

# Character Development Through Cartoons Initiative (CDCI) Pilot Study

## Research Results from the 2014 Pilot Study Evaluation



# A Research Project for the



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# Background and Objectives

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- VIP Research and Evaluation was contracted by The West Michigan Character Council (WMCC) to conduct a pilot evaluation of their Character Development through Cartoons Initiative (CDCI) among 2nd graders in Lakeshore Elementary School in West Ottawa School District (Ottawa County, MI).
- The overall objective of this research is to demonstrate the impact that the CDCI program has on students' ability to learn character traits.
- It is hypothesized that the CDCI program, and its visual element, contribute to learning concepts like character traits better than already existing protocol.
- It is hoped that this pilot will provide findings that are significant enough to warrant further research that will include larger samples permitting replication of current findings and inferences to larger student populations.
- More specific objectives include measuring the impact of CDCI materials and exercises on learning the following character traits:
  - Timeliness (Being On-Time)
  - Responsibility
  - Patience
  - Self-control
  - Forgiveness

# Methodology

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- VIP Research and Evaluation used a quasi-experimental design to measure the impact of the CDCI program on student learning of character traits. The design used was “quasi” in the sense that students were not randomly selected to participate nor randomly assigned to either an experimental or control group. Rather, three classrooms were chosen to participate and two were randomly selected to receive the CDCI (cartoon materials and exercises) intervention, while the other received the same program of exercises with non-visual elements.
- The following three groups were tested:
  - Classroom 1, n=22 (experimental, received CDCI intervention)
  - Classroom 2, n=23 (experimental, received CDCI intervention)
  - Classroom 3, n=25 (control, received static program, no visual element)
- All three test groups were 2<sup>nd</sup> grade classrooms at Lakeshore Elementary School in West Ottawa School District (Ottawa County, MI).
- In lieu of HSRB approval, which was not required, we obtained permission from the district superintendent and school principal to conduct this research.
- Further, consent was provided by the students’ parents in the form of a signed consent form.
- The fielding dates were March 17, 2014 (pre-test) to June 4, 2014 (post-test)

# Methodology (Cont'd.)

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- The following instruments were implemented and distributed to each group to measure program impact:
  - Pre-test assessment questionnaire administered to teachers to measure the extent to which students exhibited indicators of the five character traits: *being on time*, *responsibility*, *patience*, *self-control*, and *forgiveness*
  - Post-test assessment questionnaire administered to teachers following program intervention to measure the extent to which students exhibited indicators of the five character traits: *being on time*, *responsibility*, *patience*, *self-control*, and *forgiveness*
  - Pre-test assessment questionnaire administered to parents to measure the extent to which their child exhibited indicators of the five character traits: *being on time*, *responsibility*, *patience*, *self-control*, and *forgiveness*
  - Post-test assessment questionnaire administered to parents following program intervention to measure the extent to which their child exhibited indicators of the five character traits: *being on time*, *responsibility*, *patience*, *self-control*, and *forgiveness*
  - Questionnaire administered to teachers at the end of the program to get their feedback on overall program impact
  - Post program questionnaire administered to students to measure their level of knowledge of each character trait and their indicators
  
- Bold numbers in the tables displaying pre- and post-test measures indicate a statistically significant difference between the two tests at a 95% confidence level.

# Methodology (Cont'd.)

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- The CDCI materials and exercises:
  - Were administered in two-week segments. During the first two weeks Class 1 received the Olympia On-Time cartoon storybook and follow up exercises (related music, narrations and in class exercises). Class 2 received cartoon scenario flash cards with discussion questions and a take-home card to record how they acted on individual character traits at home. The flashcards covered the traits Patience, Responsibility, Self-Control and Forgiveness. Students were exposed to each card for two days before moving on to the next card. The Control Group did the same exercises as Class 1, but with no visual cartoon element. All Control materials and exercises were text, sound and teacher instruction.
  - Were switched during the second two-week segment. Class 1 received the flash card materials and exercises. Class 2 received the book materials and exercises. The Control Group received written story scenarios of the flash card situations.
  - Were administered in short, five to ten minute segments each day to fit around mandatory coursework.
  - Were collected and tabulated every two to three days to guarantee all exercises were being done by all classes on the same schedule.
  - Were accompanied by extra student activity options (cartoon sheets for coloring the characters in the books and flash cards, sheets for noting other's character actions, etc.) for them to take part in at their own discretion.
  
- Teachers recorded student answers to questions as well as their own observations in a class specific guide. The teachers were also interviewed for insights after the final assessment of the CDCI.

# ***EXECUTIVE SUMMARY***

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# Executive Summary

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- This pilot study has demonstrated that programs focusing on teaching children character traits through visual (cartoon) stories and materials are effective and impactful in behavior change.
  - Because of this, we can ascertain that programs like this are : (1) effective in getting children to learn character traits and exhibit behavior associated with these traits, and (2) better than alternative programs that do not use stories and/or visuals
- That said, this pilot study had clearly demonstrated that the **CDCI program, with its visual element, is more effective than a non-visual program** in teaching character traits to children and getting them to exhibit these traits.
  - Although there was statically significant improvement/gains on many character trait indicators from pre- to post-intervention for the non-visual classroom (control group), these gains were not as large as those for each classroom that utilized the CDCI program (experimental groups)
- With regard to the character trait **Timeliness (Being On-Time)**, both CDCI classrooms saw significant improvement in students' behavior for all four of the following indicators:
  - Doing what he/she is asked right away
  - Self-initiating tasks in a timely manner
  - Doing things without getting distracted
  - Listening to what people say so that they know what to do and when to do it



