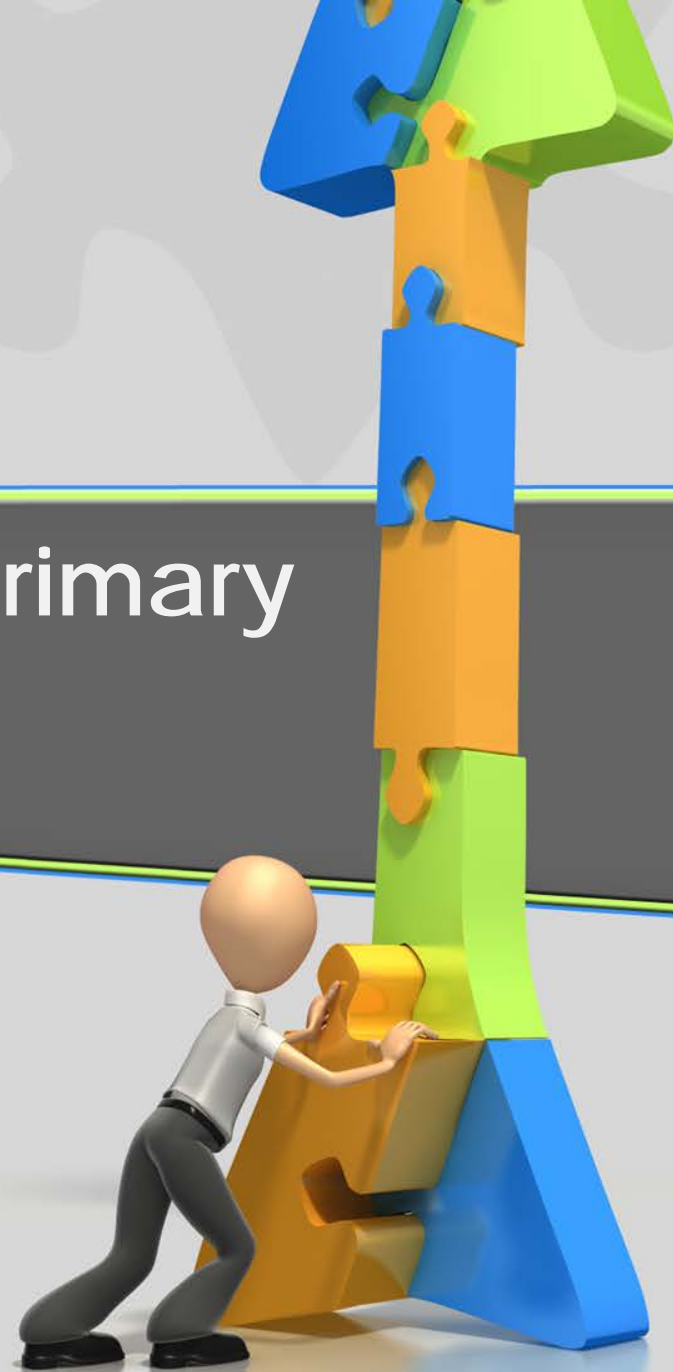


Findings of Project EILE-Primary and Secondary Schools

Presentation for MEP, Costa Rica
March 19, 2013





Purpose and Overview of EILE

- To determine the extent to which technology enhances the learning of English as opposed to learning English via traditional, teacher-only typical practice without technology
- 2-year intervention
- Primary: 661 students from 72 schools randomly assigned to 3 conditions (Treatment A, Treatment B, and Control)
- Secondary: 248 students from 33 schools (issues to be discussed) from 5 conditions (4 technology-based treatments and Control)

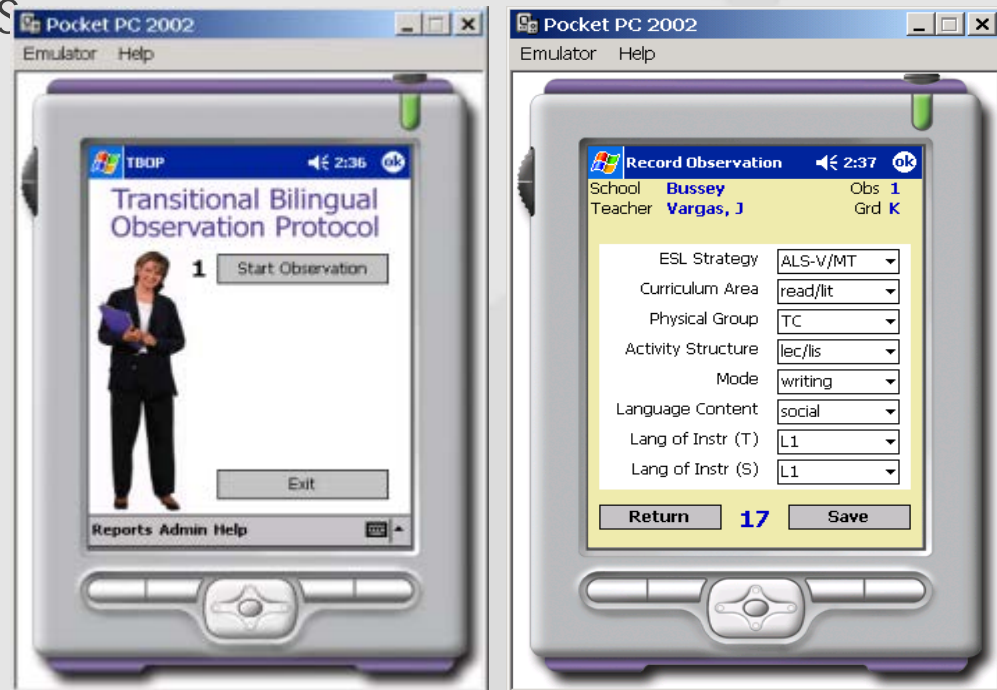


Primary Schools (3rd-4th grade)

- 3rd grade: *technology program as teacher*
- 4th grade: *technology program plus teacher instruction*
- **Classroom observation:** Transitional Bilingual Observation Protocol (TBOP)
- **Survey on family, student, teacher, and principal:** Associated Factors
- **English Oral language development:** Woodcock Munoz Language Survey-Revised (WMLS-R)
- **Interview with the Principals**
- **Teacher survey**
- **Challenges**

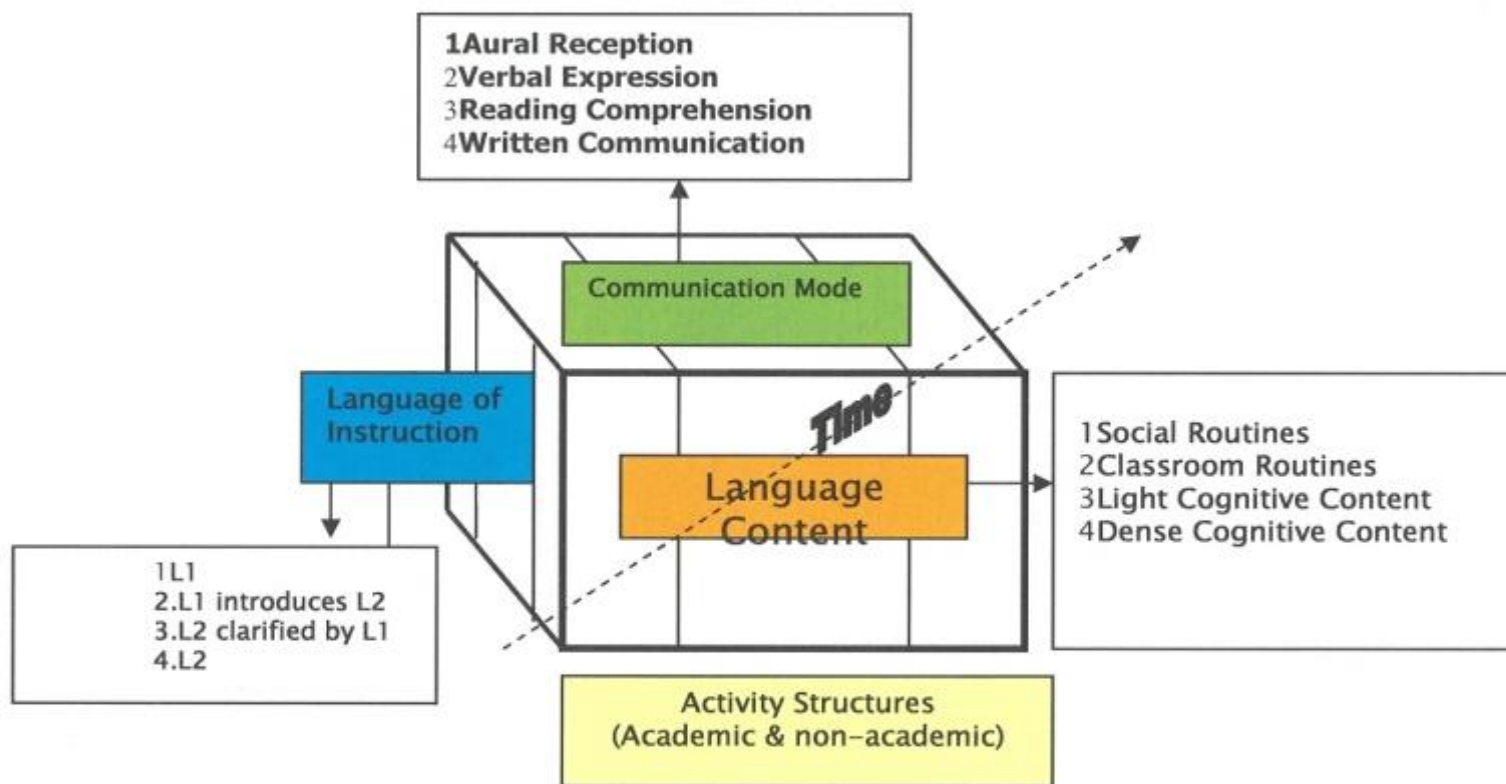
Transitional Bilingual Observation Protocol (TBOP)

- Observation tool used to collect data on actual classroom practice in bilingual programs



Demonstration online: <http://www.inlineresources.com/docs/tbop.swf>

Teacher/Classroom Characteristics Theory



Four Dimensional Transitional Bilingual Pedagogical Theory (Lara-Alecio & Parker, 1994)



Dimensions of TBOP

- **Language of instruction**
 - Content presented in L1 (Spanish)
 - L1 (Spanish) introduces L2 (English)
 - L2 (English) supported and clarified by L1 (Spanish)
 - Content presented in L2 (English)
- **Language Content**
 - Social routines (conversation)
 - Classroom routines (school-related tasks)
 - Light cognitive content (reviewing previously taught concept)
 - Dense cognitive content (introducing new concepts, specialized vocabulary, critical thinking)



Dimensions of TBOP

- **Activity Structure**
 - Teacher behavior (directing, leading, evaluating, observing)
 - Student response (listening, performing, discussing, asking questions)
- **Communication Mode**
 - Two receptive modes (aural, reading)
 - Two expressive language modes (verbal, writing)
- Record data specifying curriculum area, physical grouping, and ESL strategies



