FLES practicum at the University of XXX, this is the first time that a CDC class had ever been offered WL instruction, and both the practicum’s professor
and the target school’s principal were very much interested in identifying how successful the WL instruction would be with these very special children. Thus, the idea for this research study was conceived.

**Research Questions**

Specifically, the research questions that guided this study were:

1. How can special needs elementary school students benefit from world language instruction?
2. How can the impact of FLES instruction on these children be measured?

**Methodology**

**Participants**

Data for this study were triangulated from three different sources: 1) group and individual interviews with 3 teachers (1 Special Education teacher and 2 Educational Instructional Assistants), who worked with the CDC children, in a self-contained classroom; 2) observations of 12 CDC students (grades 1-5; 3 females and 9 male; and 3) CBM (Curriculum-Based Measurement) scores from the target population, identifying their level of reading fluency.

**Data Collection**

*Interviews:* The researcher elected to conduct three sets of semi-structured interviews (see Appendix A for the protocol) with the teachers who worked on a daily basis with the 12 CDC children, in order to capture their perceptions and first-hand experiences. First, a group interview was conducted with all 3 teachers prior to the first Spanish class with the children, in order to hear their personal voices relating their experiences with the children (Holstein & Gubrium, 1995). Individual teacher interviews were subsequently conducted, mid-semester, using the same interview protocol, followed by a third and final group interview with all of the teachers at the end of the semester. These interviews were conducted at times that were
convenient for the teachers and the researcher and digitally recorded for later qualitative analysis. “In much qualitative work, interviews are used alongside other data collection methods” (Hatch, 2002, p. 91). Thus, two other data sources were used: observations and test scores.

*Observations:* Three sets of classroom observations, conducted by the principal investigator, at the beginning of the semester, mid-semester and end of the semester, provided both quantitative and qualitative data, recording the verbal and non-verbal behavior of the CDC students during three scheduled Spanish classes and during three class periods of other regular content instruction. After a review of the literature, a suitable data collection instrument for the present study was not found. Thus, a protocol (see Appendix B) was developed by the researcher to record student behavior during instruction, during all six full class period observational sessions.

*CBM Scores:* The school district in which this research study took place uses the AIMSweb® Reading Curriculum-Based Measurement (R-CBM) to provide a measure of students’ levels of reading achievement (in grades 1-5). CBM checks were made at biweekly intervals with the 12 research student participants throughout the semester to measure their levels of oral fluency (i.e., correct words read out loud within a finite period of time).

*Data Analysis—Qualitative*

Each of the three sets of interviews with the CDC teachers, guided by a set fairly focused questions (see Appendix A), had been digitally recorded and were subsequently burned to a CD and transcribed, by the principal investigator. A typological analysis of the data (LeCompte & Preissle, 1993) was subsequently used to organize all data into categories, based on typologies informed by the research questions. Although there are a number of computer software programs available for qualitative data analysis, the researcher preferred
to personally hand-code and then word-process the data in order to identify reoccurring themes and commonalities.

**Data Analysis---Quantitative**

**Observation Protocols**

Over the course of 12 weeks, and during each of the 6 visits to the CDC classroom (3 visits during Spanish instruction and 3 visits during regular class instruction), the researcher recorded on the observation instrument (see Appendix B) the number of times that predicted types of behavior occurred during each observed lesson with the target population. Student behavior that was observed yet not listed on the protocol, in addition to anecdotal field notes, were recorded as well. Following each classroom observation, the researcher hand-tallied the categorized behaviors recorded on the data collection instrument and summarized the anecdotal notes on the bottom of each observational instrument. At the end of the data collection period, the observed behaviors of the CDC children were rank-ordered in descending order of occurrence.

**CBM Scores**

CBM checks were made of the target students’ oral fluency levels, on a biweekly basis, throughout the 12-week data collection period. Scores from the students, reported from data collected the semester prior to the FLES instruction, were compared with CBM data collected throughout and at the end of the semester, and were placed into a table for ease of comparison, interpretation and identification of any gains.

**Results and Discussion**

**Interviews**

Whereby the researcher collected a wealth of information during the series of 3 interviews with the 3 CDC teachers, this study will report 4 typologies, identified from the
qualitative analysis of the data, the latter of which focused primarily on the teachers’ perceptions of their CDC students in the classroom. These include:

- the behavior of typical CDC students;
- a comparison of the children’s behavior in Spanish class with their behavior outside of Spanish class;
- the type of activities that kept the students on-task; and,
- the children’s overall response to Spanish class.

