Journey Toward Deeper Learning:

An Evaluation of the Roadtrip Nation Experience in the San Jose PLUS Academies

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Table of Contents

I. Introduction & Overview

This report describes the background, methods, and findings of a "deep dive" evaluation of Roadtrip Nation's (RTN) high school program, the Roadtrip Nation Experience. The primary focus of the evaluation was RTN pilot implementation in three San Jose Unified School District PLUS Academies during the 2011–2012 academic year, supported by analysis of program curriculum and instructional materials. Conducted by Dr. David Conley and the Educational Policy Improvement Center (EPIC), this multimethod evaluation project used the William and Flora Hewlett Foundation's Deeper Learning Rubric to answer the question: How and to what extent does the Roadtrip Nation Experience foster students' Deeper Learning?

"We started Roadtrip Nation because we didn't feel there were any resources in school that could truly empower students to explore what was possible for their future. That was the genesis of our first Roadtrip, to get outside our comfort zones and connect with Leaders to learn how they got to where they are today."

– Mike Marriner, Co-Founder
Roadtrip Nation

The Roadtrip Nation Experience was launched in 2008 to help students more effectively engage with their futures and view education as relevant and important in their lives. Developed through an ethnographic study of thousands of hours of footage from the Roadtrip Nation television series and documentary film, this school-based program provides a framework for students to "define their own roads in life" through 12 online multimedia lessons, access to the web-based RTN Interview Archive, companion workbook activities, guided classroom discussions, and a culminating Roadtrip Project in which students work in groups to identify and interview leaders in their own communities. To date, over 100,000 students from 22 of states have participated in the Roadtrip Nation Experience.

Section II addresses the study's methodology. Lacking one elegant measure to assess students' Deeper Learning, five investigative lenses were employed: 1) a comprehensive curriculum analysis, identifying which and to what extent the Deeper Learning domains and components are incorporated into the RTN program design; 2) pre- and post-program administration of EPIC's Student Diagnostic to RTN participants and a group of

comparison students not participating in the RTN program, with Deeper Learning components linked to specific items on the diagnostic; 3) analysis of student work samples, noting demonstrations of Deeper Learning components identified by the curriculum analysis; and 4) classroom observations and 5) focus groups, both with observation protocols and discussion questions designed to elicit qualitative information specific to Deeper Learning and the contexts in which it takes place.

Findings from the study—summarized in Section III—are organized under the domains and supporting components of the Deeper Learning Rubric, alongside additional considerations and analysis of the implementation context at the three San Jose PLUS Academies. Key findings from each of the domains include:

- **Master Core Academic Content:** The curriculum's use of word play, analogy, and real-world connections facilitated students' mastery of core academic content, as focus group students consistently recalled, explained, and applied key concepts. Ninety-three percent of RTN students answered positively—either stating they did or could do better—to the statement "I try to learn and understand the big ideas and concepts from class that I will continue to use, rather than just memorize facts."

- **Engage in Expanding Structure of Knowledge:** Students reported strong orientation toward their long-term future, as 93% expressed a positive belief that what they learn in school today will be important to them later on in life, compared to 83% of comparison students not participating in the RTN program.

- **Think Critically and Solve Complex Problems:** Through focus groups and work samples, students described and demonstrated strategic thinking skills by using different approaches to overcome obstacles that arose in their final projects. Ninety-two percent of students answered positively to the statement, "I change my strategy and try again when my first try doesn't work."

- **Communicate Effectively:** Students demonstrated keen awareness that their communications during their interviews with community leaders needed to meet professional standards. Classroom observations showed students practicing their interview introductions and lead questions, with peer and teacher feedback provided along the way.

- **Work Collaboratively:** When compared to PLUS Academy students not participating in the RTN program, RTN students had higher rates of positive responses on every Student Diagnostic item linked to this Deeper Learning domain.

- **Learn How to Learn:** Students collectively demonstrated a significant increase in self-efficacy through the pervasive selection of the Student Diagnostic response "I can do better" in the post-program survey administration, a finding that is more thoroughly described in Section III.

Perhaps the most concrete finding of the study related to the RTN program's impact on academic improvement: the average GPA of students participating in the RTN program increased from 2.35 to 2.75, compared to that of PLUS Academy students not participating in RTN, 2.40to 2.60. RTN students not only had higher achievement than their peers at the end of the year, but they also demonstrated greater academic improvement by a factor of 2.

Key Finding:

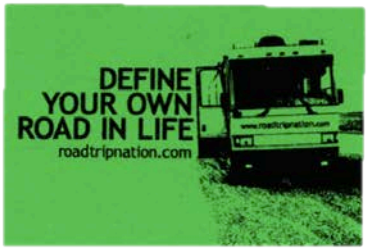
RTN students not only had a higher average GPA than their peers at the end of the school year, but they also demonstrated greater academic improvement by a factor of 2.

The increase in RTN students' average GPA is interesting at face value, because the program itself does not focus on academic achievement. There are no lessons that encourage students to study harder or get good grades. The Roadtrip Nation Experience does, however, focus squarely on the behaviors, attitudes, and strategies—termed "noncognitive" factors by educational researchers—that hold a direct positive relationship to students' concurrent and future outcomes. Section IV's conclusion discusses the relationship between this study and a wider body of research on student success and noncognitive skills. Section IV also addresses limitations to generalizability, recommendations for future evaluation, and recommendations on how the findings can inform future program development.

About Roadtrip Nation

In 2001, three recent college graduates decided to take a road trip in hopes of discovering their places in the world. The idea for the journey was simple: if you don't know what to do with your life, go out and talk to people who are doing what they love and ask them how they got there. Over the course of three months, the trio traveled over 17,000 miles in an old green motor home and interviewed 85 individuals as diverse as the CEO of National Geographic, the scientist who decoded the human genome, and the conductor of the Boston Philharmonic. Their trip was chronicled in *Forbes* magazine, a documentary film, and a book published by Random House.

During the publicity campaign for the book launch, it became clear that rather than simply reading about the journey, students across the country wanted to hit the road, meet with their own list of leaders, and explore the world for themselves. To meet this need, the three graduates—Nathan Gebhard, Mike Marriner, and Brian McAllister—created Roadtrip Nation, an organization dedicated to helping students build this experience first-hand through an annual PBS television series, live campus events, nationally publicized books, and multimedia online content.



In 2008, Roadtrip Nation further extended into the education field by creating a nonprofit subsidiary called RoadtripNation.org, developing curricula and programs to help at-risk students gain access and exposure to life pathways that they may have otherwise not known existed. The program's stated goals are as follows:

1. Increase relevance in student's educational experience by connecting them to the real world via RoadtripNation.org's experiential-learning programs and engaging multimedia content.

2. Expand students' social capital and increase exposure to pathways that relate to their individual passions and interests.

3. Develop students' 21st-century skills by leveraging RoadtripNation.org programs and resources that guide them in developing research, project management, communication, teamwork, leadership, technology, and communication skills.

RoadtripNation.org's high school program—the Roadtrip Nation Experience—provides a framework for students to "define their own roads in life" through 12 online multimedia lessons, the web-based RTN Interview Archive, companion workbook activities, guided classroom discussions, and a culminating Roadtrip Project in which students work in groups to identify and interview leaders in their own communities.

Figure 1. The Roadtrip Nation Experience supports students' self-discovery process through four integrated components.

Section I, *Exposure*, breaks down seven core educational themes gleaned from the hundreds of interviews in the Roadtrip Nation Interview Archive:

- Lesson 1: Introduction to Exposure
- Lesson 2: Don't Fall Asleep at the Wheel
- Lesson 3: Get Out and Explore
- Lesson 4: Risk, Failure, and Success
- Lesson 5: Work Versus Your Life's Work
- Lesson 6: Self-Confidence
- Lesson 7: Making it Work

Each theme has a corresponding lesson video pulling topical/thematic content from the Roadtrip Nation Interview Archive, an online interactive assignment, and workbook activities for writing, reflection, collaboration, and spatial organization.