Application of TBOP

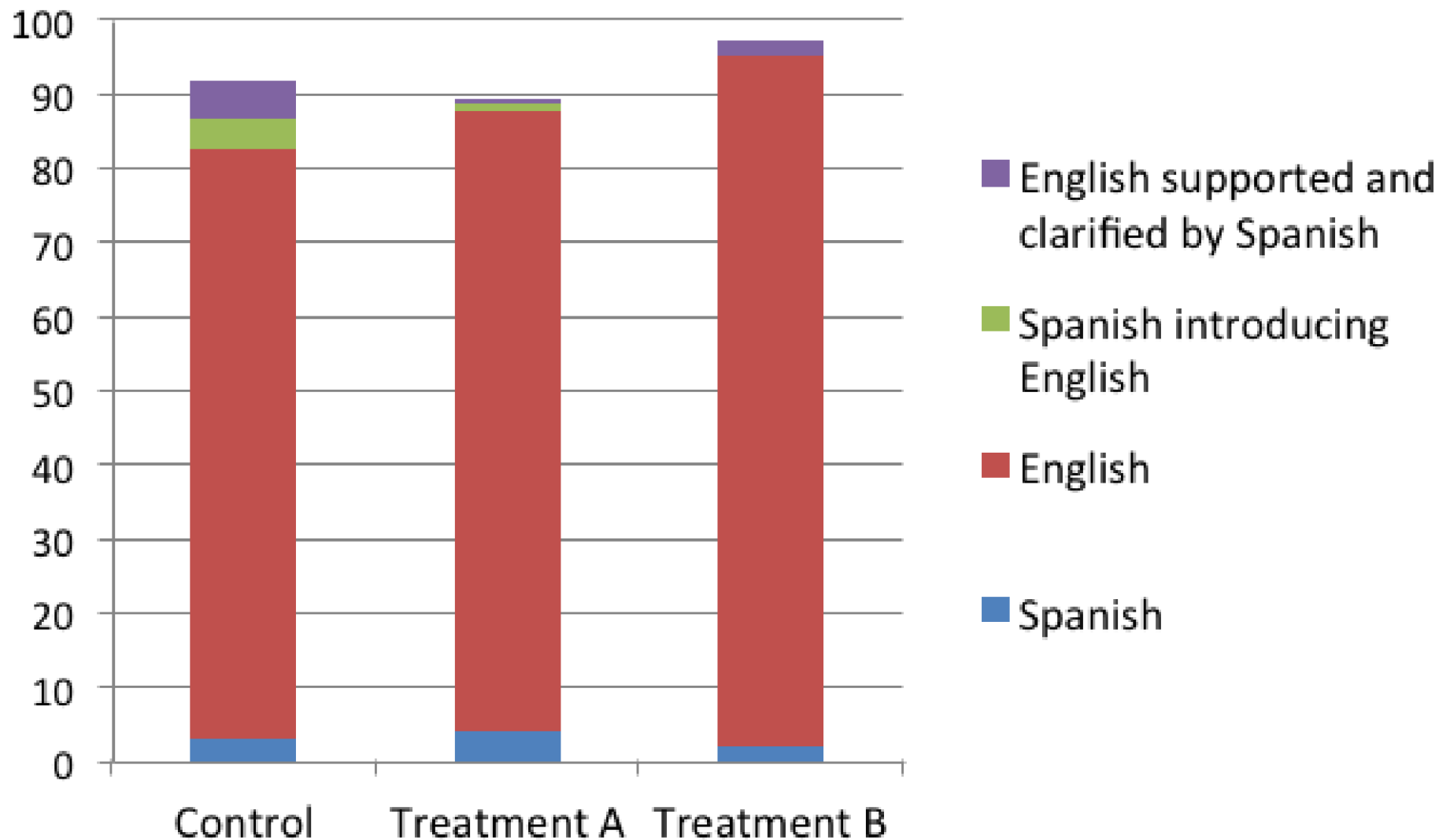
- Inter-rater reliability .90
- Although the model depicts transition of language, the model can also be used, singling out either L1 or L2, as would be in an all-Spanish or all-English classroom (or as applies to other languages)
- It also can report-- ESL strategies, curriculum areas, communication modes, activity structures, language content, and physical groups



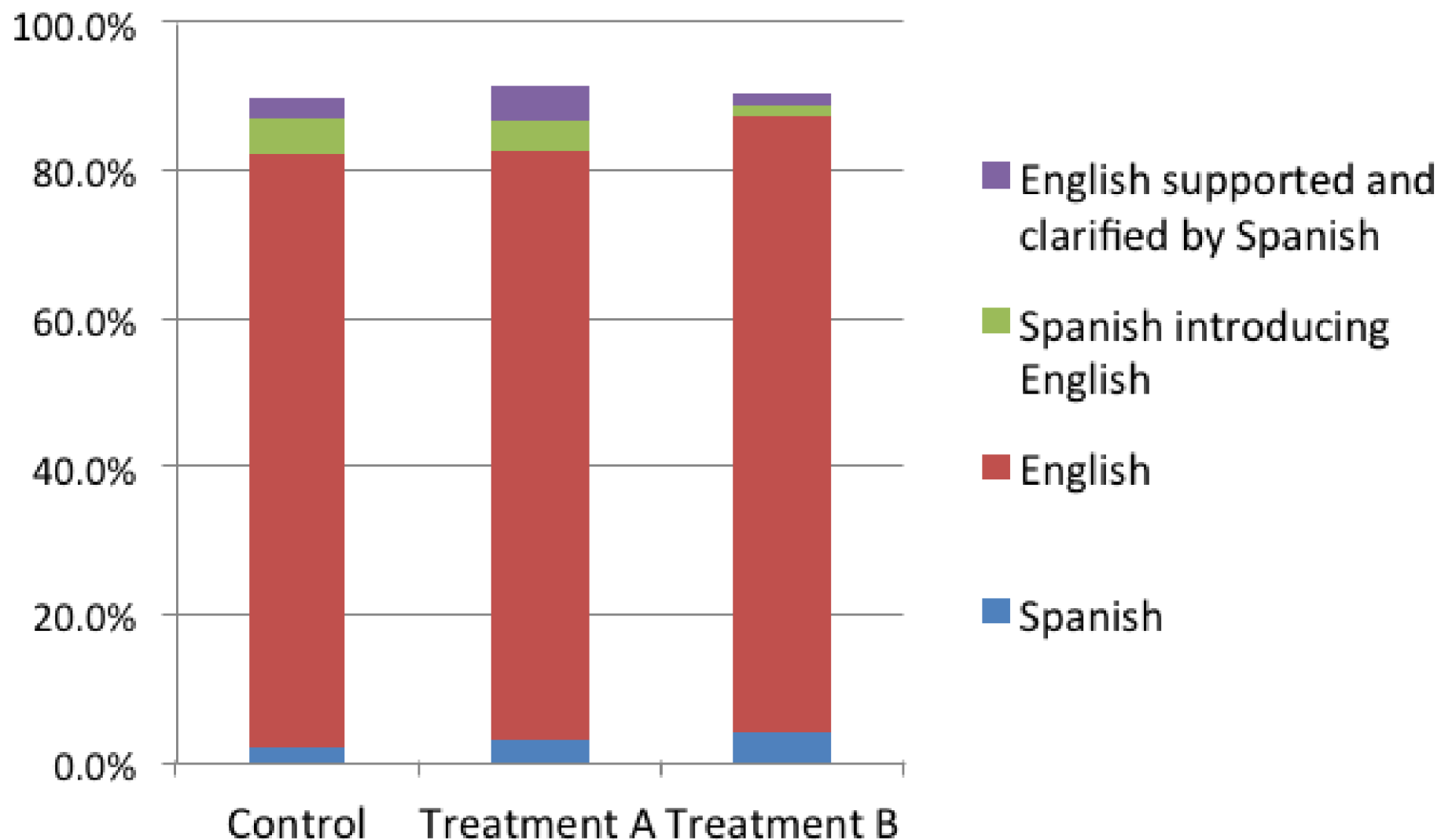
Findings of TBOP

- Findings from classroom observations reflect the nature of English language instruction in the respective conditions.
- Teachers in Treatment A&B were observed spending more instructional time than were control/comparison (typical English classroom teachers) in (a) using English as language of instruction, (b) engaging students in cognitive academic language proficiency levels, (c) receptive language-related communication modes (especially in 3rd grade), and (d) teacher-leading/student-performing and teacher-directing/student-performing types of activities