# Executive Summary (Cont'd.)

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- For the character trait **Responsibility**, both CDCI classrooms saw significant improvement in students' behavior for all three of the following indicators:
  - Taking time and effort to do things he/she is supposed to do
  - Demonstrating a commitment to academic responsibilities
  - Making efforts to interact appropriately with other students
  
- Moreover, for the character trait **Patience**, both CDCI classrooms saw significant improvement in students' behavior for all three of the following indicators:
  - Ability to wait for something/someone even when it's hard to do
  - Ability to wait in line without getting frustrated or upset
  - Ability to wait until it is his/her turn to use something during class/recess without getting upset, frustrated, or angry
  
- Further, with regard for the character trait **Self-Control**, both CDCI classrooms saw significant improvement in students' behavior for all three of the following indicators:
  - Ability to control his/her feelings/urges in class
  - Ability to manage his/her feelings in pro-social ways
  - Displays control when taking food/candy where the portion size is up to them

# Executive Summary (Cont'd.)

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- As for the final character trait measured, **Forgiveness**, one CDCI classroom saw significant improvement in students' behavior for all three of the following indicators and the other saw significant improvement in two of the three:
  - Does not hold painful words/actions of others against them or hold on to angry feelings about them
  - Ability to take the perspective of others and grant forgiveness
  - Ability to engage with peers after an argument or conflict
- Both teachers who utilized the CDCI program (with the visual cartoon element) in their classrooms are **very satisfied with it as a tool for assisting their students in learning character traits** and would recommend the program to other colleagues. The teacher who used the non-visual program was also very satisfied and would recommend this program as well.
- Both CDCI (with visual cartoon element) teachers believe the program:
  - Is *easy to use and implement*
  - Can be used to help **all** students in character development/traits
  - Is *very engaging* for students

# Executive Summary (Cont'd.)

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- Student knowledge gain was assessed with student post-program questionnaires. The flash card questionnaire displayed the four flash-card cartoons with no other indicators of the character trait. Students were asked which trait was displayed in each cartoon, and what the trait means. The book questionnaire had visual cues and asked for three ways in which the student could improve their Timeliness. The Control Group had the same questionnaires with written, rather than visual scenarios. All answers for each trait were marked correct or incorrect (with no partial points) based on whether their answer indicated a grasp of the material presented in the CDCI. The class percentage of correct answers is tabulated here (if a student did not complete the questionnaire due to absence, we did not enter any score for that questionnaire):
  - **Class 1-** 106 responses, 96 correct responses, 90.6% Accuracy
  - **Class 2-** 101 responses, 93 correct, 92.1% Accuracy
  - **Control-** 118 responses, 97 correct responses, 82.2% Accuracy
- It is worth noting that the students in the Control group are Spanish Immersion students who generally are high scoring, motivated students. However, in this assessment, it is clear that the visual cartoon element of the CDCI materials in Class 1 and Class 2 yielded a much higher percentage of correct responses.

# Executive Summary (Cont'd.)

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- Teachers in Classroom 1 and Classroom 2 maintain differences in their perceptions of whether or not they think the CDCI program is the best program for teaching students character traits.
  - Whereas, the Classroom 1 teacher reported the CDCI program as the best method of teaching character traits to students and better than traditional methods for teaching character traits, the Classroom 2 teacher remained neutral on these issues
  
- CDCI teachers report the following **strengths** of the program:
  - Colorful, *attention-grabbing, engaging*
  - *Appealing images* and visuals
  - Introduces *character traits that are important and every student should exhibit*
  - *Easy to use* materials
  - *Easy to understand* topics
  - Topics support school/district curricula
  
- Conversely, CDCI teachers report the following **suggestions for improvement**:
  - *Lessons could be longer*, or program could be *implemented over longer time period*
  - Some of the concepts or story lines *may be too advanced for some students*
  - English Language Learners (ELL) may have *difficulty with the vocabulary*

# Executive Summary (Cont'd.)

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- The majority of parents were satisfied with the CDCI program, although they did not witness great behavior changes like the teachers did.
  - This could be due students concentrating on behavior related to character traits in the school setting where they were learned, and focusing less on them at home
- Parents of Classroom 1 students did witness positive behavior change for the following character trait indicators:
  - Ability to wait in public without getting frustrated or upset (*patience*)
  - Ability to manage feelings in pro-social ways (*self-control*)
  - Ability to engage with peers after an argument or conflict (*forgiveness*)
- Parents of CDCI students report the following **strengths** of the program:
  - Children *relate well to the program characters*
  - *Exercises* help children learn what to do and what not to do
  - *Reinforces values taught at home*
  - Program *topics are simple*
  - Program topics *tie in related traits with which children can easily identify*
- Conversely, Parents of CDCI report the following two **suggestions for improvement**:
  - *Implementing the program for a longer time period*
  - *Providing parents with more information about the program* so that they can be more immersed or involved with their children are learning

# Implications

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- This pilot program was limited in scope and reach due to limitations in funding and other resources. For example, an ideal methodological approach would consist of a true experimental design, where students are randomly selected to participate and then randomly assigned to either experimental or control groups. Also, more classrooms across multiple grades and schools would bolster the conclusions.
- Further, implementing the CDCI program in the field longer, for example six months or an entire school year, may contribute to more parents witnessing positive behavior changes at home.
- Still, this pilot study provides information that the CDCI program is a promising program for developing character traits in children, and because of this warrants further investigation on a larger scale
- While not conclusive with similar scientific pre and post measures, the results of the student post assessment indicate strong understanding and mastery of the concept of individual traits after minimum exposure. Future CDCI studies will expand and regularize materials, exercises, and assessments to measure knowledge gain.