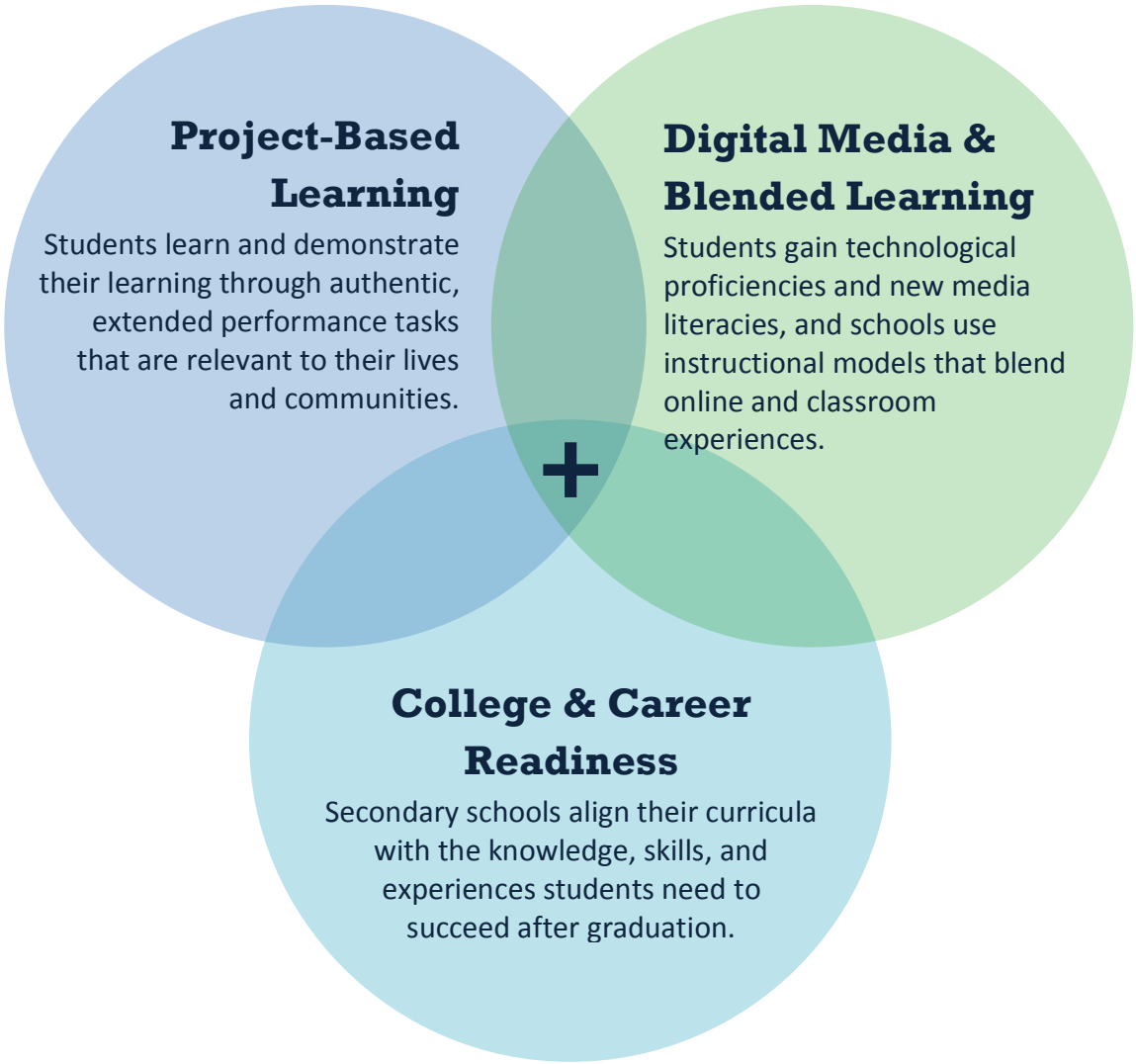
Section II, *Self-Construction*, guides students through a process of introspection and reflection to identify their interests and passions by exploring the RTN Interview Archive. The five core educational themes in Section II are:

- Lesson 8: Introduction to Self-Construction
- Lesson 9: Shed The Noise
- Lesson 10: Explore Your Interests
- Lesson 11: Themes from the Road
- Lesson 12: I Am My Manifesto

The Roadtrip Project, the culminating learning component of the curriculum, provides the opportunity to go out into students' communities and interview local leaders and innovators with achievements and passions that correspond with their interests. Students research and identify whom to meet, cold-call potential interviewees, learn how to develop effective interview questions, practice professional behavior in the interview setting, and capture their experiences through digital storytelling tools such as video, photos, and student blogs. Curricular units in the Roadtrip Project include:

- Prep For Your Roadtrip
- Cold-Call
- The Interview
- Share Your Experience

The design of the Roadtrip Nation Experience places the program at the intersection of three key fields of innovation in secondary education: 1) College and Career Readiness, 2) Project-Based Learning, and 3) Digital Media and Blended Learning. Policymakers and educators alike are increasingly focused on aligning secondary curricula with the knowledge, skills, and experiences students need to succeed after high school. Roadtrip Nation aims to support college and career readiness through its primary operating hypothesis: if students get engaged in their futures and explore who they want to be, they will become more engaged in school as a necessary pathway and tool in their lives. Students are invited to engage with their futures through a blended learning instructional model and an authentic, extended final project.



"The real world rarely offers us multiple-choice questions."

– Barbara Chow, Education Director, William and Flora Hewlett Foundation

Moving beyond the narrow focus on content knowledge brought forth by the era of test-based accountability, the goals of the Roadtrip Nation Experience place the program in a class of next-generation interventions and instructional models that define student success by "21st-Century" or "Deeper Learning" skills.

"The real world rarely offers us multiple-choice questions," says Barbara Chow, Education Director at the William and Flora Hewlett Foundation. "Employers clamor for staff members who can solve problems by designing their own solutions and then telling coworkers how they did it. To thrive in an increasingly complex and dynamic world where routine manual and cognitive tasks are being assumed by machines, those emerging from school must be able to think analytically, find reliable information, and communicate with others."[1]

The Hewlett Foundation has adopted a definitional model for Deeper Learning after extensive research and consultation with leaders from education, business, and policy. Broadly framed, students need Deeper Learning to succeed in college and prepare for careers; the United States must cultivate its talent in order to lead in the global economy; and the world needs these capabilities to solve critical problems.[2] These capabilities include: mastering core academic content; engaging in expanding structure of knowledge; thinking critically and solving complex problems; communicating effectively; working collaboratively; and learning how to learn. Deeper Learning skills can also provide effective instructional strategies to implement the more rigorous and cognitively challenging Common Core State Standards.[3] Working at the levels of policy, practice, research, and innovation, the Hewlett Foundation has developed a Deeper Learning investment portfolio, which includes a capacity-building grant for Roadtrip Nation.

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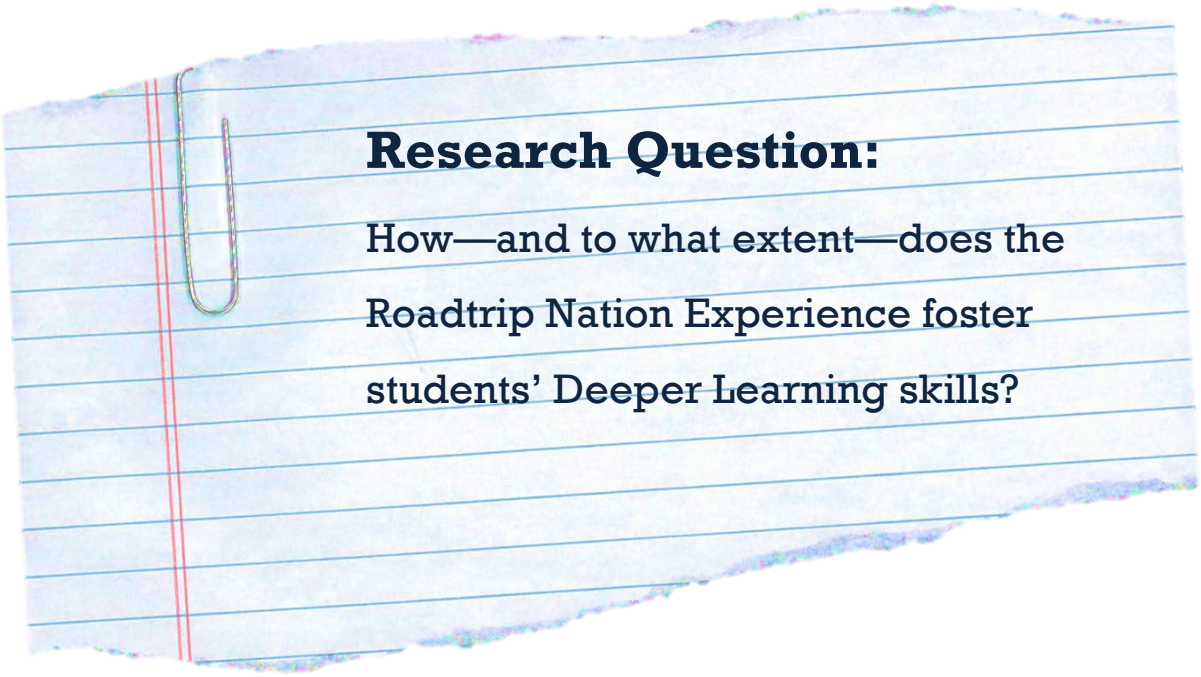
[1] Chow, B. (October 6, 2010). "The Quest for Deeper Learning." *Education Week*. Retrieved from http://www.hewlett.org/newsroom/quest-deeper-learning