Language of Instruction—3rd grade

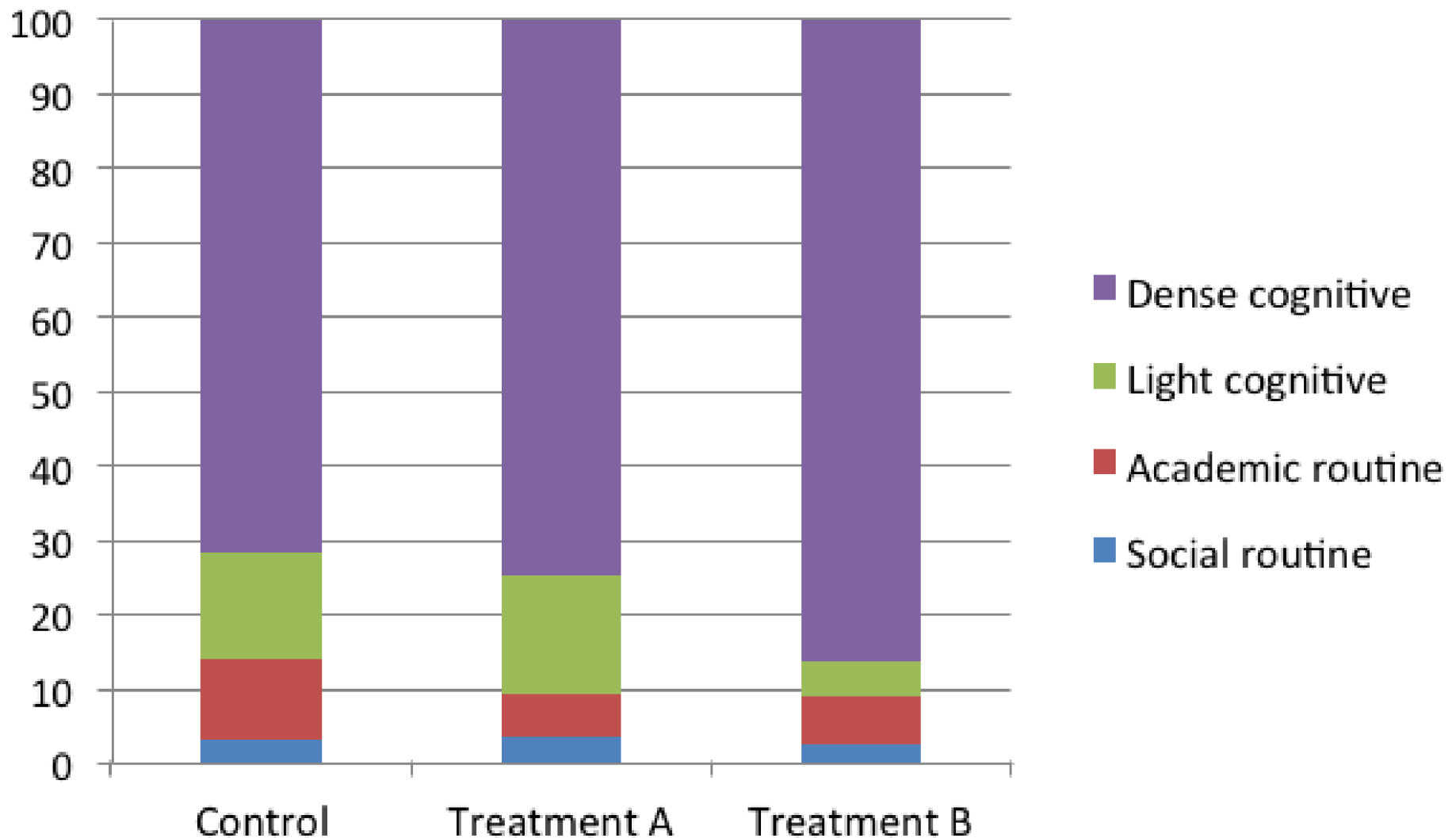


Language of Instruction—4th grade

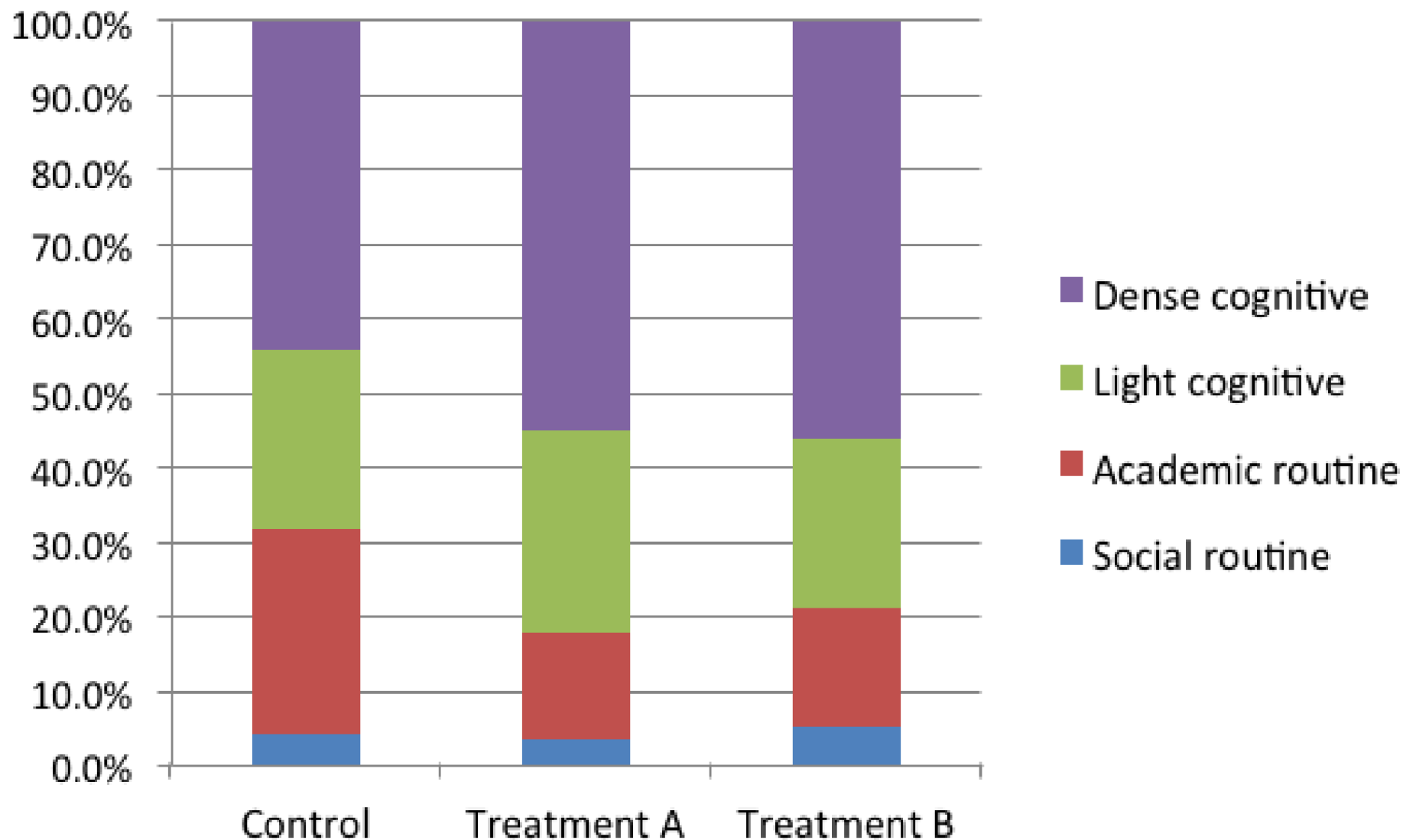




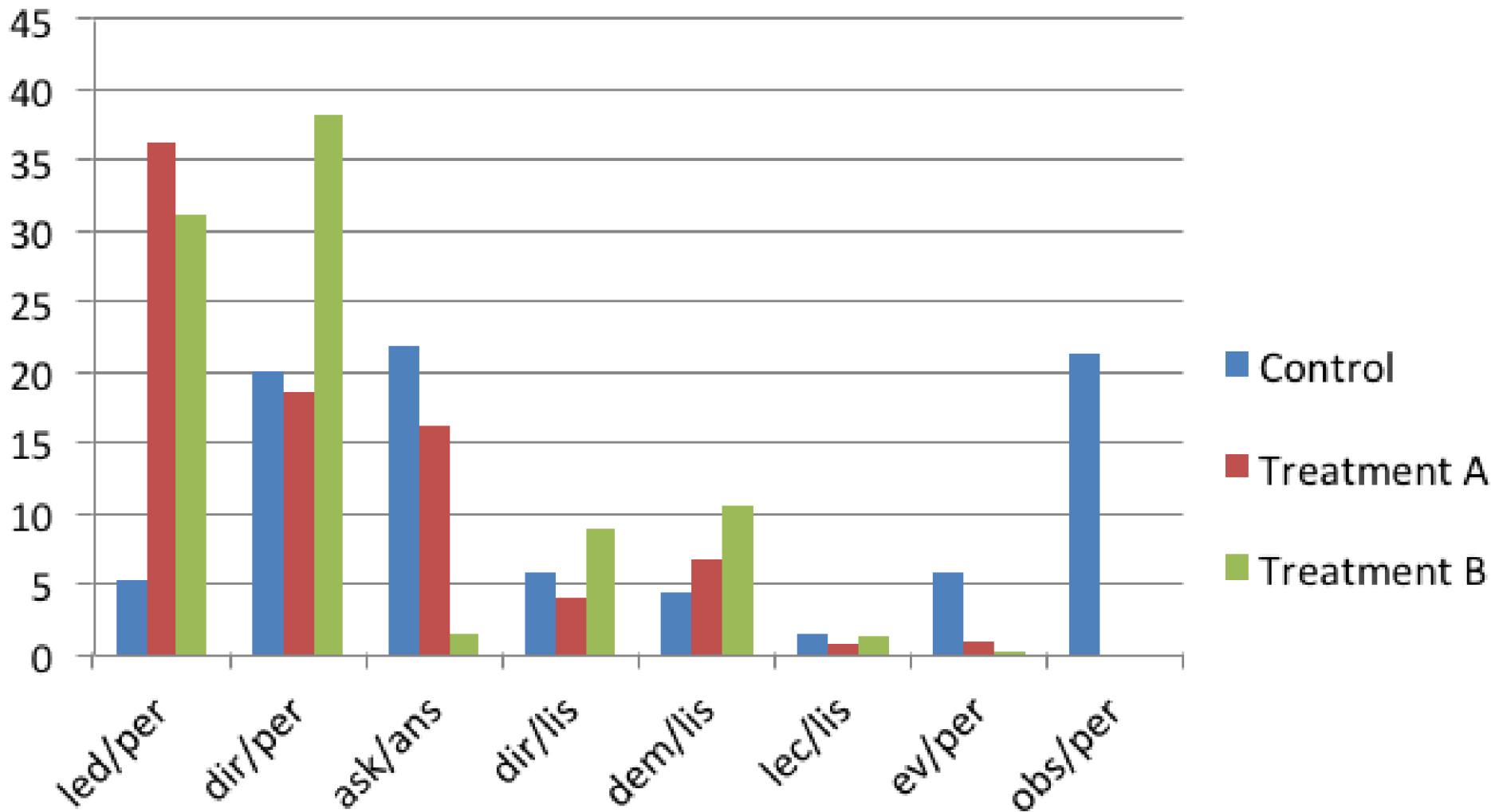
Language of Content—3rd grade



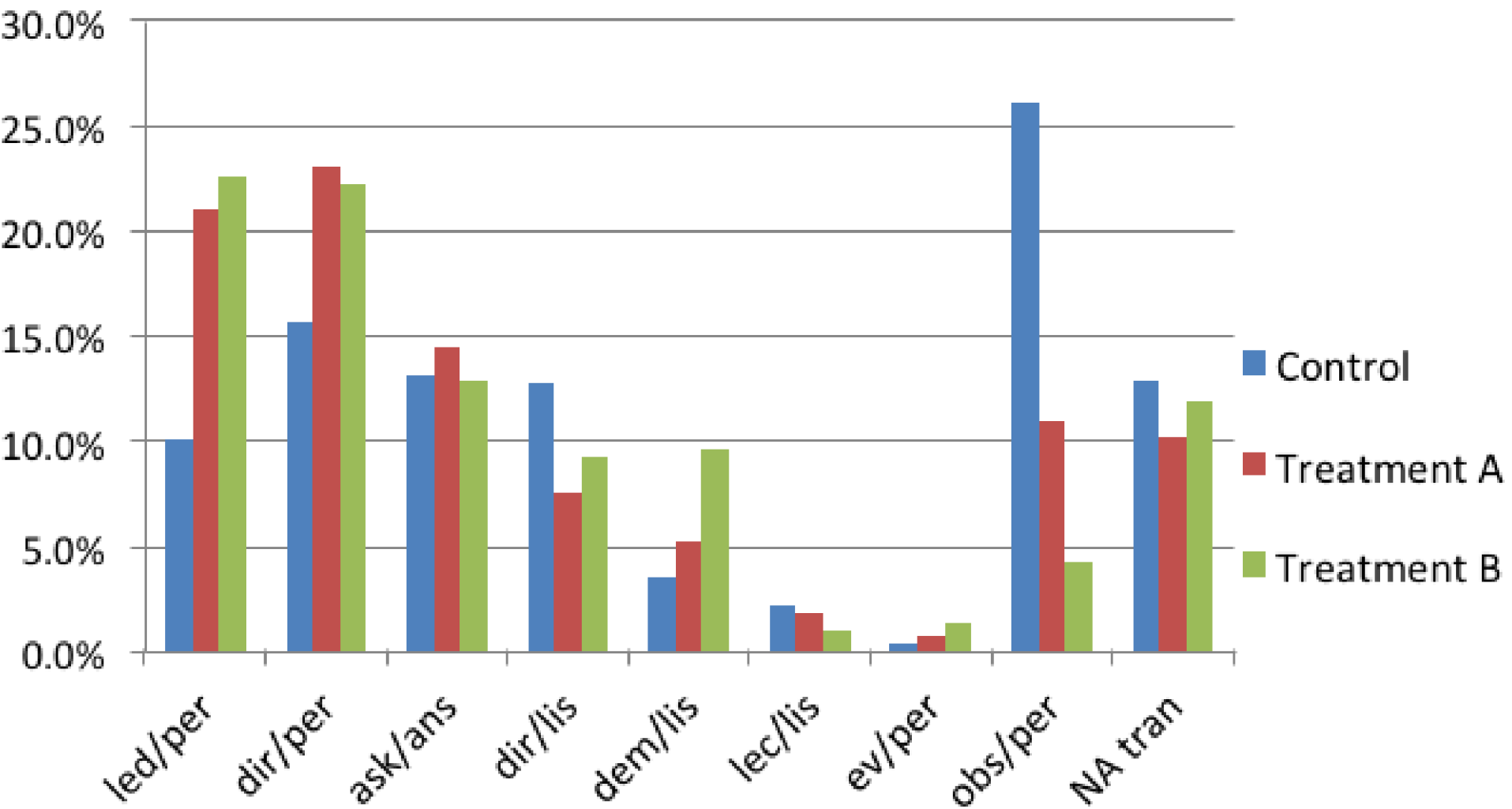
Language of Content —4th grade



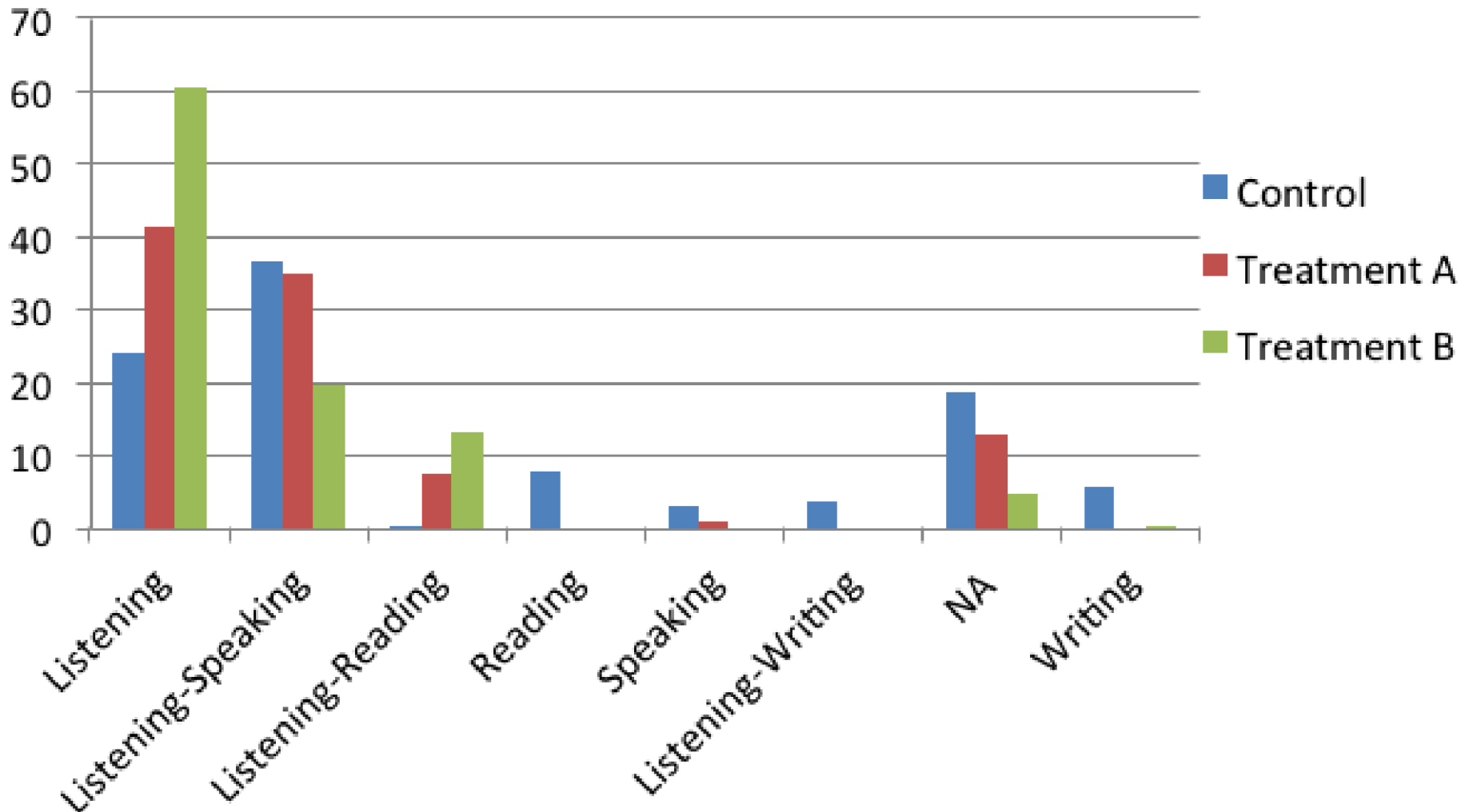
Activity Structure—3rd grade



Activity Structure—4th grade

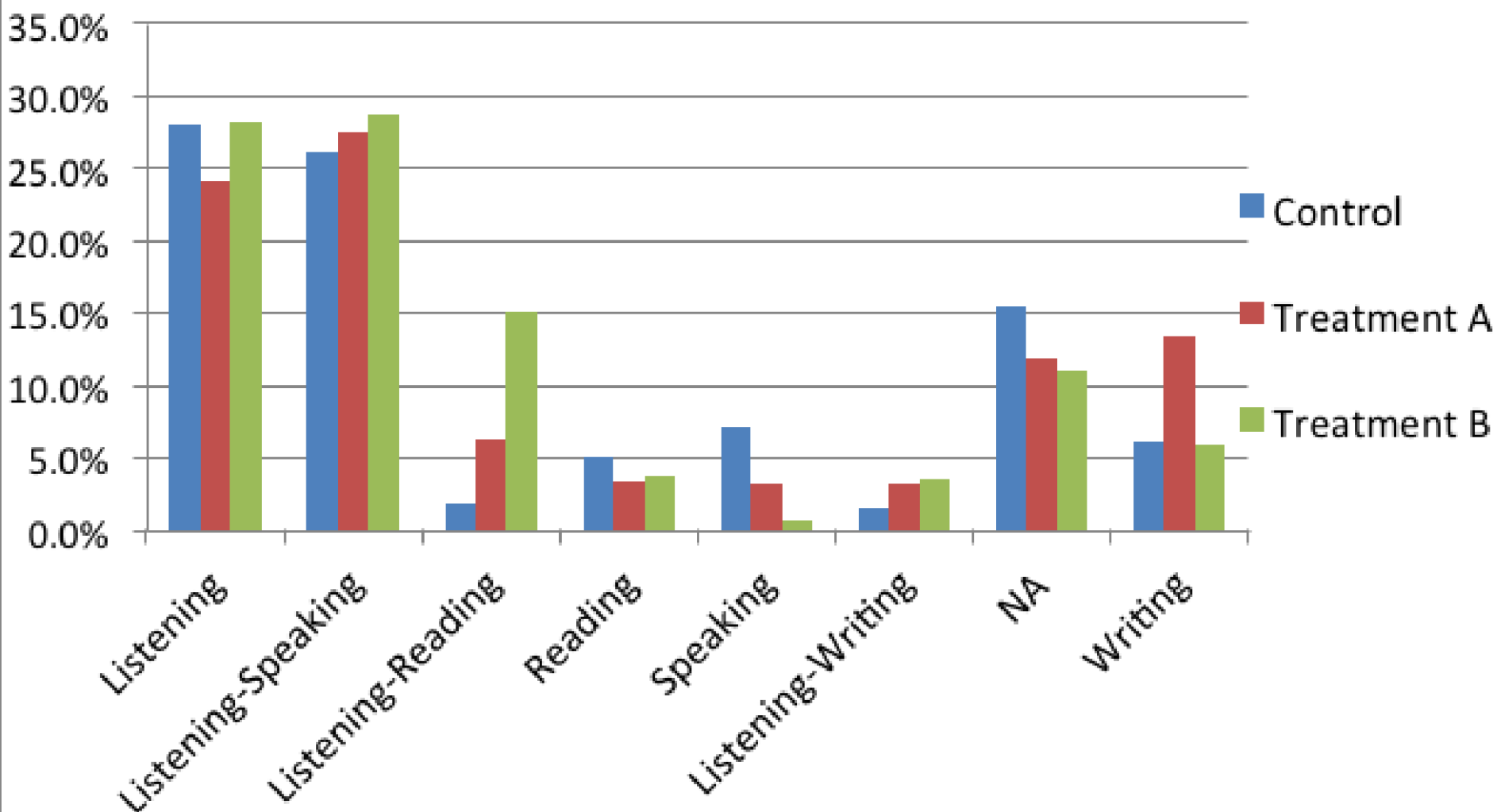


Communication Mode—3rd grade





Communication Mode—4th grade





Oral English Development: WMLS-R

- On average, the primary students had limited English proficiency in oral expression and listening at the time of pre-test
- When the effect of two interventions was combined, we found that when *controlling for initial performance at the beginning of 3rd grade*, students in the technology group acquired oral English at a similar rate as did students in the control condition.
- Students were still performing below that of 3rd grade native English speaking students.



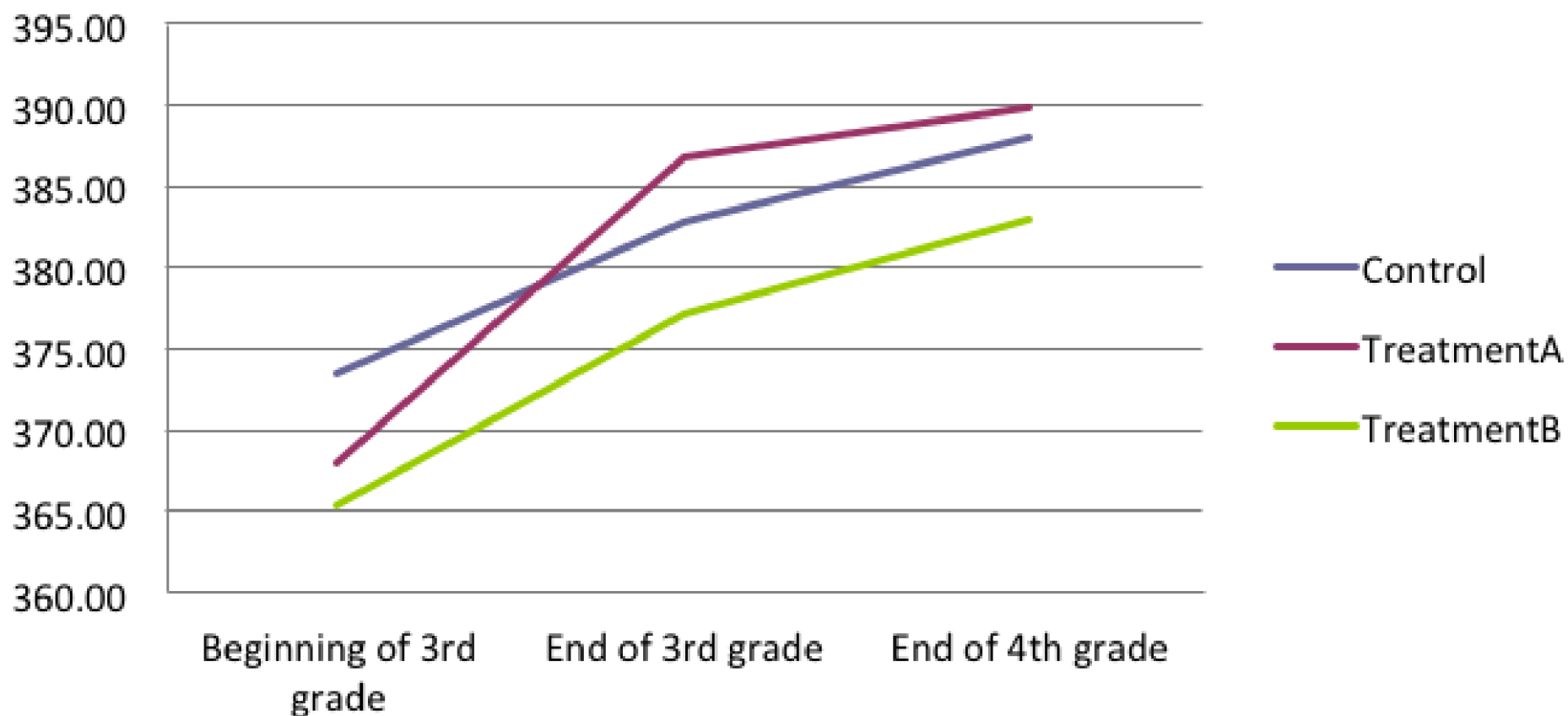
Oral English Development: WMLS-R

- *Controlling for initial performance at the beginning of 3rd grade*, students in Treatment A developed at a higher rate as compared to those in control condition in lexical knowledge.
- It is also worth noting that all schools in Treatment A were located in rural areas, and the technology intervention worked well in these schools
- Although these students made significant gains over time, they had a very limited initial oral English proficiency and were still significantly below the typical native English speakers' norms at fourth grade level at the end of the project



Growth in *Picture Vocabulary* by 3 conditions

Picture Vocabulary





Interview with the Principals

- Principals who participated in the interviews manifested that, in general, there were more positive than negative experiences
- Principals thought that the inclusion of computers was a great opportunity for students not only to learn English, but also to get familiar with this type of technology.
- Students learned their English and, as evidenced, they were heard in the corridor speaking in English.



Interview with the Principals

- There were some challenges with
 - Obtaining assistance in a timely manner
 - Having internet connections, installed software, and earphones for everyone
 - Having qualified personnel to assist with hardware issues
 - Having appropriate assistance given in the manner they deemed necessary.



Teacher Survey on best EFL strategies

- Top five methods currently used for teaching English as a foreign language in Costa Rica in Primary School.