# ***DETAILED FINDINGS***

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# ***Teacher Feedback on CDCI Program***

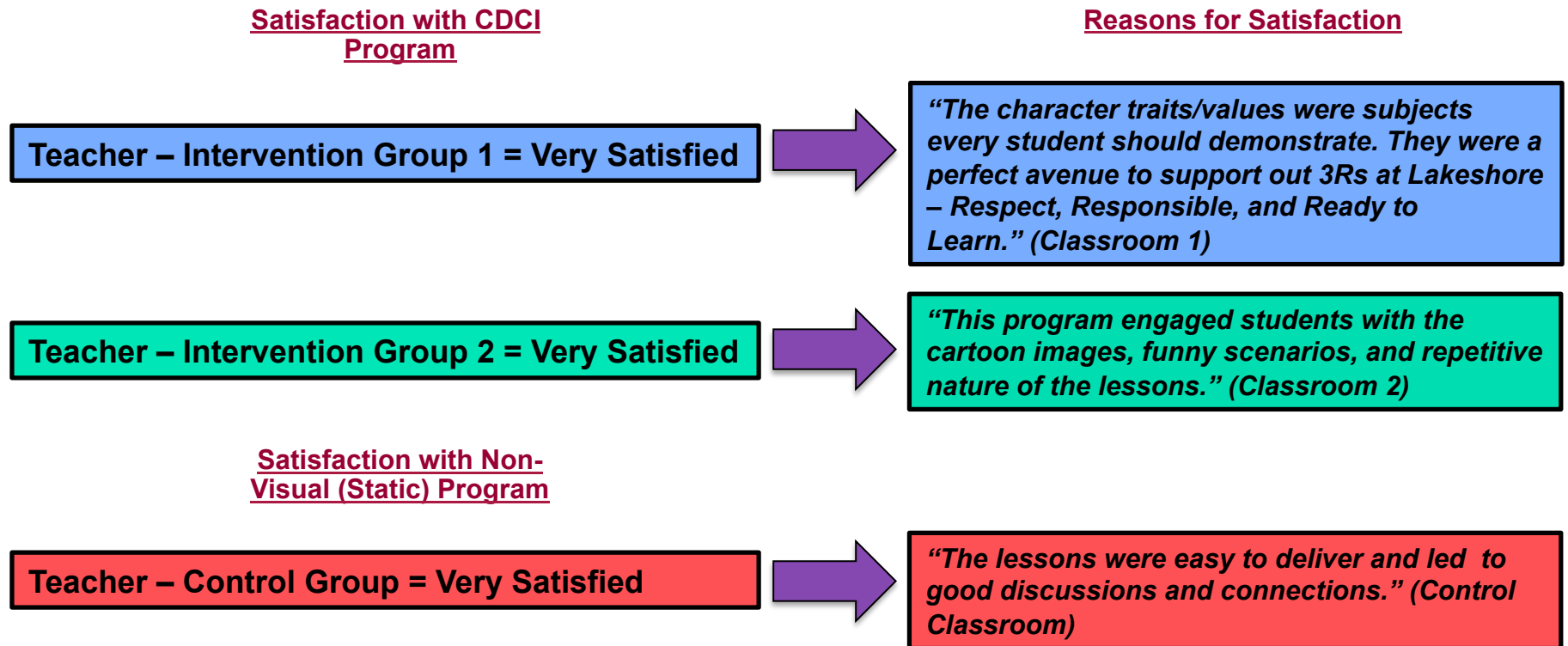
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Both teachers of the CDCI program were very satisfied with the program as a tool for helping students learn character traits. The teacher who used the program without the visual element (control group) was also very satisfied with the program she utilized and commented that it was *easy to use* and *led to good discussions*. The program with the visual element (CDCI) seemed to *really engaged students* and *taught them valuable traits that were consistent with teacher and school curricula*.

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### Satisfaction with Program



Q1. First, using the scale below, how satisfied are you with the CDCI program as a tool for helping children learn character traits?

Q2. Why do you say that? Please be as detailed as possible.

The CDCI program is considered to be: (1) *easy to use and implement*, (2) a program that can *address all students* in character development, and (3) *highly engaging* for students. While one teacher believes the CDCI program is the *best way for children to learn character development* and is better than traditional methods, the other remains neutral. Still, **both teachers would recommend this program to other teachers.**

### Levels of Agreement with Aspects of the CDCI Program

	Intervention Group 1	Intervention Group 2	Control Group
The CDCI program was easy to use	Strongly Agree	Strongly Agree	Strongly Agree
The CDCI program was easy to implement	Strongly Agree	Agree	Strongly Agree
The CDCI program helps students learn character traits better than traditional methods of teaching character development/traits	Agree	Neither Agree Nor Disagree	Neither Agree Nor Disagree
The CDCI program is the <u>best</u> way for children to learn character development/traits	Strongly Agree	Neither Agree Nor Disagree	Neither Agree Nor Disagree
The CDCI program can be used to help <u>all</u> students in character development/traits	Strongly Agree	Strongly Agree	Strongly Agree
The CDCI program was very engaging for students	Strongly Agree	Strongly Agree	Agree
I would recommend the CDCI program to other teachers for teaching character development to their students	Strongly Agree	Strongly Agree	Strongly Agree

Q3. The following statements deal with certain aspects of the CDCI program. Please tell us the level to which you agree or disagree with each statement.