[2] William and Flora Hewlett Foundation (October, 2010). *Education Program Strategic Plan*. Menlo Park, CA: Hewlett Foundation. Retrieved from www.hewlett.org/programs/education-program

[3] Fasimpaur, K., Treacy, B., and Fletcher, G. (April, 2012). New Opportunities Presented by the Common Core: Deeper Learning, Open Educational Resources, and Increases in Long-term Student Success. Presentation to the National School Boards Association. Retrieved from http://www.slideshare.net/kfasimpaur/common-core-and-deeper-learning

Roadtrip Nation sought to leverage its support from the Hewlett Foundation to better understand how its high school program operates within this class of next generation interventions and instructional models. Working with David Conley and the Educational Policy Improvement Center, a multimethod evaluation study was conducted over the 2011–2012 academic year to answer the following research question: How and to what extent does the Roadtrip Nation Experience foster students' Deeper Learning?



II. Methodology

The targets of this evaluation were defined by the Hewlett Foundation's Deeper Learning Rubric, articulating six broad domains of Deeper Learning and supporting components under each domain (Figure 2). To evaluate how Roadtrip Nation (RTN) fosters students' Deeper Learning, a number of issues were considered in the research approach. First, the Roadtrip Nation Experience was not originally designed around the Deeper Learning Rubric. While the program aligns with the broad aspirations of Deeper Learning, the Roadtrip Nation Experience was designed from more of an ethnographic perspective leveraging over 10 years of RTN interview content. Thus, evaluating the extent to which the program supports each of the Deeper Learning domains and components was a bit of a retrofit. The rubric had to first be operationalized through the identification of concrete ways the program design facilitates Deeper Learning. Otherwise, this study ran the risk of evaluating a non-event. Second, Deeper Learning is a complex concept. There was not one elegant measure readily available to validly and reliably assess it in students. Lastly, this evaluation research was situated within a significant period of Roadtrip Nation's capacity building. Findings needed to not only evaluate statistical evidence of impact but also identify key insights to inform the program's future development and continuous improvement.

Based on these considerations, a multimethod evaluation was designed using five investigative lenses: 1) a comprehensive curriculum analysis, identifying which and to what extent the Deeper Learning domains and components are incorporated into the RTN program design; 2) pre- and post-program administration of EPIC's Student Diagnostic, with Deeper Learning components linked to specific items on the diagnostic; 3) analysis of student work samples, noting demonstrations of Deeper Learning components identified by the curriculum analysis; and 4) classroom observations and 5) focus groups, both with observation protocols and discussion questions designed to elicit qualitative information specific to the Deeper Learning Rubric. Such a "deep dive" evaluation approach was not conducive to a random sampling of schools and students across Roadtrip Nation's full roster of implementation sites. This study instead focused on one set of implementation sites within the San Jose Unified School District's PLUS Academy program. The following section describes in fuller detail background information on the PLUS Academies and the execution of each investigative lens of the multimethod evaluation design.

Figure 2. Deeper Learning Domains and Components

Master core academic content
Students learn, remember, and recall facts relevant to a content area.
Students extend core knowledge to novel tasks and situations in a variety of academic subjects.
Students learn and can apply theories relevant to a content area.
Students know and are able to use the language specific to a content area.
Students apply facts, processes, and theories to real world situations.
Engage in expanding the structure of knowledge
Students perceive the inherent value of content knowledge.
Students know that future learning will build upon what they know and learn today.
Students are motivated to put in the time and effort needed to build a solid knowledge base.
Students enjoy and are able to rise to challenges requiring them to apply knowledge in non-routine ways.
Think critically and solve complex problems
Students are familiar with and able to use effectively the tools and techniques specific to a content area.
Students formulate problems and generate hypotheses.
Students identify the data and information needed to solve a problem.
Students apply the tools and techniques specific to a content area to gather necessary data and information.
Students evaluate, integrate, and critically analyze multiple sources of information.
Students monitor and refine the problem solving process based on available data as needed.
Students reason and construct justifiable arguments in support of a hypothesis.
Students persist to solve complex problems.
Communicate effectively
Students structure information and data in a meaningful and useful way.
Students listen to and incorporate feedback and ideas from others.
Students provide constructive and appropriate peer feedback to others.
Students understand that creating a quality final communication requires review and revision of multiple drafts.
Students communicate complex concepts to others in both written and oral presentations.
Students tailor their message for the intended audience.
Work collaboratively
Students collaborate with others to complete tasks and solve problems successfully.
Students work as part of a group to identify group goals.
Students participate in a team to plan problem-solving steps and identify resources necessary to meet group goals.
Students communicate and incorporate multiple points of view to meet group goals.
Learn how to learn
Students know and can apply a variety of study skills and strategies.
Students are aware of their strengths and weaknesses.
Students identify and work towards lifelong learning and academic goals.
Students evaluate the match between reality and what is needed to attain specific goals.
Students recognize their weaknesses and anticipate needing to work harder in those areas.
Students monitor their progress towards a goal, and adapt their approach as needed.
Students enjoy and seek out learning on their own.
Students understand and are prepared to meet changing expectations in academic and professional environments.

Evaluation Context: San Jose PLUS Academies

San Jose PLUS Academies are part of California's "Small Necessary Continuation School" program, which was established to give at-risk and credit-deficient students an opportunity to take part in a small group setting with two core teachers and a counselor. Housed within traditional schools, the selective PLUS Academies focus on supporting credit recovery and promoting student graduation. Students are grouped into two classes of 20 and attend PLUS Academies for half a day for core subjects and attend regular high school or community college for electives. Three of the six San Jose PLUS Academies implemented the Roadtrip Nation program in the 2011–2012 academic year: San Jose PLUS, Lincoln PLUS, and Willow Glen PLUS.

PLUS Academy Demographics:

81% Minority

80% First-Gen College-Goer

51% Free/Reduced Lunch

39% ESL

Curriculum Analysis

A comprehensive analysis of the RTN curriculum and instructional materials identified which and to what extent each of the Deeper Learning domains were incorporated into the RTN program design. Specifically, the curriculum analysis was a sequential artifact review of the RTN Experience journal, online site, lesson plans, and video platform.

Two reviewers independently evaluated each curriculum unit for the presence, depth, and relevance of each component of the six Deeper Learning domains, citing evidence of component operation in a log matrix. Using a holistic scoring method and defined five-point scoring criteria, the reviewers generated scores for the lessons, the project, and overall curriculum content for each component and domain. The five-point scoring criteria were defined by the same qualities of presence, depth, and relevance used to evaluate each unit (Figure 3). Reviewers also summarized log notes, identifying themes and examples of components operationalized in the RTN curriculum. For moderation purposes, an inter-rater reliability threshold was established at 1 point, where a third rater would be consulted in the event of a score discrepancy greater than 1. This process had strong concordance with a mean discrepancy of 0.125. Using a convergent consensus approach, reviewers compared findings, provided rationales for ratings, and generated a shared score for each component and domain.