Table 1

Games	Music	Dramatization	Oral Tasks	Pictures & Symbols
189	154	110	92	80
18.40%	15.00%	10.71%	8.96%	7.79%

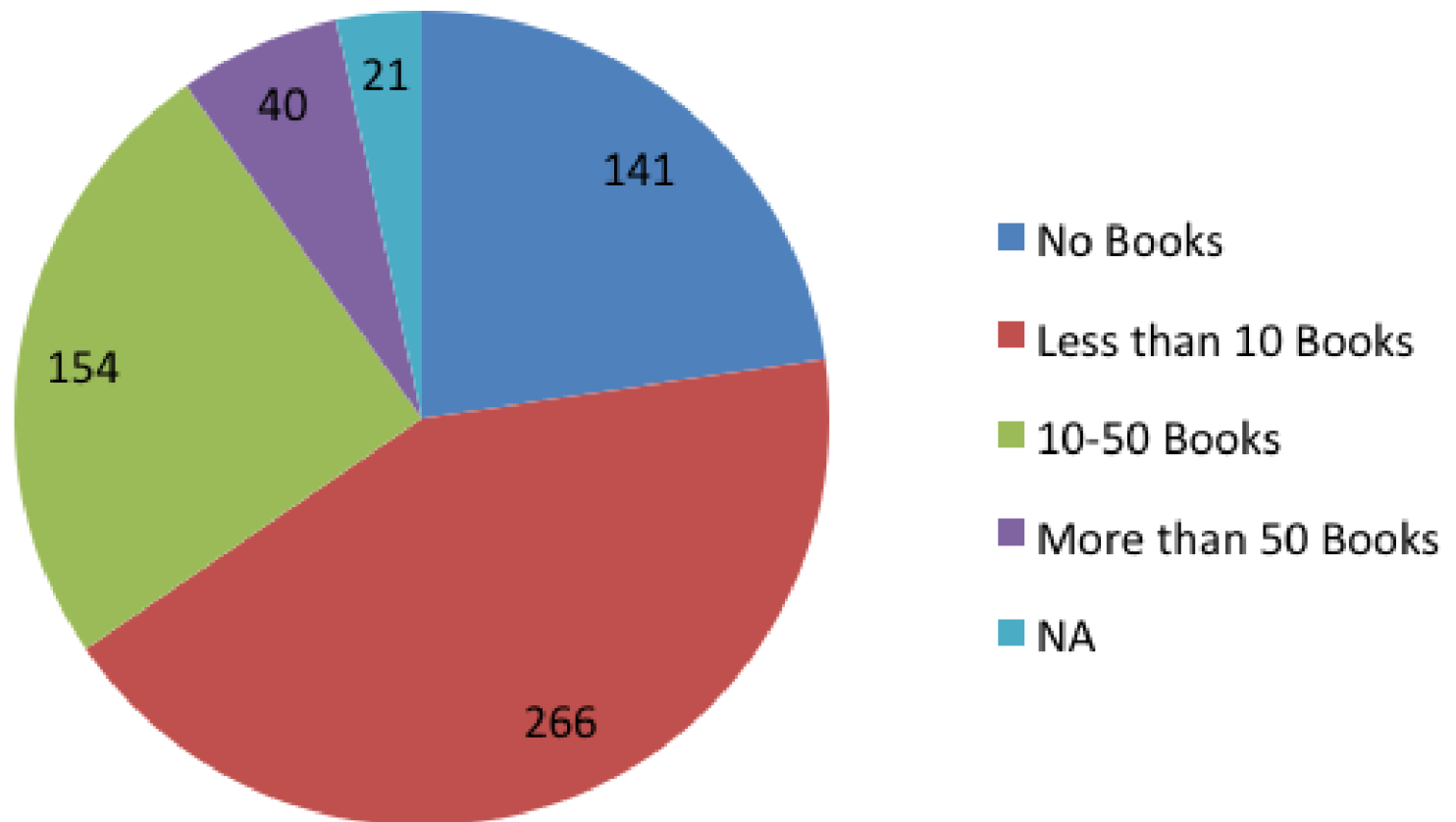


Associated Factors

- The Associated Factors-Family
- The Associated Factors-Student
- The Associated Factors-Teacher
- The Associated Factors-Principal

The Associated Factors-Family

Response to Number of Books in the Home





The Associated Factors-Student

Students were asked about how they felt while in school

	Yes	No	No Answer
Content	541	49	61
Bored	67	435	149
Entertained	401	98	152
Nervous	77	389	185
Calm	465	45	141



The Associated Factors-Teacher

The importance of assessment of third grade students in language learning following the evaluative procedure

	Very important	Important	Not very important
Written exams	30	19	7
Observation of student performance	50	5	0
Exercises and/or homework or written assignments	36	19	0
Asks students	23	27	5
Exposure of students in classroom	37	17	2
Students' self-evaluation	25	14	16
Other	4	3	2



The Associated Factors-Principal

Which of the following topics are those that are discussed during a school board meeting?

	Frequently	Occasionally	Not discussed
Pedagogical issues	13	10	13
Budget issues	28	8	1
General Disciplinary Rules	10	15	10
Social problems with the community	8	18	9
Community problems related with the environment	12	18	5
Community problems related to poverty	9	21	5
Appointment, dismissal or removal of staff	1	6	28
Other			



Teachers' WMLS-R Scores

- No difference was observed among the 3 conditions
- Teachers experienced a gain from pre-test to post-test in each condition
- Teachers' TOEIC scores were not included in the evaluation, because there were a significant amount of missing data, and some were collected in the year of 2007 which were too outdated to be used for establishing a baseline in 2010



Challenges

- Finding personnel to conduct testing
- Providing transportation
- Accounting for weather conditions such as hurricanes or storms
- Finding the schools
- Altered schedules once the assessors arrived
- Protecting computers
- Obtaining the equipment and getting the software installed on time
- Lack of electricity
- Testing issues



Secondary Schools—7th to 8th grade

- The project started with 75 schools and 1,131 seventh graders.
- Data were analyzed by the Evaluation Team based on 248 students from 33 schools
- The significant reduction in numbers was due to the fact that the initial research design was severely compromised because of multiple implementation issues and a lack of fidelity to the initial and revised design.



Findings

- **Classroom observation:** Transitional Bilingual Observation Protocol (TBOP)
- **Survey on family, student, teacher, and principal:** Associated Factors
- **English Oral language development:** Woodcock Munoz Language Survey-Revised (WMLS-R)
- **Interview with the Principals and Teachers**
- **Teacher survey**
- **Additional analysis**
- **Challenges and Recommendations**



WMLS-R

- Students made significant gains in English oral proficiency
- Treatment A > Control on Understanding Directions
- Treatment D was least effective
- No difference was found between control and combined treatment conditions--no difference between technology enhanced and teacher-led instruction

Picture Vocabulary

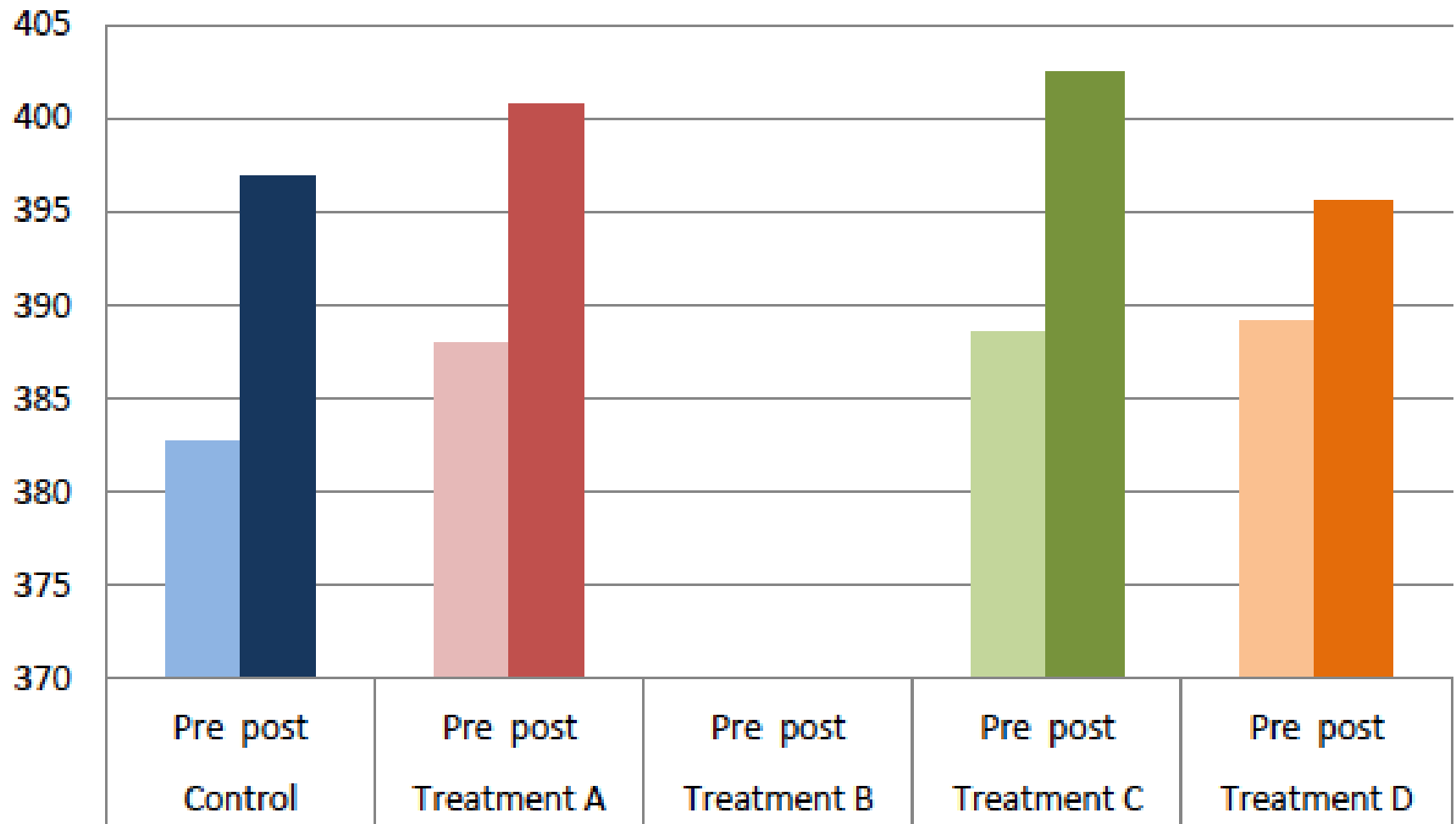
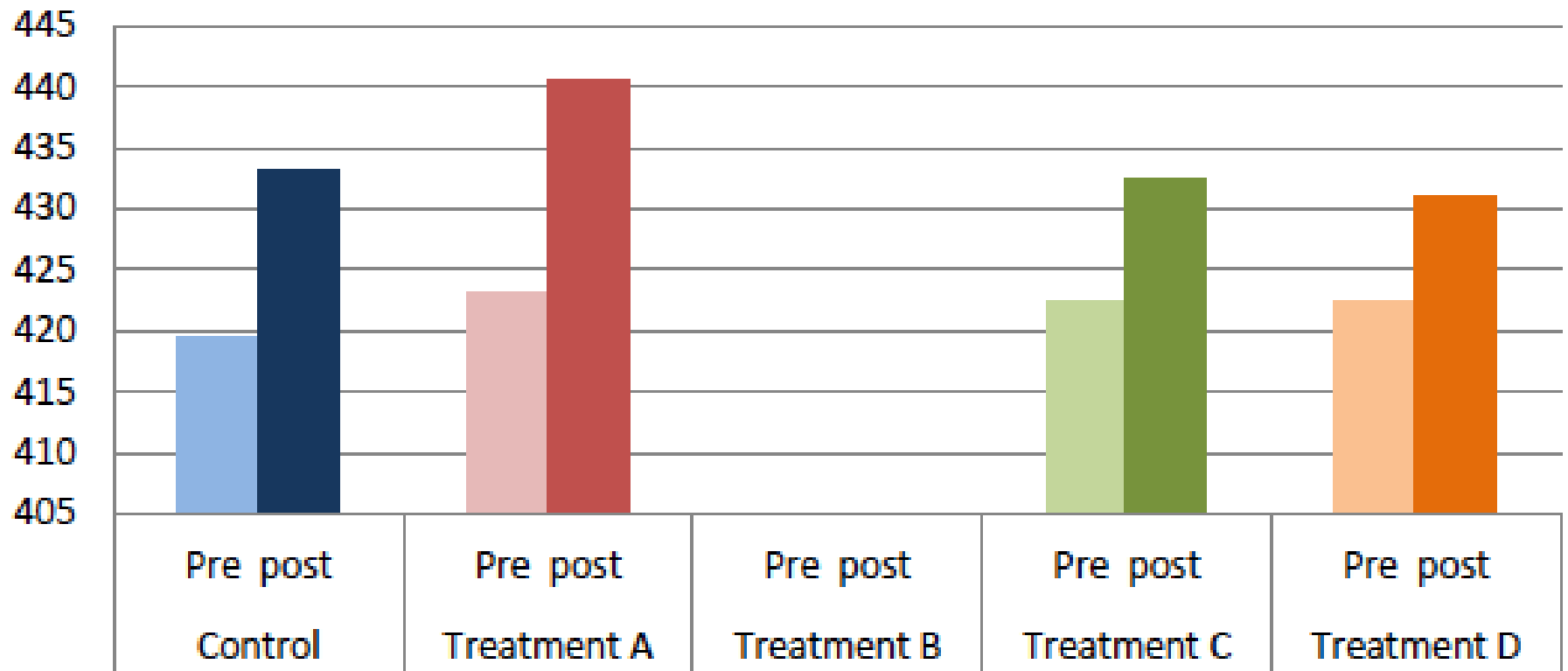
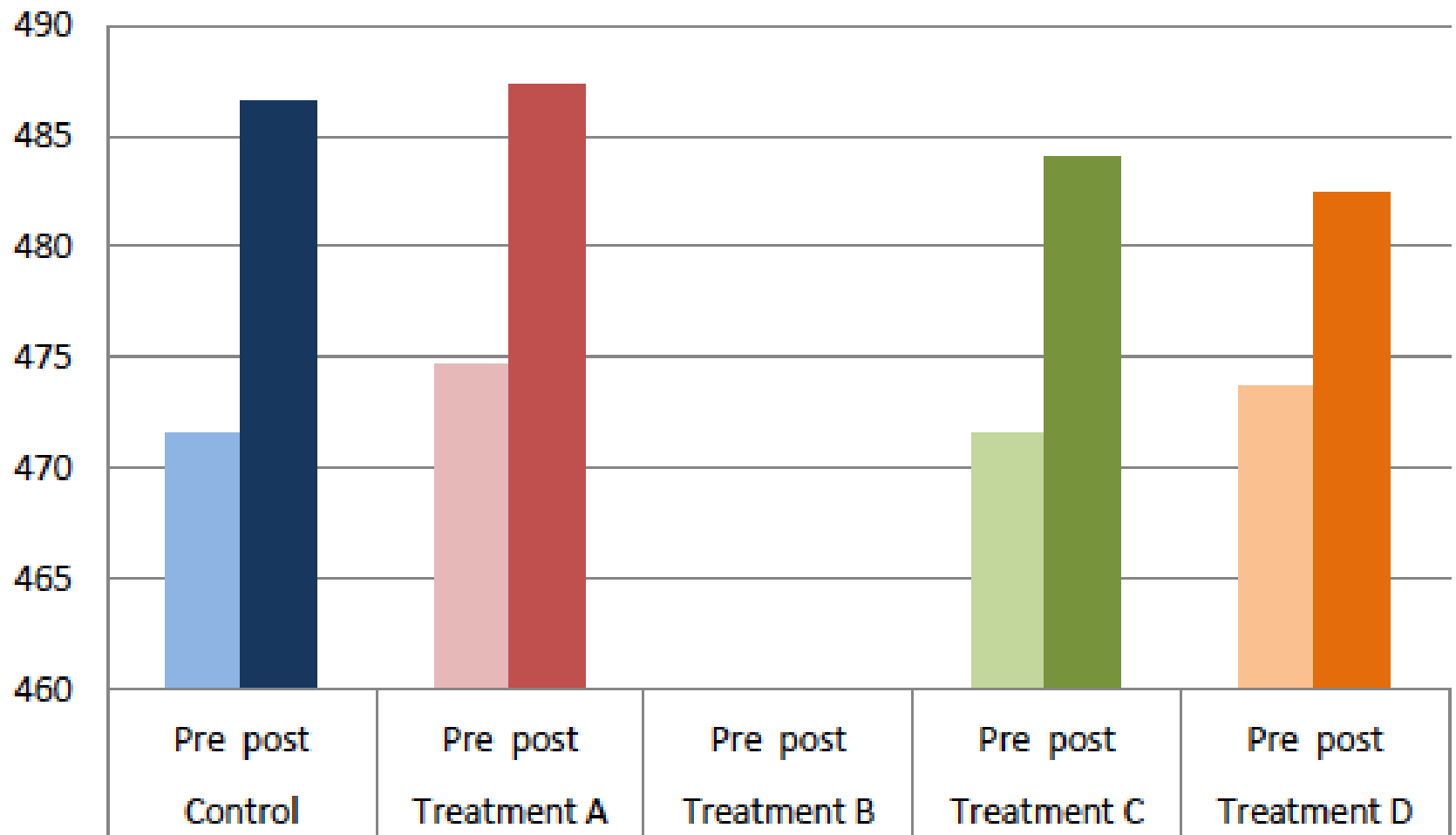