The materials that come with the CDCI program are *easy for students to understand* and the *colorful visuals are appealing and attention-grabbing*. On the other hand, *lessons could be longer* and *some of the concepts may be too advanced* for students at this grade level. The control teacher recommends *limiting the program to a handful of character traits* to enable students to master the subject matter.

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### Strengths and Weaknesses

#### Strengths

***“Colorful posters always grab a student’s attention. Using traits that are necessary for a positive.” (Classroom 1)***

***“Teacher materials were easy to use and understand. Cartoon images were appealing to students.” (Classroom 2)***

***“Easy to deliver lessons. Great opportunities for discussion and application.” (Control Classroom)***

#### Weaknesses

***“Lessons are approximately 30 minutes, which was fine, and fit nicely into our day.” (Classroom 1)***

***“Some concepts in the story line may be too advanced for younger students to grasp. They understand the character value, but didn’t always catch the workplace references.” (Classroom 2)***

***“As the program is expanded, keep it to a small core group of character traits like this study. Then students can really learn them well.” (Control Classroom)***

Q4. What are some of the strengths of the CDCI program? Please be as detailed as possible.

Q5. Conversely, what are some ways the CDCI program could be improved? Please be as detailed as possible.

Although the CDCI program includes Spanish materials for Spanish-speaking students, one teacher indicates *ELL students may experience difficulties with the program vocabulary and understanding the cartoon scenarios.*

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### Barriers or Obstacles to CDCI Program Effectiveness

***“Nice that there was Spanish along with English.” (Classroom 1)***

***“English Language Learners may have difficulty with the vocabulary and understanding the scenarios.” (Classroom 2)***

***“Because this study was for a short period of time, it is hard to see changes in behavior; however, there has definitely been heightened awareness.” (Control Classroom)***

Q6. Are there any barriers or obstacles to the effectiveness of the CDCI program (e.g., specific student populations)? If yes, please describe these barriers.

In order to create a heightened awareness of character values, *CDCI exercises and activities can be used most effectively by addressing and rewarding positive behavior associated with these traits and by creating a shared vocabulary where every student is on the same page.*

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### **CDCI Exercises and Activities Creating a Heightened Awareness of Character Values**

***“We used the different character traits by addressing good behavior throughout the day, like for example, saying, “that’s showing great responsibility.” (Classroom 1)***

***“The CDCI activities created a common vocabulary and point of reference for reinforcing positive behaviors. We can use words like “self-control” and “timeliness” and can conjure up a shared image.” (Classroom 2)***

***“Yes, students have been making connections to the character values when we read stories or discuss situations.” (Control Classroom)***

Q8. Did the CDCI exercises and activities help to create a general heightened awareness of character values and their role in everyday life? If so, could you explain how or give examples?

# ***Teacher Feedback on Their Students***

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The post intervention scores for **all** indicators of *being on time* were significantly higher than the pre intervention scores for both test classrooms. The post intervention scores were also significantly higher for the control group on three of the four indicators, however the gains were notably lower compared to the two test classrooms.

**Being On Time – A Comparison of Indicators Before and After CDCI Intervention**

	Classroom 1			Classroom 2			Control Classroom		
	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.
<b>Being On Time Indicators</b>									
The student does what he/she is asked and does it right away when asked	3.62	4.19	<b>+.57</b>	3.33	3.67	<b>+.34</b>	3.56	3.80	<b>+.24</b>
The student self-initiates and carries out know tasks in a timely manner (like getting ready to go home at their locker, or coming in from their locker upon arrival in the morning)	3.40	4.15	<b>+.75</b>	3.56	4.11	<b>+.55</b>	3.64	3.84	<b>+.20</b>
The student can do things without getting distracted (keep focus)	3.19	3.90	<b>+.71</b>	3.00	3.78	<b>+.78</b>	3.44	3.72	<b>+.28</b>
The student listens to what people say so that he/she knows what to do when it's time to do it	3.29	3.95	<b>+.66</b>	3.17	3.67	<b>+.50</b>	3.52	3.80	<b>+.28</b>

Q1. How often does the student exhibit the following indicators of being on time? (1-5 scale, where 1=never, 2=almost never, 3=occasionally/sometimes, 4=almost every time, 5=every time)

Post intervention scores for **all** indicators of *responsibility* were also significantly higher than the pre intervention scores for both test classrooms. Post intervention scores were significantly higher for the control group on one indicator.

**Responsibility – A Comparison of Indicators Before and After CDCI Intervention**

	Classroom 1			Classroom 2			Control Classroom		
	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.
<b>Responsibility Indicators</b>									
The student takes the time and effort to do things he/she is supposed to do	3.76	4.43	<b>+.67</b>	3.61	3.94	<b>+.33</b>	3.56	3.92	<b>+.36</b>
The student demonstrates a commitment to his/her academic responsibilities	3.76	4.38	<b>+.62</b>	3.61	4.11	<b>+.50</b>	3.92	3.96	<b>+.04</b>
The student makes an effort to interact appropriately with other students	3.48	4.29	<b>+.81</b>	3.56	4.11	<b>+.55</b>	4.48	4.68	<b>+.20</b>

Q2. How often does the student exhibit the following indicators of responsibility? (1-5 scale, where 1=never, 2=almost never, 3=occasionally/sometimes, 4=almost every time, 5=every time)



Further, post intervention scores for all indicators of *patience* were significantly higher than the pre intervention scores for both test classrooms. The post intervention scores were also significantly higher for the control group for two indicators.