Figure 3. Defined 5-Point Scale for Holistic Scoring

Holistic Score and Definition	
0	• Does not offer any evidence of key component or domain.
1	• Contains partial or incomplete evidence of key component or domain. • Shows poor understanding of target students and most activities are irrelevant. • Considers surface-level use of key component in activity.
2	• Contains reasonably complete evidence of key component or domain. • Shows some understanding of target students and some activities are relevant. • Creates minimal opportunities to engage in obtaining and expanding knowledge of key component.
3	• Contains complete evidence of key component or domain. • Shows clear understanding of target students and most activities are relevant. • Requires students to demonstrate awareness of key component or domain. • Offers multiple opportunities to engage in obtaining and expanding knowledge of key component.
4	• Addresses key component or domain directly with extensive evidence. • Shows clear understanding of target students and all activities are relevant. • Requires students to demonstrate basic proficiency of key component or domain. • Contains a longitudinal element that seeks to develop key component along a continuum for students.
5	• Addresses key component or domain directly with extensive evidence. • Shows clear understanding of target students and all activities are relevant. • Requires student mastery of key component or domain. • Require students to process knowledge extensively and over time, and to apply understandings of the knowledge in non-routine ways on multiple occasions.

Student Diagnostic Administration

The Student Diagnostic was administered at the beginning and end of the 2011–2012 academic year to both RTN participants and a comparison group of students from the three PLUS Academies who did not participate in RTN. The Student Diagnostic is a web-based student survey contained within EPIC's CampusReady tool that provides a comprehensive picture of college and career readiness within a school. The 45-minute student survey is composed of research-validated, metacognitive assessment items in which participants self-report behaviors and attitudes mapped to Dr. David Conley's Four Keys to College and Career Readiness.[4] Each item uses an ordinal scale of response options (I Don't Know What This Is= 1; I Don't Know How=2; I Don't=3; I Could Do

[4] Conley, D. T. (2012). *A Complete Definition of College and Career Readiness*. Eugene, OR: Educational Policy Improvement Center.

Better=4; I Do=5). Frequencies and means were calculated for each item, and mean scores were aggregated up to the aspect and dimension level of the Four Keys. A second frequency was also calculated on a binary scale for positive and negative responses (4,5=1; and 1,2,3=0). Employing a crosswalk analysis of the Four Keys and Deeper Learning Rubric previously completed for the Hewlett Foundation, mean scores and item frequencies were linked to corresponding Deeper Learning domains and components. This evaluation took specific interest in change between fall and spring and differences between the RTN students and the comparison group.

Analysis of Student Work Samples

An analysis of student work samples looked at the extent to which students exhibited Deeper Learning operationalized by the RTN program as identified in the curriculum analysis. PLUS Academy teachers were asked to submit work samples from six students at each of the three schools, and students were selected based on a range of engagement and achievement (high, average, low). Rather than assessing each student's overall achievement, the students' journals, online activities, and final projects were analyzed by two reviewers as document artifacts, using the Deeper Learning Rubric as a coding scheme. Findings were summarized in the data log, with accompanying examples cited or captured as annotated images.

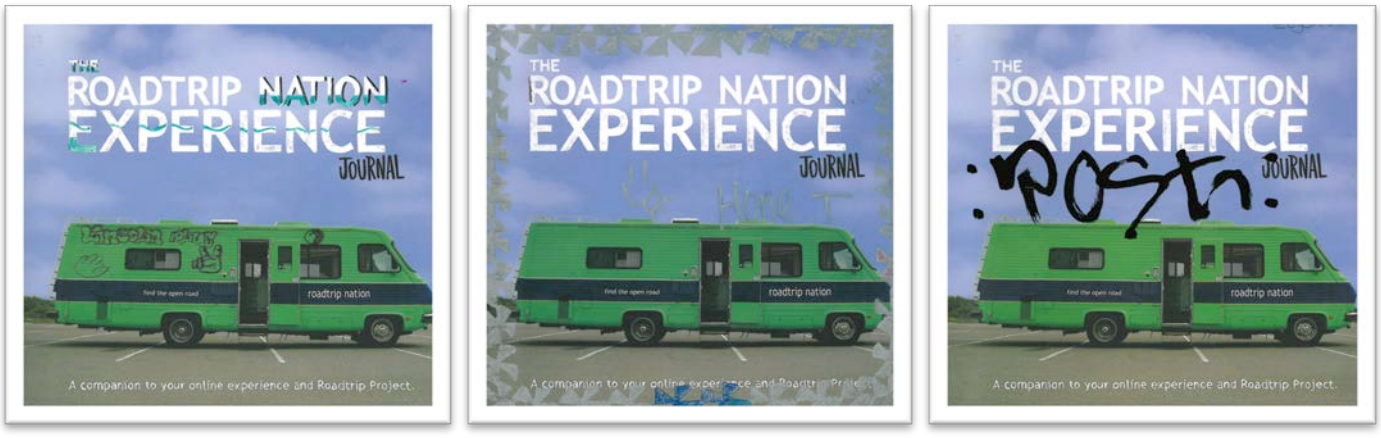


Figure 4. Work samples included student journals that documented engagement with course material.

Classroom Observations

A set of classroom observations used observation protocols and coding schemes specific to the Deeper Learning objectives and the contexts in which Deeper Learning takes place. Instructors submitted video recordings of typical RTN lessons as taught in their classrooms. Two reviewers captured descriptive information about the classroom and collected evidence of Deeper Learning from lectures, discussions, and students completing program activities. Observation of instructional activities, feedback given to students, and student engagement with classroom activities were noted in the data log.

Focus Groups

Focus groups were conducted with students at all three San Jose Unified School District PLUS Academies at the end of the academic year, May 1–3, 2012. From 6 to 9 students in each morning and afternoon class were selected by their teacher to participate and represented a range of engagement levels, academic achievement, and backgrounds. Students were introduced to the evaluation project, the role of the researchers visiting their classrooms, and the students' role as "experts" on the Roadtrip Nation Experience. Naming the students as experts rather than subjects of the research was an intentional effort to engage them in a constructive and reflective conversation about the strengths and weaknesses of the RTN program.

Six one-hour focus groups were conducted over three days, with a total of 45 students participating. A common set of focus group questions—each linked to a Deeper Learning domain—were discussed in each session. Natural follow-up questions were posed to reveal additional insights. Discussion topics included what students learned through RTN, how the program was implemented in their classroom, the challenges they experienced, and how it promoted their personal

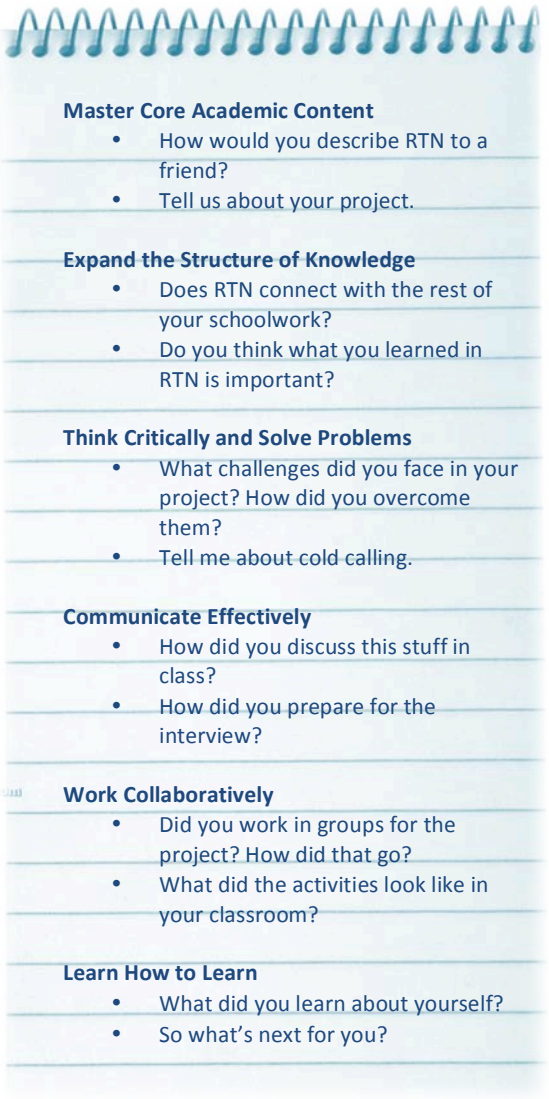


Figure 5. Focus group questions linked to Deeper Learning domains served as jumping-off points for conversation with students.

growth. Informal, 30-minute interviews were also conducted with teachers at each site. Focus groups were captured through field notes and audio recordings, and were analyzed using the Deeper Learning domains and components as a coding scheme.