Figure 3. Pre- and post-test in *Picture Vocabulary* by 5 conditions.

Understanding Directions



Story Recall

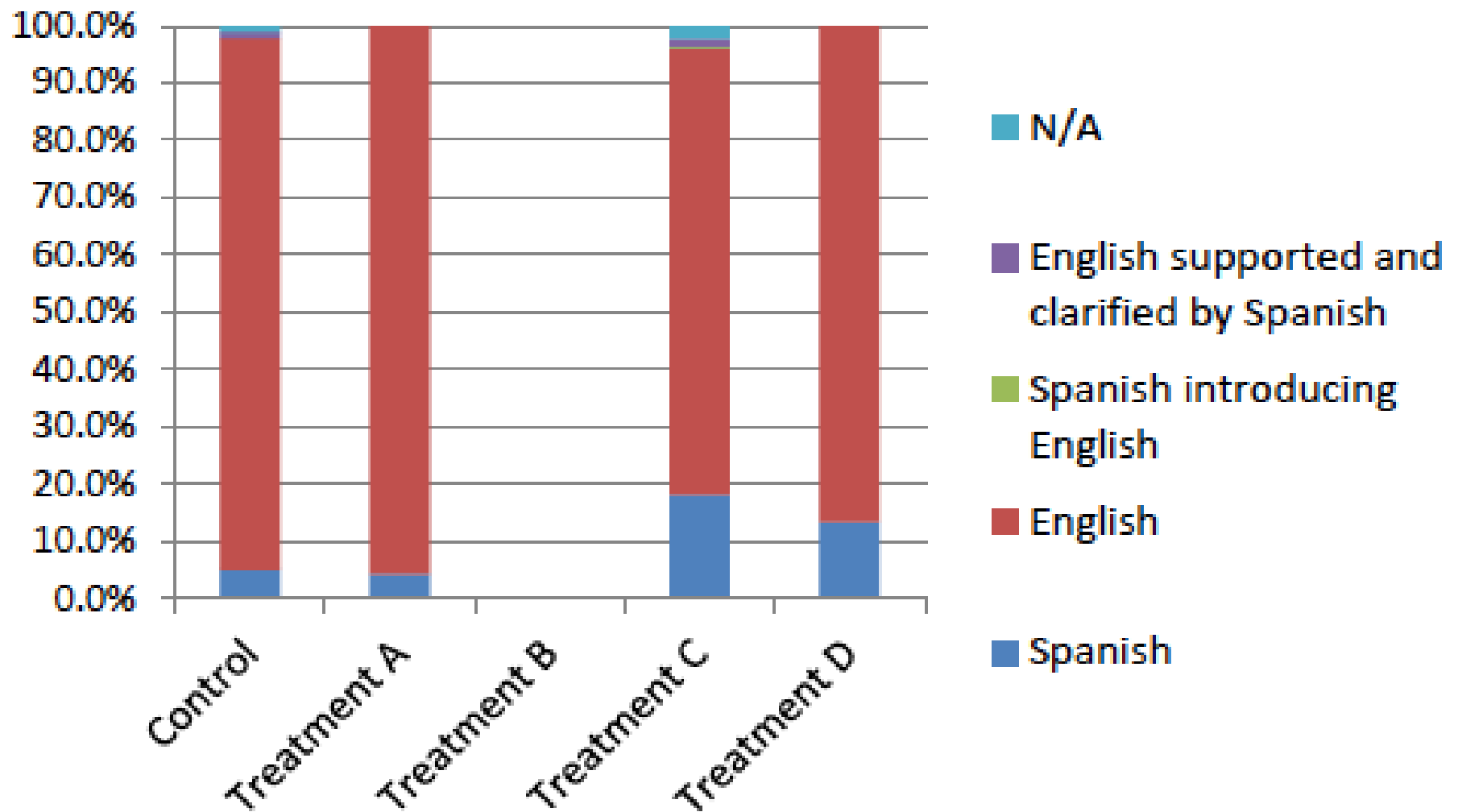




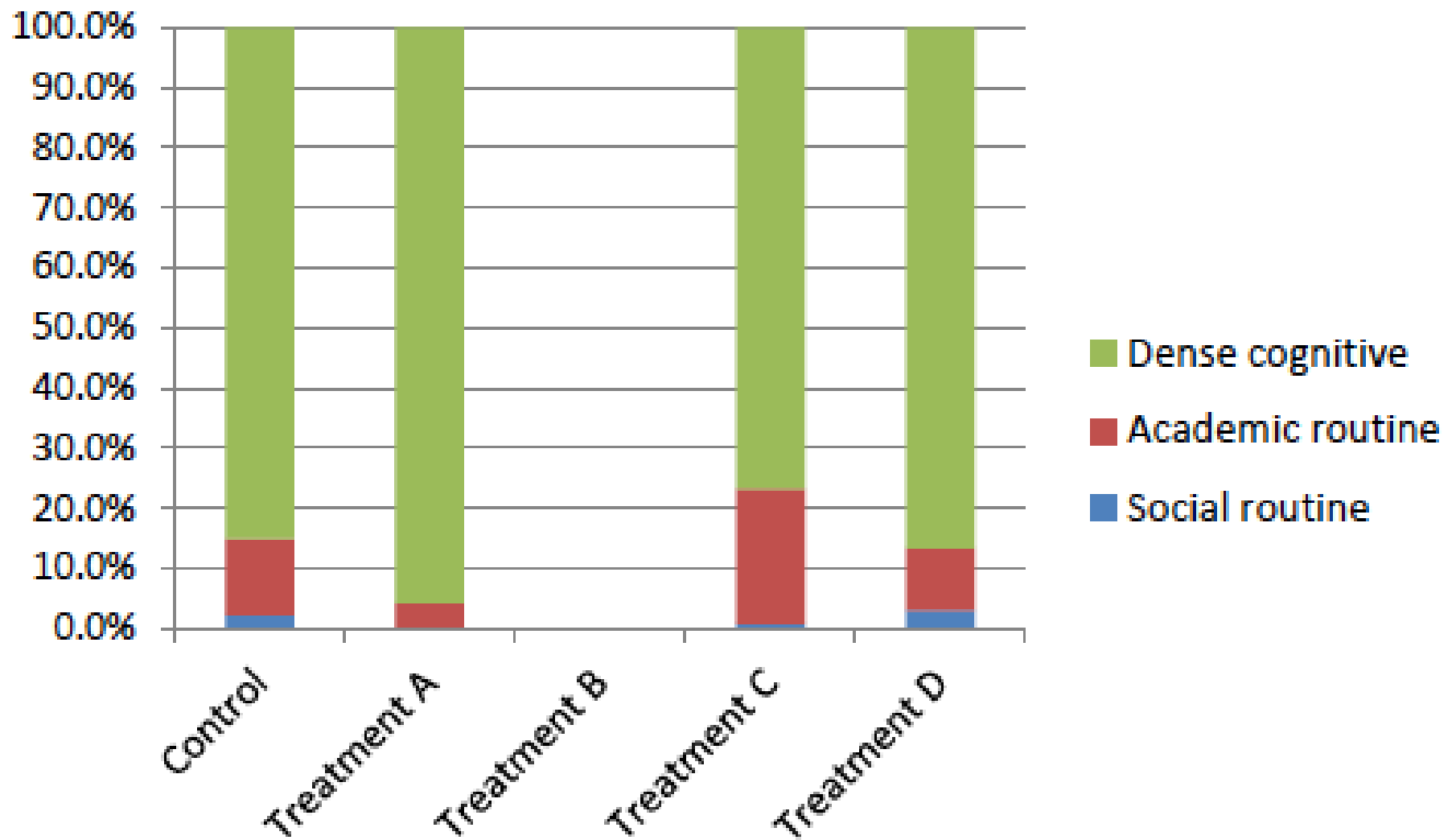
TBOP

- Teachers in Treatment A spent most time teaching in teaching English; teachers in Treatments C allocated more instructional time speaking Spanish language
- Treatment A spent significantly more time in dense cognitive areas; teachers in Treatment C spent a larger portion of instructional time in academic routine
- Teachers in Treatment C were spending more time in non-activity (e.g., transitioning)