**Patience – A Comparison of Indicators Before and After CDCI Intervention**

	Classroom 1			Classroom 2			Control Classroom		
	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.
<b>Patience Indicators</b>									
The student is able to wait for something or someone, even when it's hard to do	3.71	4.38	<b>+.67</b>	3.44	4.28	<b>+.84</b>	4.00	4.56	<b>+.56</b>
The student is able to wait in line without getting frustrated, upset, or goofing off	3.76	4.38	<b>+.62</b>	3.39	3.94	<b>+.55</b>	3.96	4.52	<b>+.56</b>
The student is able to wait until it is his/her turn to use something during class or at recess (on the playground) without getting frustrated, angry, or upset	3.86	4.43	<b>+.55</b>	3.78	4.39	<b>+.61</b>	4.96	4.92	<b>-.04</b>

Q3. How often does the student exhibit the following indicators of patience? (1-5 scale, where 1=never, 2=almost never, 3=occasionally/sometimes, 4=almost every time, 5=every time)

The post intervention scores for all indicators of *self-control* were significantly higher than the pre intervention scores for both test classrooms. The post intervention score for one indicator of *self-control* was significantly higher for the control group.

**Self-Control – A Comparison of Indicators Before and After CDCI Intervention**

	Classroom 1			Classroom 2			Control Classroom		
	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.
<b>Self-Control Indicators</b>									
The student is able to control his/her feelings, urges, and actions in class	3.71	4.10	<b>+.39</b>	3.33	3.89	<b>+.56</b>	4.04	4.52	<b>+.48</b>
The student shows the ability to manage his/her feelings in pro-social ways (e.g., expressing feelings vs. acting out) in classroom settings	3.81	4.24	<b>+.43</b>	3.61	4.17	<b>+.56</b>	4.48	4.64	<b>+.16</b>
The student displays control when taking food, candy, or other things where the portion size is up to them	4.10	4.52	<b>+.42</b>	3.94	4.33	<b>+.39</b>	NA	NA	NA

Q4. How often does the student exhibit the following indicators of self-control? (1-5 scale, where 1=never, 2=almost never, 3=occasionally/sometimes, 4=almost every time, 5=every time)

The post intervention scores for all indicators of *forgiveness* were significantly higher than the pre intervention scores for Classroom 1. With regard to Classroom 2, two of the three were significantly higher at post test. Of note, changes in scores from pre to post were much greater for Classroom 1 than for Classroom 2.

**Forgiveness – A Comparison of Indicators Before and After CDCI Intervention**

	Classroom 1			Classroom 2			Control Classroom		
	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.
<b>Forgiveness Indicators</b>									
The student does not hold the painful words or actions of others against them, and doesn't hold on to angry feelings about them	4.05	4.67	<b>+.62</b>	3.56	3.72	<b>+.16</b>	4.76	4.80	<b>+.04</b>
The student displays the ability to take the perspective of others (see things from the others point of view) and grant forgiveness	3.71	4.57	<b>+.86</b>	3.61	3.89	<b>+.28</b>	4.80	4.76	<b>-.04</b>
The student demonstrates the ability to engage with peers after an argument or conflict	3.71	4.57	<b>+.82</b>	3.67	4.06	<b>+.39</b>	4.00	4.50	<b>+.50</b>

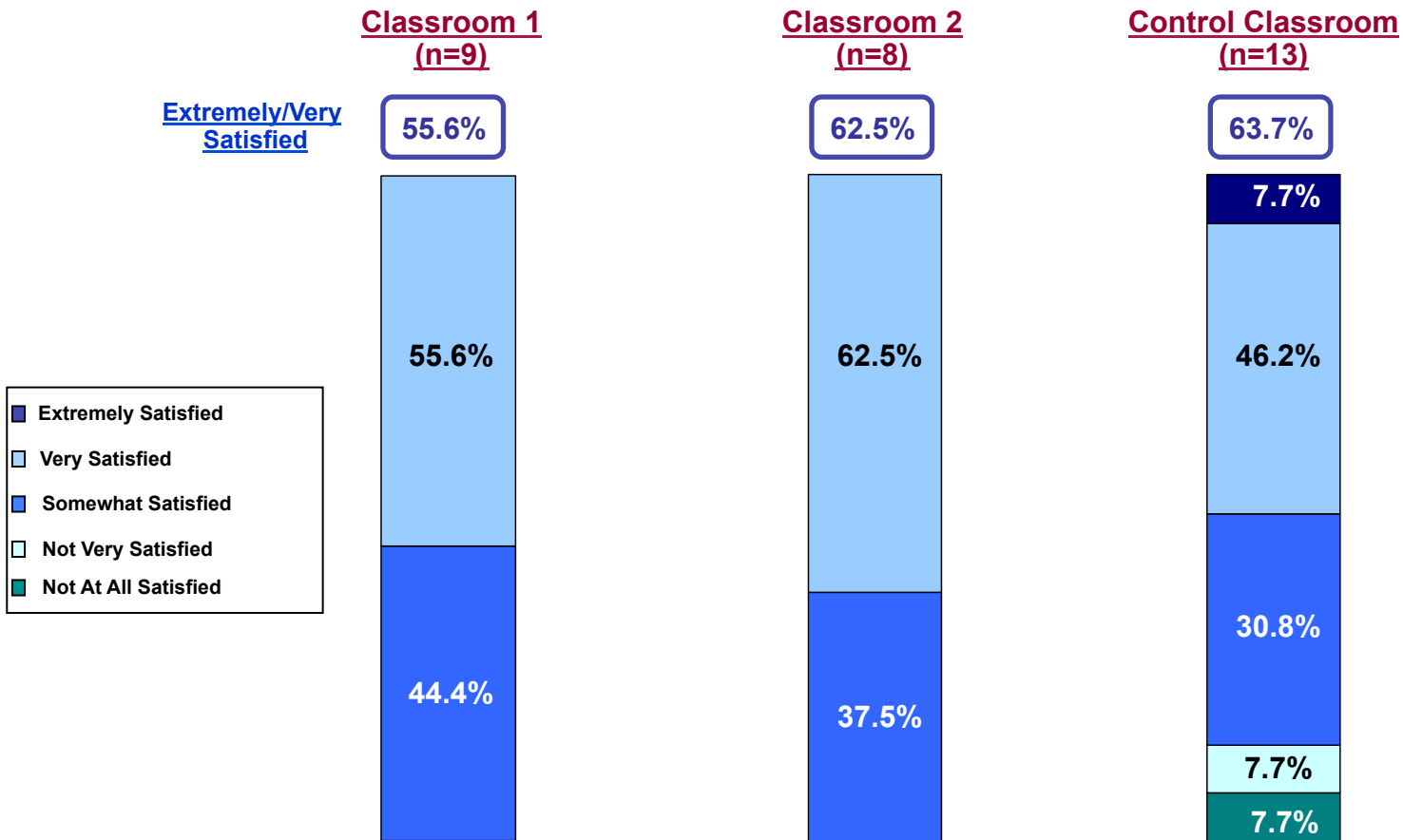
Q5. How often does the student exhibit the following indicators of forgiveness? (1-5 scale, where 1=never, 2=almost never, 3=occasionally/sometimes, 4=almost every time, 5=every time)