Holistic Analysis

The holistic scoring method employed for the curriculum analysis was repeated to generate an overall evaluation of the RTN program as it was implemented in the PLUS Academies. Findings from each of the investigative lenses were summarized and compiled into one master data log, and two reviewers independently rated each Deeper Learning domain and component on a five-point scale defined by qualities of presence, depth, and relevance. Like the curriculum analysis process, the inter-rater reliability threshold was established at 1 point. Again, there was high concordance with a mean discrepancy of 0.27. Using a convergent consensus approach, reviewers compared findings, provided rationales for ratings, and generated a shared score for each component and domain.

In this context, a holistic scoring process accommodates considerations of sufficiency of evidence, where significant findings are confirmed through at least two different investigative lenses. Aggregated up to the domain level, it also allows for compensatory scoring, where the strength of Deeper Learning demonstrated in one component compensates for another component not well represented. Lastly, employing the same scoring criteria for the curriculum analysis and the overall program evaluation allows for further insights into the variance introduced through implementation. As this evaluation is designed to not only provide a status report but also support future program iterations and development, overall findings were summarized through the identification of core strengths and opportunities for improvement.

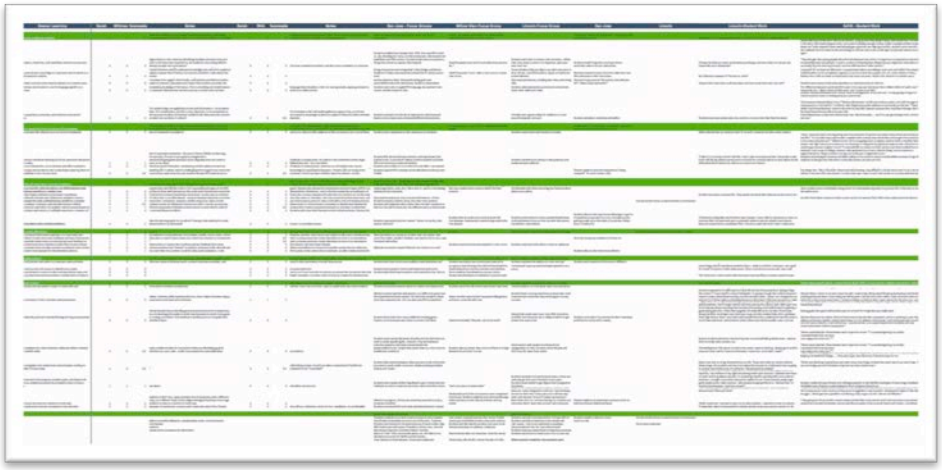


Figure 6.
A screenshot of the master data log illustrates the extensive collection of information gathered through the multimethod evaluation.

III. Summary of Findings

The following section provides a summary of findings organized by the six domains of the Deeper Learning Rubric: Master Core Academic Content; Engage in an Expanding Structure of Knowledge; Think Critically and Solve Complex Problems; Communicate Effectively; Work Collaboratively; and Learn How to Learn. Each section begins with a bullet point description of the Deeper Learning domain with its supporting components and overall holistic scores. The holistic scoring criteria rated each domain and component on a scale of 0–5 for presence, depth, and relevance. To make this rating system more meaningful and actionable, however, the summary of findings under each Deeper Learning domain is organized by three categories: 1) analysis of how the domain and components are operationalized by the Roadtrip Nation Experience; 2) identification of key strengths and supporting evidence; and 3) identification of opportunities for improvement.

+4 Master Core Academic Content

- *+4 Students learn, remember, and recall facts relevant to a content area.*
- *+3 Students extend core knowledge to novel tasks and in a variety of subjects.*
- *+4 Students learn and can apply theories relevant to a content area.*
- *+4 Students know and are able to use the language specific to a content area.*
- *+4 Students apply facts, processes, and theories to real world situations.*

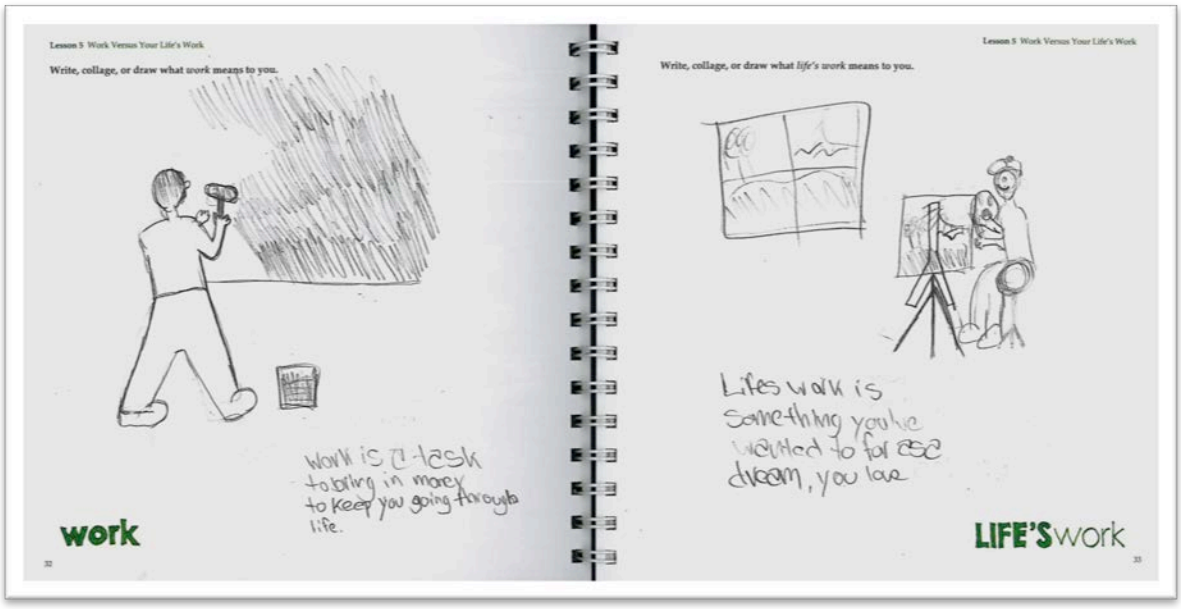
The Roadtrip Nation program curriculum is unique in that it is not traditional academic content. It was, however, implemented as part of the ELA coursework at the PLUS Academies, and it teaches key concepts, vocabulary, and a theoretical framework of "axels." Thus this study defined the academic content of RTN as the knowledge that students need to define their own road in life. Students learn the content through a number of channels:

- Using the Cornell note-taking method to capture key ideas and supporting evidence from each video;
- Completing short-answer questions online about each video;
- Participating in class discussions; and
- Completing activities in the journal to expand, deepen, and apply content.

Program Strengths

One key strength in the RTN approach to teaching content is the use of metaphor, analogy, and word play. For example, a workbook activity in Lesson 3 used an extended metaphor about a cocoon to deepen students' thinking regarding barriers to getting out of their comfort zones. In focus group discussions, students used metaphors to explain the purpose of the program, and with ease could recall and explain concepts such as "shed the noise" and "don't fall asleep at the wheel." Students even generated their own metaphors and word play to demonstrate understanding of content in both focus group discussions and student work samples. One student illustrated the difference between "work" and "life's work" in Lesson 5 by comparing a house painter to a fine arts painter.

Figures 7 and 8. Students make meaning out of original metaphors and word play in focus group conversations (pictured left) and journal activities (pictured below).



The value of using analogies, metaphors, and word play to teach new content is supported by a strong body of research from the learning sciences. Analogies in text help to build relationships between what students already know and what they are setting out to learn, where familiar analogies serve as mental models in which students can form meaningful understanding of more complex concepts.[5] The effectiveness of this strategy in the RTN program design is evident in Student Diagnostic data. Ninety-three percent of RTN students answered positively—either stating they did or could do better—to the statement "I try to learn and understand the big ideas and concepts from class that I will continue to use, rather than just memorize facts," compared to 83% of PLUS Academy students not participating in the RTN program.