Profile of CDC Student

In their own words, the teachers described this special population of students as being, “easily distracted” with the “shortest attention span…[of some being] every couple of seconds,” and others having on-taskness that is sporadic and “changes all day long.” They go on to report that these children are “easily distracted” they “get frustrated very easily,” and “need a lot of redirection” to stay focused. Some of the children have medication challenges and are lethargic and “want to go to sleep, which is a little difficult to handle.” When asked how the CDC students behave during the FLES experience, the teachers had much to share with the researcher.

Comparison of the Students’ Behavior in and Outside of the FLES Spanish Classroom

The CDC students “are very attentive and pay attention. They are very happy to be in the [Spanish] class,” said one of the CDC teachers. When asked why she thought that the students were happy studying a second language, the teacher retorted, “…by their reaction. They are doing very well in Spanish class and have accepted it well.” The children enjoy their special lessons so much and look forward to her visits that they regularly ask their teachers when the FLES teacher is coming. The students “have a good attitude…a much more willing attitude” [in Spanish class than during regular lessons], perhaps in no small part,
due to the dynamic teaching style of the FLES teacher and the use of hands-on activities that “they can relate to.”

*What Keeps the Children Engaged in Class?*

As was stated early in this paper, and corroborated by the literature, it is essential to utilize a variety of instructional strategies with special needs children, and to teach, as one teacher said, “in an animated…way. You need to grab their attention. It can’t be boring. If you’re in to it with them, they are in to it with you….An element of surprise is also good.” One comment that especially seemed to make the effort involved with setting up this FLES program for the CDC kids worthwhile, was the following.

*They [the CDC kids] know they are different from everyone else and they know that if they are doing the same things that the regular [non- CDC] kids are doing, it really makes them happy...especially the older kids.*

Beginning in the pre-teaching phase of the study, and reiterated several times over the course of the 3 interviews, the CDC teachers mentioned the fact that their kids “enjoy pretty much anything that you want them to do” yet, they do “not enjoy writing or reading tasks because it is very difficult for them.” Thus, it was decided early on in the planning of the FLES curriculum to focus primarily on aural-oral-visual input with oral-motor output. As with any child, and in concert with published literature on the issue, the researcher and her FLES practicum student discovered that if the children are happy and motivated to participate in class, using their strongest modalities, they will stay on-task and learn.

*The Students’ Overall Response to Spanish Class*

Overwhelmingly, the students’ response to participating in a FLES program was indeed very positive. Teachers and staff in the school reported to the researcher that they would hear the CDC children calling the principal of the school señor and other teachers señora, and sometimes even with an hola or buenos días to accompany this direct address.
Indeed, what the children learned inside of their special FLES classroom accompanied some of them out in the halls and even during bathroom breaks when a teacher heard “…one student singing the Alphabet Song out in the hallway.” Aside from the former, when asked what subject area carryover the CDC teachers noticed from the Spanish class to other classes, one teacher said, “…I mentioned Christopher Columbus and the kids got really excited because they remembered that from Spanish class.” Therefore, not only traditional students but also special kids can follow the bridge across the curriculum, from a WL class to other content fields.

A final comment from one of the CDC teachers, during the final interview conducted at the end of the semester, added that one of the benefits of having her students be exposed to Spanish was that, “it’s letting them know that there are other things, besides this little art of the world, to know about… [and]…they seem to enjoy it.” The results of the qualitative interviews with the CDC teachers appear to mirror what the researcher found during her classroom observation sessions.

Class Observations

Results of the quantitative analysis of the Classroom Interaction Protocols and field notes taken each of the 6 observations over the 12-week data collection period, indicate that the children participating in the present study exhibited a higher degree of engaged participation and on-task behavior during the Spanish classes, than during the non-Spanish classes, as observed by the principal investigator of this study (see Table 1). Specifically, the top 3 frequently-occurring behaviors exhibited by the children in the FLES classroom demonstrated positive attentiveness. The students smiled, nodded, listened, repeated after the teacher (when prompted), and raised their hands to ask or answer a question. Outside of the Spanish classroom, however, 2 of the 3 top-occurring behaviors of these same children were not positive; the children did not pay attention and answered the teacher without raising their
hands. Thus, during the final of the 6 in-class observations, the target population was more actively engaged and on-task and showed more appropriate behavior when they were in the FLES classroom then when they were not.