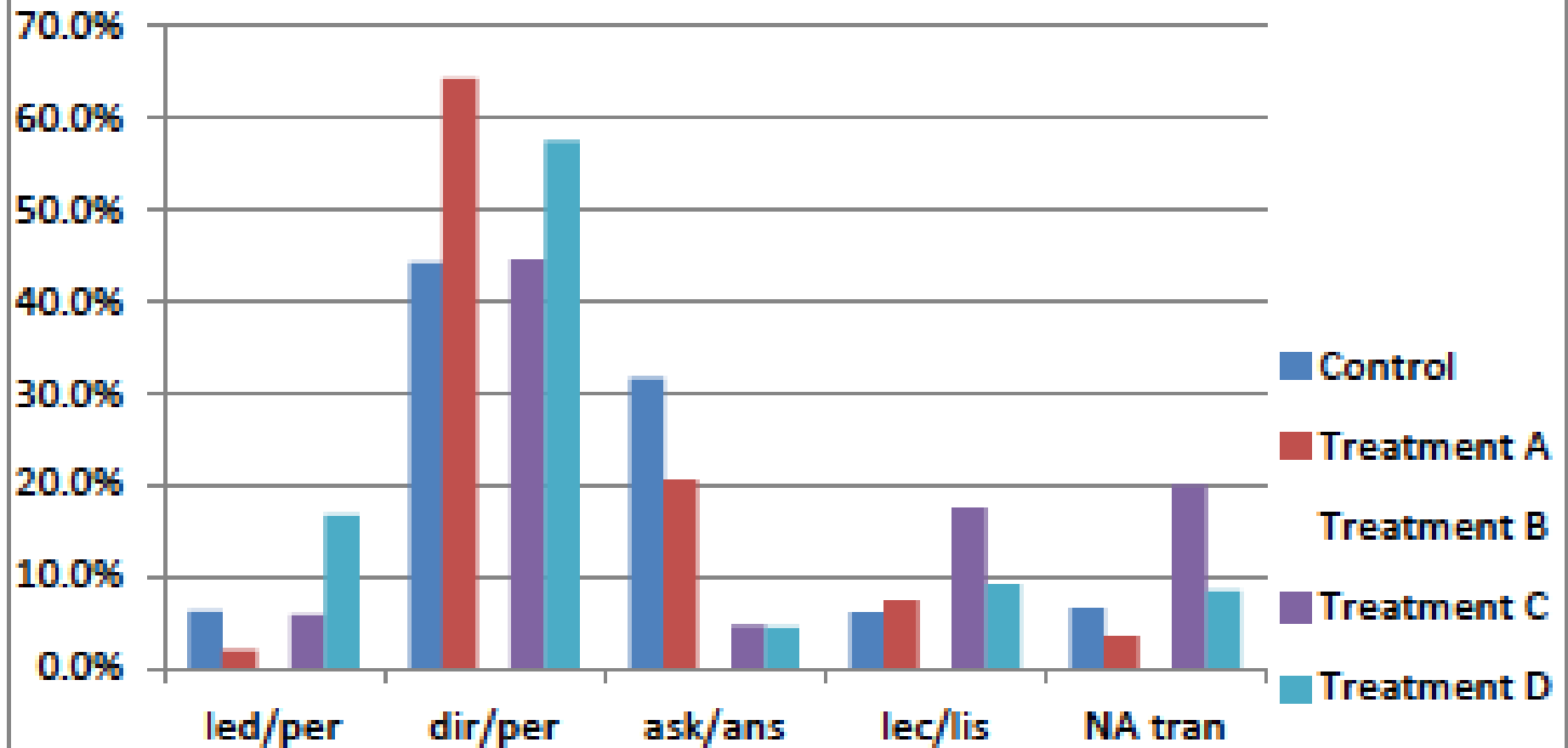
Language of Instruction



Language Content

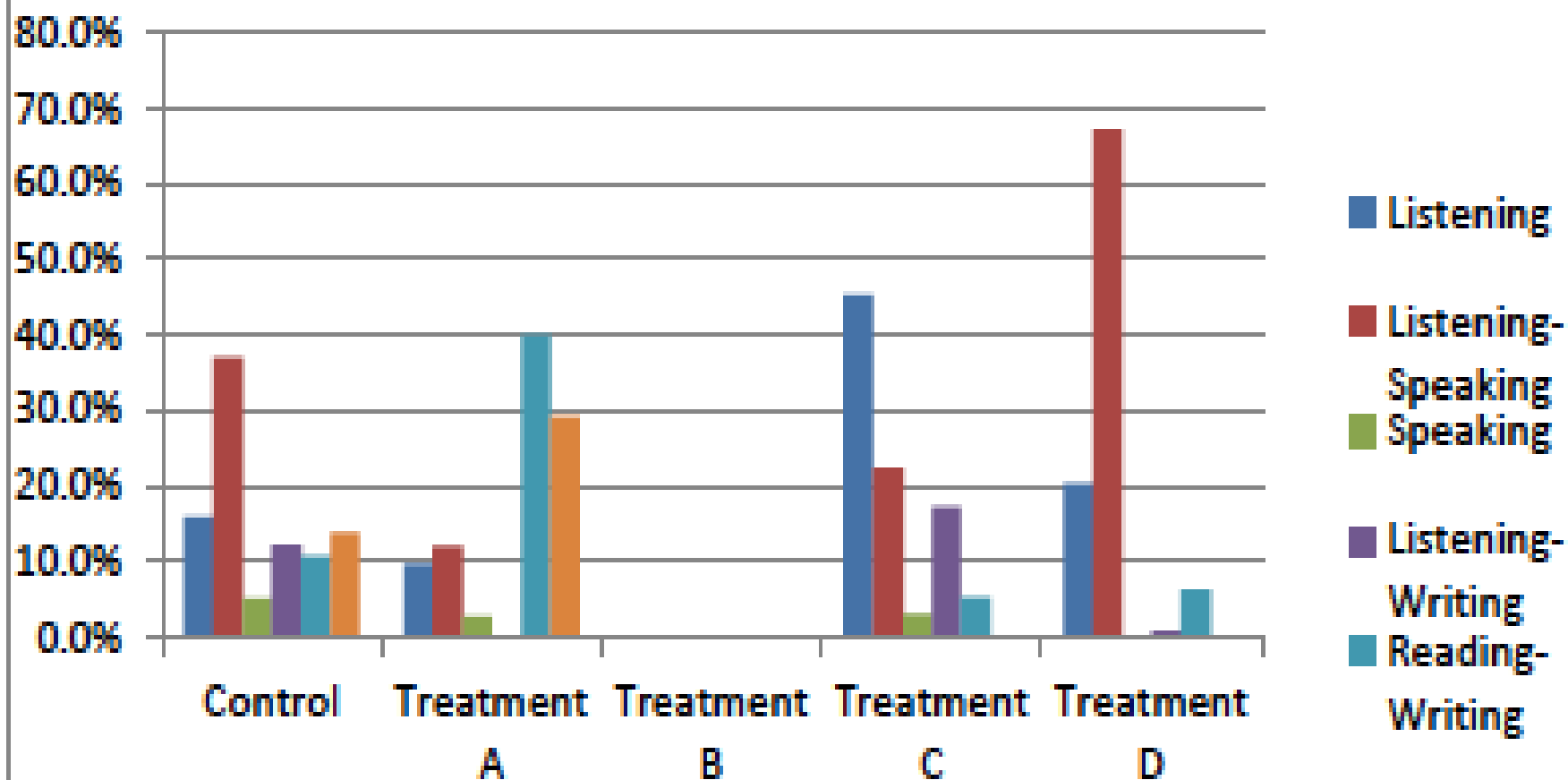


Activity Structure





Communication Mode



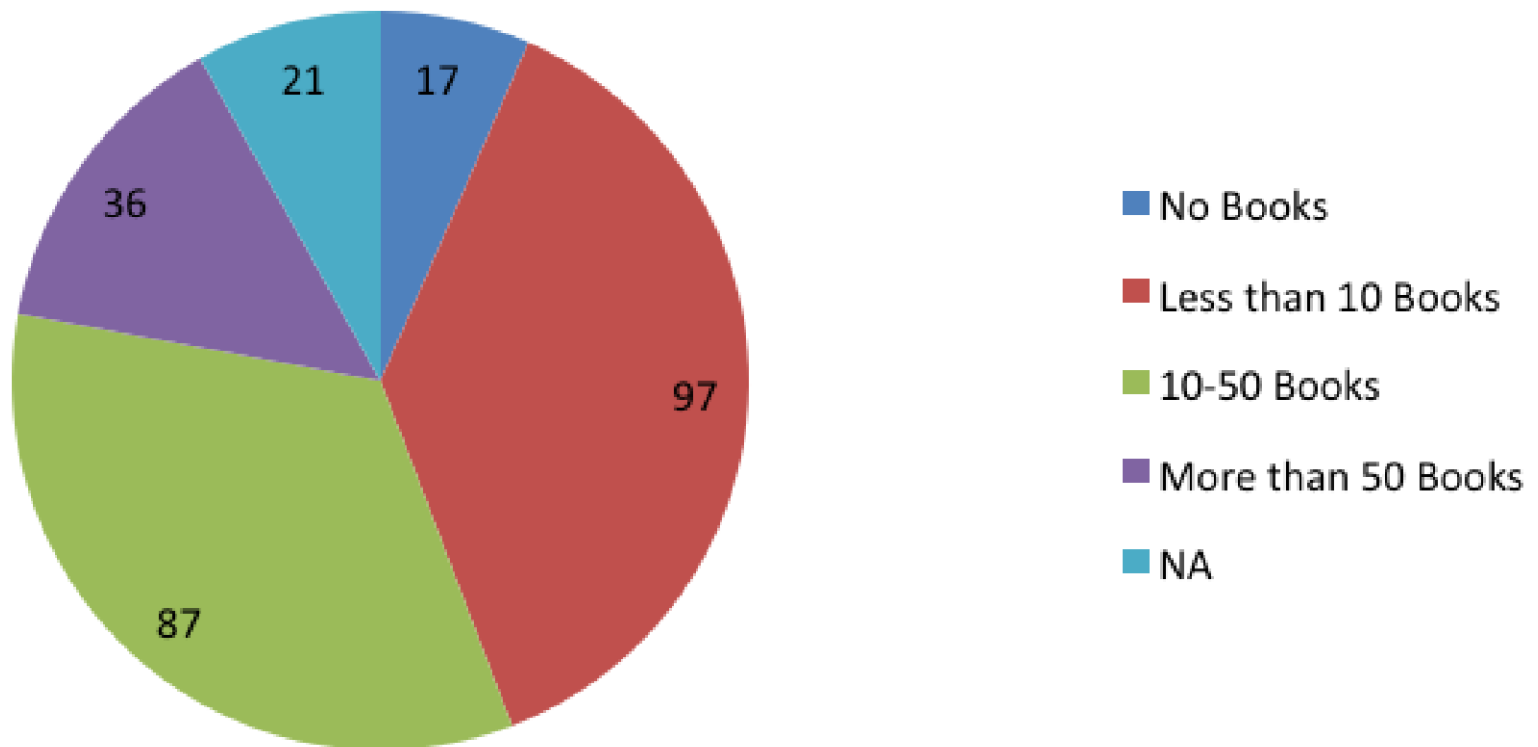


Associated Factors

- The Associated Factors-Family
- The Associated Factors-Student
- The Associated Factors-Teacher
- The Associated Factors-Principal

The Associated Factors-Family

Response to Number of Books in the Home





The Associated Factors-Student

Students were asked about how they felt while in school

	Yes	No	No Answer
Content	199	19	47
Bored	56	130	79
Entertained	168	37	60
Nervous	22	164	79
Calm	193	16	56



The Associated Factors-Teacher

The importance of assessment of eighth grade students in language learning following the evaluative procedure

	Very important	Important	Not very important
Written exams	19	11	0
Observation of student performance	23	7	0
Exercises and/or homework or written assignments	17	13	0
Asks students	8	16	6
Exposure of students in classroom	14	15	1
Students' self-evaluation	7	15	8
Other	2	1	1



The Associated Factors-Principal

Which of the following topics are those that are discussed during a school board meeting?