"Cheryl Foster's story is a lesson for my own life—stop going through the motions and be brave in chasing what I want to do." ***– Lincoln PLUS student***

"Ariel Helwani was so shy and that's exactly how I am…but if he can get through it then certainly I can too."
– Lincoln PLUS student

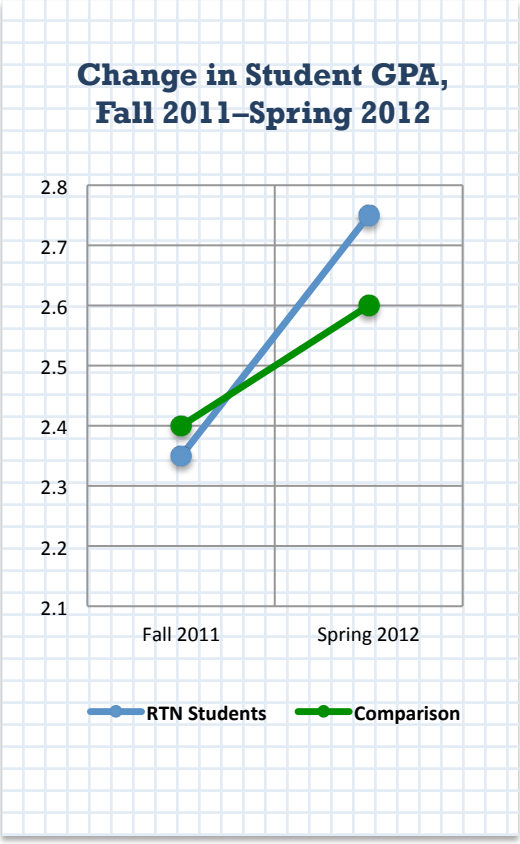
Another program strength is in students' application of facts, processes, and theories to real-world situations. The whole of the RTN program curriculum is an application of content to students' own lives, and the content is derived from real people's experiences in the video archive and in-person interviews with community leaders. This real-life connection was evident throughout student work samples, including the following excerpts from student responses to Lesson 11's online activity:

- "Cheryl Foster's story applies to my own life—stop going through the motions and be brave in chasing what I want to do."
- "Ariel Helwani was so shy that's exactly how I am…but if he can get through it then certainly I can too."
- "Max Seigel believes in hard work just like me."

"Max Seigel believes in hard work just like me."
– San Jose PLUS student

[5] Glynn, S. M., & Takahashi, T. (1998). Learning from analogy-enhanced science text. *Journal of Research in Science Teaching, 35,* 1129–1149.

Similar to teaching content with metaphors, applications of theoretical material to real-life situations make content easier to understand.[6] Moreover, by demonstrating the relevance of academic content to students' own lives, research suggests that students are more engaged, motivated, and ultimately more successful as learners.[7] Evidence of RTN's impact on academic engagement, motivation, and success is found in PLUS Academy students' grade point averages before and after participating in the RTN program. Based on self-reported data, the average GPA of students participating in the RTN program increased from 2.35 to 2.75, compared to that of PLUS Academy students not participating in RTN, 2.4 to 2.6. RTN students not only had higher achievement than their peers at the end of the year, but they also demonstrated greater academic improvement by a factor of 2.



Opportunities for Improvement

While there is strong evidence that the RTN program facilitated PLUS Academy students' mastery of core academic content, there are opportunities for improvement in this Deeper Learning domain. Work samples showed a lack of understanding of the Cornell note-taking method, thus presenting an opportunity to revise professional development supports to encourage instruction on how to use the note-taking grid. Secondly, the curriculum analysis identified a gap where content in the lessons section is not explicitly carried through to the project, and the finding was confirmed in student work samples and classroom observation videos. This presents an opportunity—through either professional development or curriculum revisions—to encourage students to use RTN axels and themes to generate their interview questions. Content knowledge can be both demonstrated and deepened by reframing it in question form.[8]

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[6] Keller, J. M. (2008). An integrative theory of motivation, volition, and performance. *Technical Instruction, Cognition, and Learning, 6* (2), 79–104.

[7] Hardre, P., & Reeve, J. (2003) A motivational model of rural students intentions to persist in, versus drop out of high school. *Journal of Educational Psychology, 95,* 347–356.

[8] MacGregor, J. (1991). Collaborative learning: Reframing the classroom. *Essays on Teaching Excellence, 2*(3).

[+3] Engage in an Expanding Structure of Knowledge

- *[+3] Students perceive the inherent value of content knowledge.*
- *[+3] Students know that future learning will build upon what they learn today.*
- *[+3] Students are motivated to put in the time and effort needed to build a solid knowledge base.*
- *[+4] Students enjoy and are able to rise to challenges requiring them to apply knowledge in non-routine ways.*

The evaluation of student engagement with an expanding structure of knowledge looked at issues of students' perceived value of RTN content, the extent to which students were challenged by the RTN program and motivated to meet those challenges, and how students link what they learn in the program to future learning. The curriculum analysis identified program features that facilitate this type of engagement: the introductory set-point lesson is designed to ground students in an awareness of where they are today and to look at "defining your own road in life" as a lifelong process; themes such as success, failure, and persistence aim to connect and motivate students to put in time and effort to do the work required in the process. Most of the discovery related to this Deeper Learning domain, however, was made and confirmed through the investigative lenses of focus groups and Student Diagnostic results.

Program Strengths

One key strength in this domain is the presentation of challenges requiring students to apply knowledge in non-routine ways, specifically in the execution of the project. In focus group discussions, students identified cold-calling, interviewing, storyboarding, and videography as new skills they had never previously been exposed to in their traditional ELA coursework. These were the program areas where students stated they were the most challenged and found the most rewarding. This is supported by Student Diagnostic data, where 86% of students answered positively that they have the ability to rise to the challenge when presented with challenging work.

86% of students agreed:

"I can rise to the challenge when I'm presented with challenging work."

Also relevant to this Deeper Learning domain is evidence that the program oriented students toward their long-term future. The thrust and theory of action of the entire RTN program is future-oriented, yet the key to affecting an expanding structure of knowledge is the extent to which students transfer these lessons to their broader perspective on life-long learning. Recent research emphasizes this notion of transfer as cornerstone to all Deeper Learning.[9] Classroom observation videos showed PLUS Academy teachers acting as facilitators of this transfer. For example, one teacher used a class discussion on cold-calling and interviewing strangers to isolate the importance of the skills students were gaining in the process. "Finding the right people to connect with and asking them smart questions…this stuff isn't just going to get you an A on your project," he said. "This is preparing you to be successful in life."

> **"Finding the right people to connect with and asking them smart questions… this stuff isn't just going to get you an A on your project. This is preparing you to be successful in life."**
>
> **– San Jose PLUS teacher**

Data from the Student Diagnostic suggests that RTN students were engaging in this transfer. Ninety-three percent expressed a positive belief that what they learn in school today will be important to them later on in life, compared to 83% of PLUS Academy students not participating in the RTN program.

Opportunities for Improvement

While RTN is effective in orienting students toward their long-term future, this analysis identified a need to better connect short- and medium-term learning to long-term success. Recalling the 93% of RTN students who believe that what they learn in school today will be important later on in life, only 86% believe that what they learn today will be important to what they learn next year. Additionally, more students believe that they will be successful in their careers (90%) than successful in college (83%). Illustrating this need for a greater focus on intermediate learning and goal-orientation, focus group participants consistently expressed a desire for RTN to provide concrete steps to pursue their career interests.

[9] Pellegrino, J. & Hilton, M. (2012). Education for Life and Work Developing Transferable Knowledge and Skills in the 21st Century (Report Brief). Washington, DC: National Academies Press.

+3 Think Critically and Solve Complex Problems

- *+3 Students are familiar with and able to use effectively the tools and techniques specific to a content area.*
- *+3 Students formulate problems and generate hypotheses.*
- *+4 Students identify the data and information needed to solve a problem.*
- *+3 Students apply the tools and techniques specific to a content area to gather necessary data and information.*
- *+2 Students evaluate, integrate, and critically analyze multiple sources of information.*
- *+2 Students reason and construct justifiable arguments in support of a hypothesis.*
- *+4 Students persist to solve complex problems.*

Taking a 10,000-foot view, "define your own road in life" is THE complex problem the Roadtrip Nation Experience presents to students. The lesson components of the curriculum offer discrete opportunities to think critically, and the project component is where students engage in extended problem-solving processes. This is most evident in an analysis of the first component of this Deeper Learning domain: *Students are familiar with and able to use effectively the tools and techniques specific to a content area.* The lessons contain a diverse array of tools and techniques such as observation, note-taking, mapping, graphic organizing, and video archive searches. In contrast, the project presents a more structured sequence of problem-solving techniques: researching, cold-calling, scheduling, and interviewing.

Figure 9. Focus Group participant described defining his own road as a problem-solving process.