**Table 1**

**Rank Order of Occurrence of Student Behavior**

<table>
<thead>
<tr>
<th>Rank Order of Occurrence of Student Behavior During Spanish Class</th>
<th>Rank Order of Occurrence of Student Behavior Outside of Spanish Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smiles/Nods/Listens</td>
<td>Not paying attention</td>
</tr>
<tr>
<td>Repeats after teacher</td>
<td>Other: Answers teacher without raising hand</td>
</tr>
<tr>
<td>Raises hand</td>
<td>Listens</td>
</tr>
<tr>
<td>Asks question out loud</td>
<td>Smiles/nods</td>
</tr>
<tr>
<td>Talks to neighbor</td>
<td>Gets out of seat (sharpens pencil; goes to coat closet)</td>
</tr>
<tr>
<td>Not paying attention</td>
<td>Asks question out loud</td>
</tr>
<tr>
<td>Gets out of seat</td>
<td>Repeats after teacher</td>
</tr>
</tbody>
</table>

**CBM Test Scores**

In addition to having a desired impact on student behavior, Spanish instruction also appeared to have had a positive influence on the 50% of the students’ gains in reading fluency, when comparing the rate of increase of words correctly read by minute between the fall to spring semesters of the 2008-2009 academic year with the increase or gain of words correctly read at the end of the spring semester during the 2009-2010 school year (see Table 2). It must be noted that any proficiency or academic gains for these CDC students need to be viewed in perspective. The gains reported here for the participants are norm gains (i.e., percentage of increase for individual students), and are not reported here as criterion-referenced gains (i.e., percentages compared with all of the school district children who had CBM scores. Yet, any gain or increase is to be celebrated as in the case of 6 out of the 12 CDC children in this study.⁰¹³
Table 2

<table>
<thead>
<tr>
<th>Student Grade</th>
<th>Age</th>
<th>Gender</th>
<th>2008-2009 Gains</th>
<th>2009-2010 Gains</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Fall to Spring</td>
<td>Fall to Spring</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CBM-WRC*</td>
<td>CBM-WRC*</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>M</td>
<td>100%</td>
<td>100%</td>
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<tr>
<td>1</td>
<td>7</td>
<td>M</td>
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<td>700%</td>
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<td>1</td>
<td>8</td>
<td>M</td>
<td>0%</td>
<td>0%</td>
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<td>F</td>
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<td>100%</td>
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<tr>
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<td>11</td>
<td>F</td>
<td>0%</td>
<td>10%</td>
</tr>
</tbody>
</table>

*WRC = Words Read Correctly

Conclusions

The results of the present study cannot offer a comprehensive snapshot of the impact of WL instruction on children with special needs due to a variety of reasons: 1) only one group of students (N=12) in one small, urban school was the focus of this study. 2) Observations of the subjects were made by only 1 researcher, during only 6 class periods and using 1 observational protocol. 3) Interviews with the CDC teachers were only conducted a three different time intervals. Therefore, the results of this study cannot necessarily be generalized to a greater population similar to the one examined in this study. The results, however, did report some very encouraging data that appear to indicate that early world language instruction, offered to children with special needs, does have a guardedly positive overall impact on their behavior, cognitive processing and retention of content offered through a second language via a highly-structured, multi-sensory input. Additionally, the authors of this study concur with the literature that “…the benefits of [special needs] pupils’
self-esteem are considerable and …motivation is significantly increased by achieving short-term goals” (Holmes, 1994a, p. 9) when participating in a FLES program of instruction.

**Implications and Recommendations**

The Center for Applied Linguistics reports that only 25% of all elementary schools in the U.S. offer world language instruction (Rhodes & Pufahl, 2010, p. 3), and from these schools, 25% of them have been affected by a shortage of qualified WL teachers, and most especially, those schools with a “large percentage of students from low socioeconomic backgrounds” (Rhodes & Pufahl, 2010, p. 6). It should be noted that these data report the number of U.S. elementary school WL programs for *traditional* students, not for *special needs* students, such as the participants in the present research study. It is only by conducting and reporting the results of additional empirical research studies, such as the present study, that the rationale for offering WL instruction for the intellectually less-gifted of U.S. elementary school students can arguably be made.

Whereby, this paper reports a guardedly positive impact of second language instruction on the CDC children examined in this study, further research studies, involving a greater and more diverse population of subjects need to be conducted. Additionally, even though this research triangulated data from three different sources and used a mixed qualitative and quantitative methodology, subsequent research studies could include video-taping of and interviews with the student participants to add another voice to the next study.