# ***Parent Feedback on the CDCI Program***

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The majority of parents with children in Classroom 1 or Classroom 2 were very satisfied with the CDCI program as a tool for helping their child learn character traits. The majority of parents were also satisfied with the non-visual program, however, there were some detractors as 15.4% were dissatisfied.

### Parent Satisfaction with CDCI as a Tool for Helping Their Child Learn Character Traits



Q6. Next, using the scale below, how satisfied are you with the CDCI program as a tool for helping your child learn character traits? (*Please check one response only*)

Parents were satisfied with the CDCI because it is *easy for children to relate to*, and *identify with*, the *characters* and the program *reinforces values that are taught at home* (but may not necessarily be taught at school). Some parents, even though satisfied, did not see much change in their child's behavior, but this could be a result of the program only being implemented a short time.

### Reasons for Satisfaction Ratings – Verbatim Comments

#### Classroom 1

##### Very Satisfied

*“She seems to relate to the characters and realize how silly some of the stuff they get upset over is.”*

*“I'm satisfied with the program and the help with the exercises.”*

##### Somewhat Satisfied

*“My son said he learned a lot. As a parent I only saw a couple of response papers. Maybe I missed additional information about the program.”*

*“Some things have improved. I think the cards she fills out helps her realize the things she does or doesn't do.”*

*“I didn't really notice a difference.”*

*“Not sure how much she actually learned. She remembered the book but not much else.”*

#### Classroom 2

##### Very Satisfied

*“It's a program that reinforces values that we teach at home, which is always a good thing.”*

*“I liked that it broke down character traits into simple related traits that children could identify with.”*

##### Somewhat Satisfied

*“Putting into action something that they understood at school was a difficult concept.”*

Q7. (In response to Q6) Why do you say that? Please be as detailed as possible.

In addition to reinforcing character traits taught at home, the CDCI program helps some students learn character traits in school that they may not be exposed to in their home environment.

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### Ways the CDCI Program Helped Students Learn Character Traits

#### Classroom 1

*“They help her figure things out on her own instead of just learning from her family.”*

*“Pays more attention to the exercises and the things he's asked to do.”*

#### Classroom 2

*“Helped reinforce what we teach here [at home].”*

*“I just reminded her of her lesson and sometimes that brought back the concept.”*

Q8. In what ways did the CDCI program help your child learn character traits? Please be as detailed as possible.

Suggestions for CDCI program improvement include *implementing the program for a longer time period* and *providing parents with more information about the program* so that they can be more immersed or involved with their children and what they are attempting to learn. This may lead to an even stronger CDCI program impact.

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### Ways the CDCI Program Could Be Improved

#### Classroom 1

***“More information for parents.”***

***“Maybe make it all through the year.”***

***“Keep the parents more informed on what you're doing so we can see what our children are learning from you vs. the family.”***

***“More at-home involvement/exercises/stories, parent interaction.”***

***“Take the course for more days, longer time period.”***

#### Classroom 2

***“I don't know if this was covered in class but perhaps dedicate a portion of the program on how other individuals feel when bad impatience, lack of self-control, etc.”***

Q9. on the other hand, how could the CDCI program be improved, or how could it help your child better learn character traits? Please be as detailed as possible.



## ***Parent Feedback on the CDCl and Their Child***

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Parent evaluations were vastly different from the teacher evaluations with regard to the character trait *being on time*. The post intervention scores for the indicators of *being on time* were either slightly lower or about the same on the pre intervention scores for both test classrooms but higher for the control group on all four indicators measured.