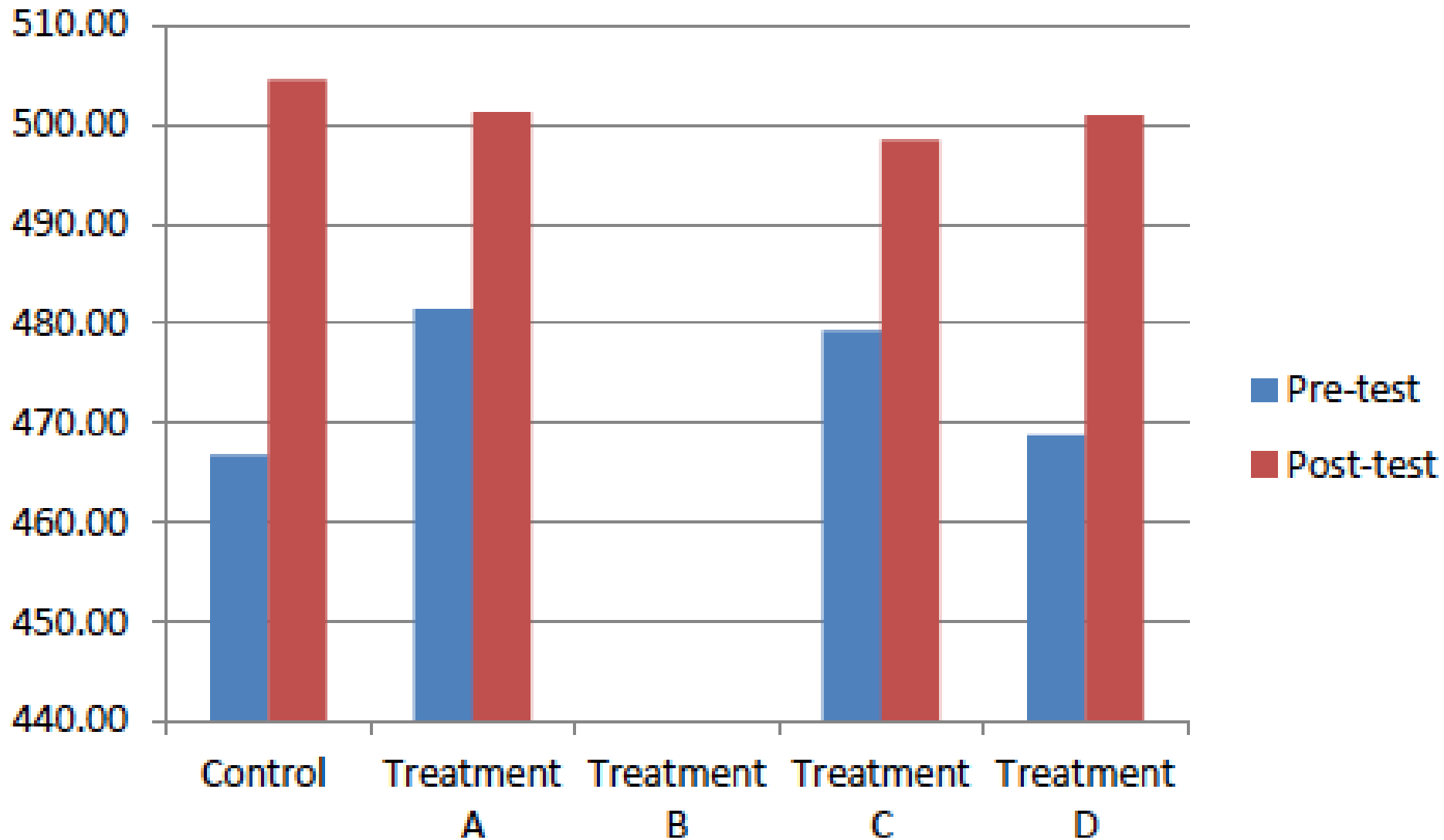
	Frequently	Occasionally	Not discussed
Pedagogical issues	15	1	3
Budget issues	6	7	6
General Disciplinary Rules	10	7	2
Social problems with the community	7	8	4
Community problems related with the environment	3	10	6
Community problems related to poverty	3	11	5
Appointment, dismissal or removal of staff	0	3	16



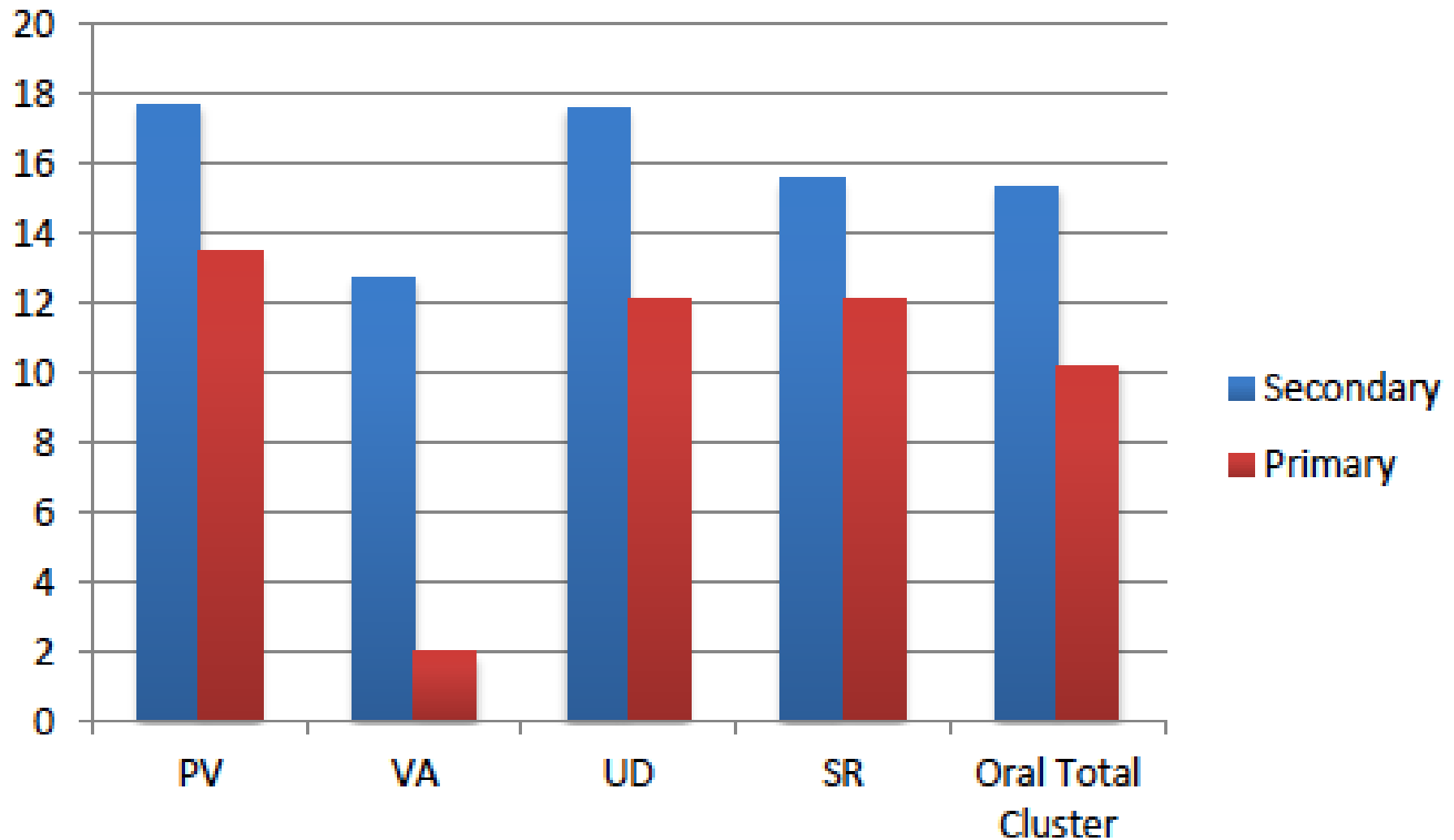
WMLS-R: Teachers

- No difference was observed among the 3 conditions
- Teachers experienced a gain from pre-test to post-test in each condition
- Teachers' TOEIC scores were not included in the evaluation, because there were a significant amount of missing data, and some were collected in the year of 2007 which were too outdated to be used for establishing baseline in 2010

WMLS-R: Teachers



Primary vs. Secondary Control Schools on Gain Scores of WMLS-R



Teacher Survey on best EFL strategies

- Top five methods currently used for teaching English as a foreign language in Costa Rica in secondary schools.

Games	Dramatization	Music	Oral Tasks	Technology
103	101	88	88	77
12.09%	11.85%	10.33%	10.33%	9.04%

Interview with the Principals

- It appears that not all administrators were fully involved with or vested in the project as had been expected
- Some of the responding administrators indicated no idea of what kind of curriculum materials for EILE-SEC were being used.
- One was unable to respond to the interview, and, in fact, no administrator in that school was able to respond on behalf of that school.

Interview with the Teachers

- In general, teachers indicated that they did not think that students advanced to a level expected by the software.
- They reported many problems with the hardware and software.
- The project, in some settings, was not initiated on time, because there was a lack of equipment or infrastructure.
- Even though some teachers and administrators indicated that they had excellent software packages, there were teachers who reported the software was limited in having sufficient grammar and vocabulary practice.

Challenges

- A failed technological infrastructure (lack of computers to initiate the project on time and with sufficient numbers of schools)
- Minimal time on technology tasks (project was initiated, but with teachers not implementing the project appropriately with the correct time on task)
- School leadership and teacher limited commitment (the school leadership was not supportive in most cases, nor were the teachers in terms of implementing the project)
- General treatment fidelity concerns (the schools were over an expansive distance and the part-time coordinator made it extremely challenging to monitor the implementation appropriately to maintain fidelity)

Challenges

- Finding personnel to test
- Providing transportation
- Accounting for weather conditions such as hurricanes or storms
- Finding the schools
- Altered schedules once the assessors arrived
- Protecting computers
- Obtaining the equipment and getting the software installed on time
- Lack of electricity
- Testing issues

Recommendation

- Based on the level of English of the students at both the primary and secondary levels at the end of the project, it is recommended that English language development be initiated at PK or K level.
- English language curriculum, inclusive or not inclusive of technology, needs to be aligned to a set of English language development standards provided by MEP for learning English in a Spanish-speaking environment.

Recommendations

- Principals should be trained and understand how to monitor English language development on their respective campuses.
- Consider well-developed technological software that has a research base.
- Invest in such technology, particularly in rural schools and beginning in PK-K.
- Implementation of any project at the secondary level must be monitored for fidelity of implementation.

Recommendation

- Prior to any type of a large-scale project such as EILE-SEC or PRI was proposed to be, all infrastructures should be checked and ensured to be operational and all teachers should be well-trained in the intervention prior to the project initiation adequate support should be sufficient during the implementation and all equipment should be in place.
- Conduct smaller scale projects to ensure fidelity and to probe deeply into the implementation effects of the project in terms of curriculum and instruction.