**Notes**


2. This differs from the sentiment about the availability of world language instruction in Europe. Following a pan-European research investigation, resulting in a report from the European Commission in 2005, it was concluded that, “… all young people in the European
Union, whatever their disability, whether educated in mainstream or segregated schools/streams, have equal rights to foreign languages education” (as cited in McColl, 2005, p. 103).

3. Knox County School District defines those students who are enrolled in a CDC as having “…been identified as needing a small, structured environment where core academic areas are addressed at the student’s instructional level while still tying the instruction to curriculum standards” [CDC, 2010, para. 2]).

4. There are two master’s programs in Teacher Education. Track 1 consists of 18 graduate hours in a world language and 18 hours in Education. Track 2 includes a year-long teaching internship, leading to initial licensure in a world language. The practicum student in the present study already held an initial licensure in Spanish from another university.

5. DD = Developmentally Delayed; ED = Emotionally Disturbed; FC = Functionally Delayed; ID (formally known as MR or Mentally Retarded) = Instructionally Delayed


7. The research corroborates the efficacy of such right hemisphere actions and reports that, “Rhythmic vocal games are part of the inbuilt language development of most children and take advantage of familiar and inherent processes can be of value” (Holmes, 1994b, p. 14).

8. Due to conflicts in the teachers’ schedules, it was not possible to hold a group interview with all teachers present; consequently, individual interviews were conducted by the researcher.

9. According to the AIMSweb® website (available at: http://www.aimsweb.com/measures-2/reading-cbm/), “more than 25 years of research has shown that listening to a child read graded passages aloud for 1 minute and calculating the number of words read correct per minute provides a highly reliable and valid measure of general reading achievement, including comprehension, for most students” (para. 1).
10. Deno (2003) defines Curriculum-Based Measurement (CBM) as, “an approach for assessing the growth of students in basic skills that originated uniquely in special education” (p. 184).

11. According to LeCompte & Preissle (1993), typological analysis is defined as “dividing everything observed into groups or categories on the basis of some canon for disaggregating the whole phenomenon under study” (p. 257).

12. It was tempting to use a software program to analysis the interviews. Glesne and Peshkin (1992), however, feel that, “The products of computer-assisted analysis are only as good as the data, the thinking, and the level of care that went into them” (p. 145).

13. However, due to the nature of this special population, a gain one year is not necessarily followed by a gain after a subsequent year. Thus, 1 student who went from 3 words read correctly (WRC) to 13 WRC during one academic year, showing a 333% increase, dipped to a 200% increase (going from 12 to 24 WRC) the following year.

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Appendix A

Interview Protocol

[First Interview: Sections I, II; Second and Third Interviews: Section II]

I. Rapport Building
   A. Pseudonym Chosen By Participants
      1. I will explain what a pseudonym is and why it will be used.
      2. What would you like your pseudonym to be?
   B. Background Information
      1. How long have you taught? Where?
      2. On what grade levels have you taught?
      3. When did you become interested in teaching CDC children?

II. Guide Questions
   A. How would you describe the attention span of the children in the CDC classroom during class instruction?
   B. How is the level of participation of the children in the classroom?
   C. What is the typical behavior of the children during class time?
   D. What type of activities do these children seem to enjoy?
   E. What do you think motivates these children to pay attention in class?
   F. How do the children interact with the teacher during instruction?
   G. How do the children interact with each other during instruction?
   H. Any other comments?
### Classroom Interaction Protocol

**Group Interaction Analysis Observation Chart:** 
- Spanish Class: ___
- Regular Class: ___

**Number of Students:**
- Girls: ___
- Boys: ___

**Date observed:** ________________  
**Time observed:** ________________  

**Observer:** ________________

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<th>Categories of Behavior</th>
<th>3-Minute Intervals of 5 Blocks of Time</th>
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<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Smiles</td>
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<tr>
<td>Nods</td>
<td></td>
</tr>
<tr>
<td>Listens</td>
<td></td>
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<tr>
<td>Repeats After Teacher</td>
<td></td>
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<tr>
<td>Raises Hand</td>
<td></td>
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<tr>
<td>Asks Questions Out Loud</td>
<td></td>
</tr>
<tr>
<td>Not Paying Attention</td>
<td></td>
</tr>
<tr>
<td>Talks to Neighbor</td>
<td></td>
</tr>
<tr>
<td>Leaves Seat</td>
<td></td>
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<tr>
<td>Other</td>
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