**Being On Time – A Comparison of Indicators Before and After CDCI Intervention**

	Classroom 1			Classroom 2			Control Classroom		
	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.
<b>Being On Time Indicators</b>									
Your child does what he/she is asked and does it right away when asked	3.50	3.40	-.10	3.50	3.33	-.17	3.42	3.67	+.25
Your child self-initiates and carries out known tasks in a timely manner (like getting ready to go home at their locker, or coming in from their locker upon arrival in the morning)	3.70	3.50	-.20	3.50	3.83	+.33	3.33	3.58	+.25
Your child can do things without getting distracted (keep focus)	3.30	3.30	+0	3.33	3.17	-.16	3.25	3.50	+.25
Your child listens to what people say so that he/she knows what to do when it's time to do it	3.67	3.67	+0	3.50	3.50	+0	3.50	3.75	+.25

Q1. How often does your child exhibit the following indicators of being on time? (1-5 scale, where 1=never, 2=almost never, 3=occasionally/sometimes, 4=almost every time, 5=every time)

Post intervention scores for the indicators of *responsibility* were slightly higher than pre intervention scores for Classroom 1, but lower or on par for Classroom 2. The post intervention score for one indicator of responsibility was significantly higher than the pre intervention score.

**Responsibility – A Comparison of Indicators Before and After CDCI Intervention**

	Classroom 1			Classroom 2			Control Classroom		
	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.
<b>Responsibility Indicators</b>									
Your child takes the time and effort to do things he/she is supposed to do	3.60	3.80	+0.20	3.83	3.83	+0	3.58	3.67	+0.09
Your child demonstrates a commitment to his/her academic responsibilities	3.90	4.10	+0.20	4.17	4.00	-.17	3.92	4.25	<b>+0.33</b>
Your child makes an effort to interact appropriately with other students	4.20	4.40	+0.20	4.17	4.00	-.17	4.33	4.25	-.08

Q2. How often does your child exhibit the following indicators of responsibility? (1-5 scale, where 1=never, 2=almost never, 3=occasionally/sometimes, 4=almost every time, 5=every time)

According to parents of Classroom 1 students, the children displayed significant improvement in their ability to wait patiently in public settings. Parents of Classroom 2 students witnessed improvement on all three indicators of patience, and it should be noted that these differences would have been statistically significant had the sample sizes been slightly larger.

**Patience – A Comparison of Indicators Before and After CDCI Intervention**

	Classroom 1			Classroom 2			Control Classroom		
	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.
<b>Patience Indicators</b>									
Your child is able to wait for something or someone, even when it's hard to do	3.60	3.70	+ .10	2.83	3.33	+ .50	3.67	3.58	- .09
Your child is able to wait in public without getting frustrated, upset, nagging you, or goofing off	3.60	4.10	<b>+ .50</b>	3.17	3.50	+ .33	3.58	3.83	+ .25
Your child is able to wait until it is his/her turn to do something or receive something (time on video games, desserts, during games)	4.00	3.90	- .10	3.17	3.83	+ .66	3.58	3.83	+ .25

Q3. How often does your child exhibit the following indicators of patience? (1-5 scale, where 1=never, 2=almost never, 3=occasionally/sometimes, 4=almost every time, 5=every time)

Similarly, parents of Classroom 1 students reported their children showed significant improvement in their ability to manage their feelings in prosocial ways. They also showed improvement on the other two indicators of self-control. Parents of Classroom 2 students witnessed a slight improvement in their child’s ability to control their feelings/actions in class.

**Self-Control – A Comparison of Indicators Before and After CDCI Intervention**

	Classroom 1			Classroom 2			Control Classroom		
	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.	Pre-Test Mean Score	Post-Test Mean Score	Diff.
<b>Self-Control Indicators</b>									
Your child is able to control his/her feelings, urges, and actions in class	3.70	3.90	+ .20	3.20	3.40	+ .20	3.67	4.00	+ .33
Your child shows the ability to manage his/her feelings in prosocial ways (e.g., expressing feelings vs. acting out) in classroom settings	3.40	4.00	<b>+ .60</b>	3.40	3.40	+ 0	3.58	4.00	<b>+ .42</b>
Your child displays control when taking food, candy, or other things where the portion size is up to them	3.90	4.20	+ .30	3.60	3.60	+ 0	3.75	4.00	+ .25

Q4. How often does your child exhibit the following indicators of self-control? (1-5 scale, where 1=never, 2=almost never, 3=occasionally/sometimes, 4=almost every time, 5=every time)

Parents of Classroom 1 students reported a significant improvement in their child’s ability to engage with peers after an argument of conflict. They also showed slight improvement in their ability to take others’ perspectives and grant *forgiveness*. Parents of Classroom 2 students witnessed slight improvement on two of the three indicators of *forgiveness*.

**Forgiveness – A Comparison of Indicators Before and After CDCI Intervention**

<b>Forgiveness Indicators</b>	<b>Classroom 1</b>			<b>Classroom 2</b>			<b>Control Classroom</b>		
	<b>Pre-Test Mean Score</b>	<b>Post-Test Mean Score</b>	<b>Diff.</b>	<b>Pre-Test Mean Score</b>	<b>Post-Test Mean Score</b>	<b>Diff.</b>	<b>Pre-Test Mean Score</b>	<b>Post-Test Mean Score</b>	<b>Diff.</b>
Your child does not hold the painful words or actions of others against them, and doesn’t hold on to angry feelings about them	3.80	3.80	+0	3.60	3.80	+0.20	4.00	4.00	+0
Your child displays the ability to take the perspective of others (see things from the others point of view) and grant forgiveness	3.60	3.80	+0.20	3.60	3.80	+0.20	3.67	4.00	<b>+0.33</b>
Your child demonstrates the ability to engage with peers after an argument or conflict	3.90	4.30	<b>+0.40</b>	4.00	4.00	+0	4.17	4.33	+0.16