Program Strengths

The key strength observed in this domain was the manner in which students refined their strategy and persisted to identify and confirm leaders to interview. Across all three PLUS Academies, focus group participants stated that they and their classmates struggled with the cold-calling process. Rather than giving up, students employed alternative strategies to connect with local leaders for their interviews: email, tapping into social and family networks, and even Twitter. This observation is supported by Student Diagnostic data, where 92% answered positively—either stating they did or could do better—to the statement "I change my strategy and try again when my first try doesn't work."

92% of students agreed:

"I change my strategy and try again when my first try doesn't work."

Opportunities for Improvement

The RTN project is an extended opportunity to employ a set of tools and techniques to solve a complex problem. These methods of inquiry are introduced late in the program's sequence, however, limiting the depth of application and refinement. Focus group participants found "solving" the "problem" of completing the project the most rewarding and engaging part of the program. Yet all of the project tools and techniques were new to them, and they wished that there was more time to learn and additional opportunities to apply the tools. These limitations are reflected in the Student Diagnostic data, where this Deeper Learning domain had the lowest rates of positive responses across all schools, and RTN students' mean responses were slightly lower than students not participating in the RTN program. This illustrates a deficit larger than Roadtrip Nation programming; there is a lack of opportunities for students to sufficiently engage and master this Deeper Learning domain in general school coursework. Thus, an opportunity opens for Roadtrip Nation: deepen students' problem-solving skills by identifying one set of key tools and techniques from the program's curriculum and then develop them across the lessons and project.

+3 Communicate Effectively

- *+3 Students structure information and data in a meaningful and useful way.*
- *+4 Students listen to and incorporate feedback and ideas from others.*
- *+4 Students provide constructive and appropriate peer feedback to others.*
- *+3 Students understand that creating a quality final communication requires review and revision of multiple drafts.*
- *+3 Students communicate complex concepts to others in both written and oral presentations.*
- *+3 Students tailor their message for the intended audience.*

There are multiple channels of communication included in the design of the Roadtrip Nation Experience: short-answer questions, blogging, class discussion, cold-calling, interviewing, digital storytelling, and writing a manifesto. This diversity provides students the opportunity to demonstrate and deepen communication skills across media and audiences at varying levels of complexity. Online and journal activities facilitated written responses to lesson content that were informal and self-reflective, class discussions expanded and confirmed their reflections, and blogs prompted students to synthesize and share their insights with an online audience. The manifesto writing exercise in Lesson 12 is creatively designed as a revision process. Students cut and paste responses from earlier journal exercises, reflect on how their thinking has evolved, and revise their ideas into a brief declaration of how they are going to define their own road in life. Similarly, the project's structure of digital storytelling facilitated the opportunity to review and revise work products through a sequence of storyboarding, filming, and editing.

Figure 10. Example pages from a student's journal showing different stages of writing her manifesto.

Program Strengths

One key strength identified in this Deeper Learning domain was the means by which class discussion facilitated the process of providing and incorporating peer feedback and ideas. Every lesson and instructional module of the project included a discussion component, and students at all three PLUS Academies felt that discussions were valuable experiences in the program. Classroom observations confirmed this value: students articulated lesson concepts in their own words and others added, refined, and offered alternative interpretations. This finding was further supported by Student Diagnostic data, as students responded positively to items related to incorporating peer feedback (86%), providing feedback (85%), and listening to peers (90%).

Students also demonstrated keen awareness that their communications with interviewees needed to meet professional standards. The process of tailoring their messages for this specific audience pushed students to review and refine their communication strategies. Classroom observations showed students practicing their interview introductions and lead questions, with peer and teacher feedback provided along the way. Some focus group participants shared that this tailoring process extended beyond the classroom. "I was so nervous," one student said, "but I practiced with my family and even in front of the mirror."

"I was so nervous, but I practiced with my family and even in front of the mirror."
– Willow Glen PLUS student

Opportunities for Improvement

The initial curriculum analysis identified multiple modes of communication with opportunities to tailor messages to different audiences. While there is strong evidence that students understood the need to tailor their communication for interviews with community leaders, student work samples demonstrated a more muddled understanding of audience across their online lesson activities and blogs. This presents an opportunity to improve instructional supports in distinguishing the purpose, tone, and audience of each of these communication modes. Similar to issues raised in the sequencing of the project's problem-solving techniques, students and teachers also voiced the desire for opportunities to learn and apply digital storytelling skills earlier in the program.

[+4] Work Collaboratively

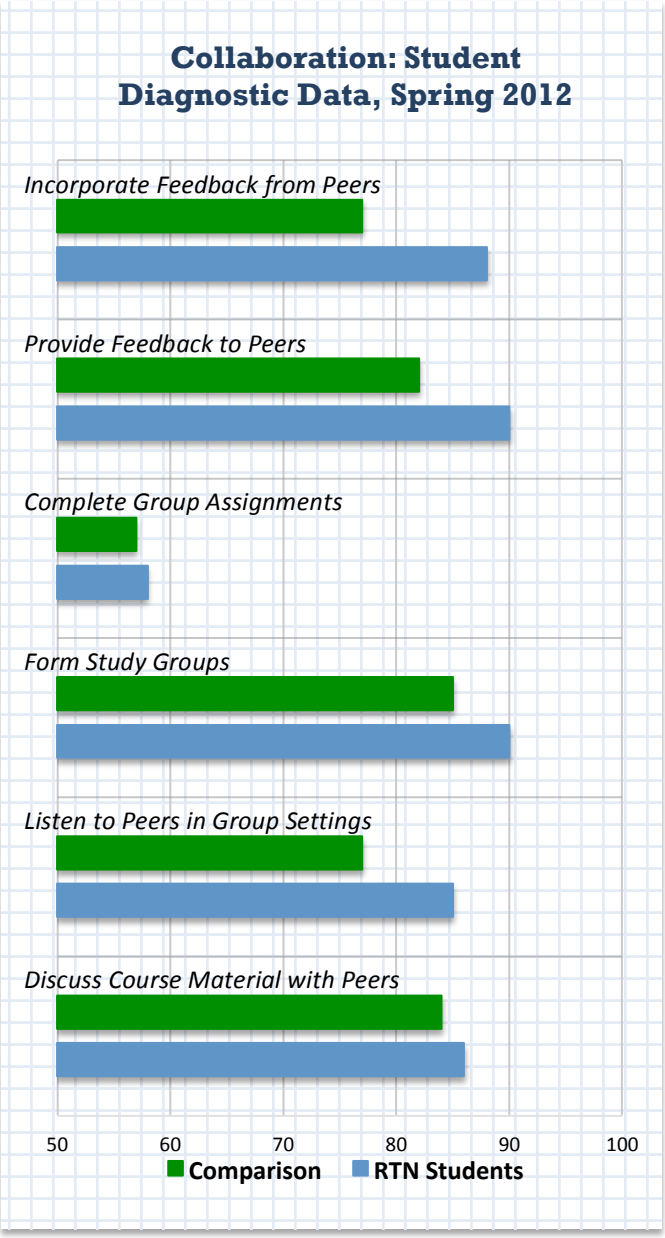
- *[+4] Students collaborate with others to complete tasks and solve problems successfully.*
- *[+4] Students work as part of a group to identify group goals.*
- *[+4] Students participate in a team to plan problem-solving steps and identify resources necessary to meet group goals.*
- *[+4] Students communicate and incorporate multiple points of view to meet goals.*

The goals and content of the Roadtrip Nation Experience are deeply personal and focused on the individual student. This exploration of defining one's own road in life, however, is facilitated and supported through collaborative work. While class discussion and discrete journal activities introduce some components of this Deeper Learning domain through the lessons, the project presents an extended opportunity for students to work, learn, and solve problems as a team. Students form groups, define a group purpose, identify individual roles, and collectively complete the project tasks of researching community leaders, cold-calling, creating interview questions, and conducting the interview.

Program Strengths

Building off the collaborative components identified in RTN curriculum analysis, this evaluation found strong evidence of collaborative work in the program's implementation at the PLUS Academies. Focus group participants at all three sites shared that individual roles were assigned based on discussion and identification of each group member's assets. Similar deliberation processes helped groups identify potential candidates to interview, where they converged around common interests and career paths. For example, one group of students at Lincoln PLUS Academy identified an executive at CISCO Systems to interview based on their individual interests in computers, business, and leadership. Students at Willow Glen PLUS Academy self-selected into groups based on general career areas—healthcare, education, the arts, and business. Students also shared that group work included holding each other accountable to meet deadlines and nudging each other to make progress. San Jose PLUS Academy students described their group as a "second family," and they referenced following up when a teammate was not pulling their weight or reaching their full potential. They were invested in the success of their peers as much as themselves.