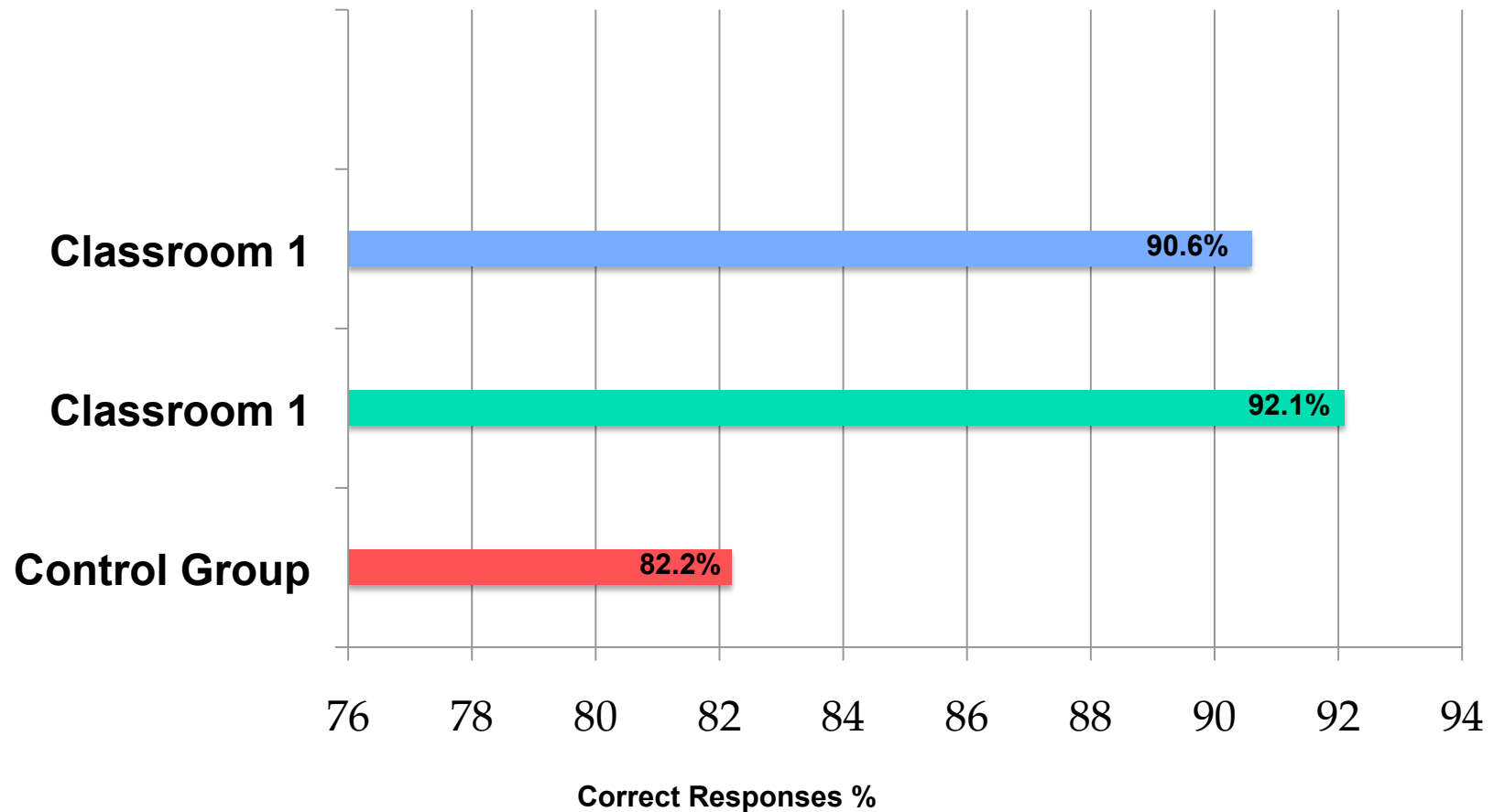
Q5. How often does your child exhibit the following indicators of forgiveness? (1-5 scale, where 1=never, 2=almost never, 3=occasionally/sometimes, 4=almost every time, 5=every time)

## ***Student Knowledge Gain from the CDCl***

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The post intervention scores for understanding and retention of character concepts are higher in the Classrooms 1 and 2 (with cartoon visual element) than in the Control Group (without cartoon visual element). It is worth noting that the children in the Control Group also happened to be Spanish Immersion students who generally excel.

Correct/Incorrect Responses to Student Post Assessment Questionnaires





A sample of CDCI student post-evaluation verbatim comments are displayed below. The students were presented with cartoons from the CDCI materials and asked to name individual character traits, define what they mean, and/or give ways they can act on the trait. The control group completed the questionnaires with text based stories or summations.

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### Classroom 1

***Self-Control – “To control your body and your feelings (and) not do what you feel.”***

***Responsibility – “Do the right thing, right away.”***

***Forgiveness – “Not holding anger against people.”***

***Patience – “That means wait until your turn.”***

***Timeliness – “Do things the same time the teacher does. Get up 10 minutes early. Do not try to be rushed.”***

### Classroom 2

***Self-Control – “Not let your body do things you do not want to do.”***

***Responsibility – “It means doing the right thing at the right time.”***

***Forgiveness – “It means when someone does something wrong the other one forgives you.”***

***Patience – “Waiting for someone or something.”***

***Timeliness – “Taking shorter showers/baths. Eat your breakfast fast but enjoy it. Get ready (for school) before goofing off.”***

### Control Classroom

***Self-Control – “You should not say bad words and you need to control yourself.”***

***Responsibility – “Doing something that you are supposed to do.”***

***Forgiveness – “To say it’s okay, but try not to do it again.”***

***Patience – “To wait for someone or something.”***

***Timeliness – “Make a checklist. Listen to instructions. When I am told to do something, do it right when told.”***