Student Diagnostic data supported the collaborative experiences that students shared in the focus groups. Students responded positively—either stating that they did or could do better—to items related to completing assignments in a group with other students (90%), discussing material with groups of students when studying (88%), and studying with others outside of class (58%). Communication skills identified in Student Diagnostic data also supported the students' descriptions of successful group collaborations, with positive responses to items related to incorporating peer feedback (86%), providing feedback (85%), and listening to peers (90%). In fact, when compared to PLUS Academy students not participating in the RTN program, RTN students had higher rates of positive responses on every Student Diagnostic item linked to this Deeper Learning domain. This finding is significant considering the large body of research linking teamwork and social competence to success in college, the workplace, and the transition into adulthood.[10]



Opportunities for Improvement

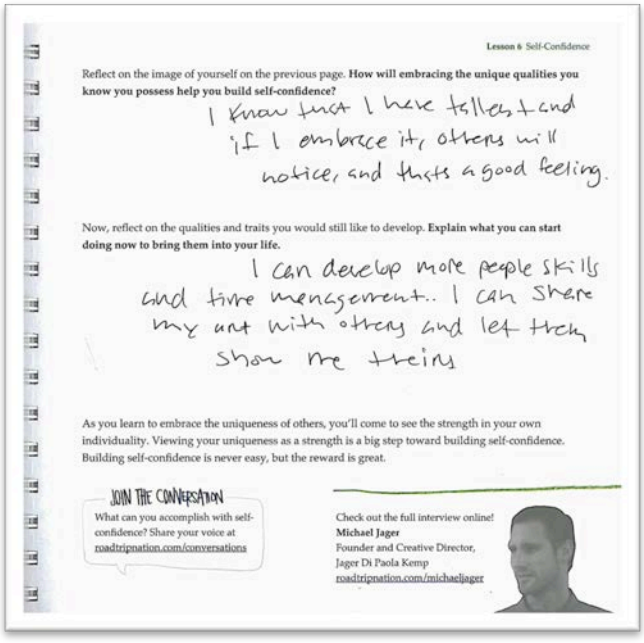
There is very strong evidence that RTN provides students with opportunities to work collaboratively, yet there is also potential for this domain to be strengthened even further. Classroom observation videos showed teachers as the primary drivers and mediators of discussions. Instructional supports could be revised to introduce small-group discussion activities to increase student-to-student dialogue and problem solving.

[10] Lippman, L., et al. (2008). *A Developmental Perspective on College & Workplace Readiness*. Washington, DC: Child Trend.

+4 Learn How to Learn

- *+3 Students know and can apply a variety of study skills and strategies.*
- *+4 Students are aware of their strengths and weaknesses.*
- *+4 Students identify and work towards lifelong learning and academic goals.*
- *+3 Students evaluate the match between reality and what is needed to attain specific goals.*
- *+5 Students recognize their weaknesses and anticipate needing to work harder in those areas.*
- *+3 Students monitor their progress towards a goal, and adapt their approach as needed to successfully complete a task or solve a problem.*
- *+3 Students enjoy and seek out learning on their own.*
- *+3 Students understand and are prepared to meet changing expectations in a variety of academic, professional and social environments.*

The design of the RTN program addresses this Deeper Learning domain in a number of ways. Journal activities facilitate students' self-reflection on their strengths and weaknesses, assets and challenges, and further prompt students to identify ways that they can work to improve their lives. For example, a series of journal activities about self-confidence in Lesson 6 asks students to draw/collage/describe positive qualities they see in others and ones they know they possess themselves. The lesson ends with the prompt: "Reflect on the qualities and traits you would still like to develop. Explain what you can start doing now to bring them into your life."



Lesson 6 Self-Confidence

Reflect on the image of yourself on the previous page. **How will embracing the unique qualities you know you possess help you build self-confidence?**

I know that I have talents and if I embrace it, others will notice, and that's a good feeling.

Now, reflect on the qualities and traits you would still like to develop. **Explain what you can start doing now to bring them into your life.**

I can develop more people skills and time management.. I can share my art with others and let them show me theirs

As you learn to embrace the uniqueness of others, you'll come to see the strength in your own individuality. Viewing your uniqueness as a strength is a big step toward building self-confidence. Building self-confidence is never easy, but the reward is great.

JOIN THE CONVERSATION

What can you accomplish with self-confidence? Share your voice at roadtripnation.com/conversations

Check out the full interview online!
Michael Jager
Founder and Creative Director, Jager Di Paola Kemp
roadtripnation.com/michaeljager

Figure 11. A work sample from Lesson 6 demonstrates how this student identified ways to develop traits she wants to possess. "I can develop more people skills and time management. I can share my art with others and let them show me theirs."

Figure 12. The online interview archive facilitates students' exploration and identification of career goals. Videos are tagged and searchable by theme and career interest area, and students explore the archive as part of lesson activities.

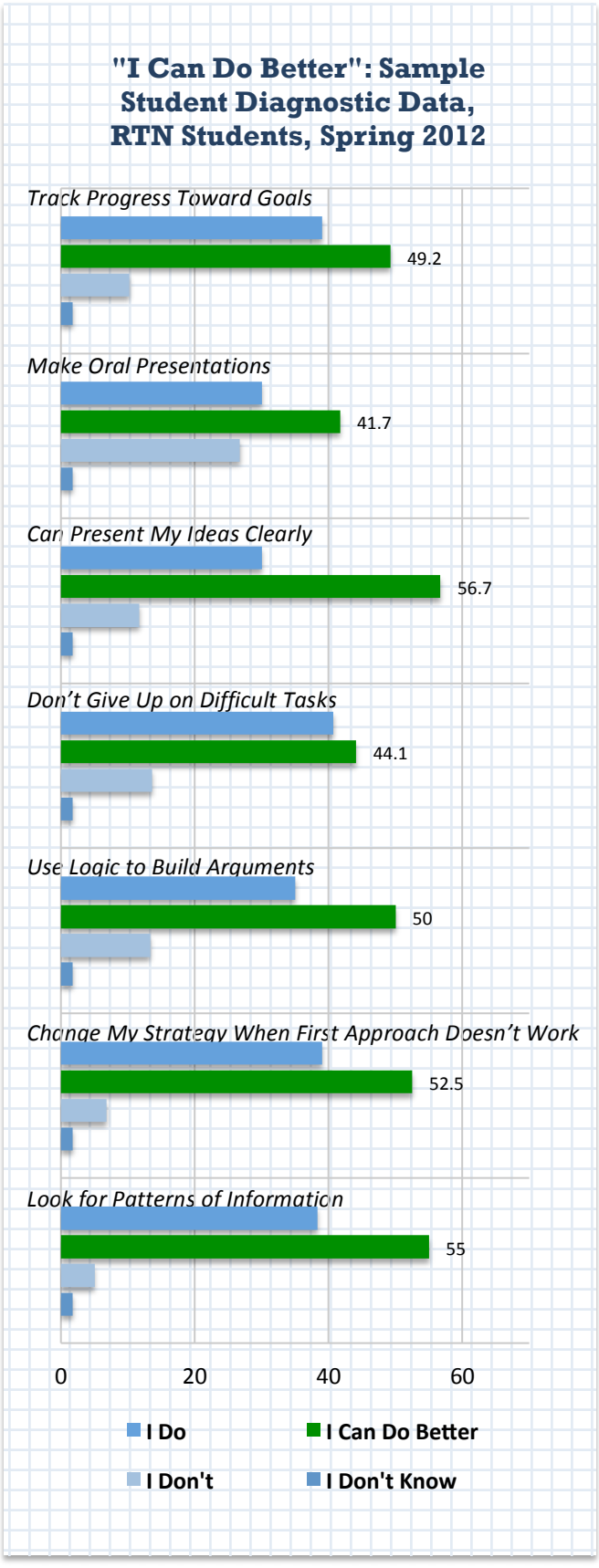
The RTN program is also designed to facilitate students' identification of long-term goals. In contrast to more traditional career exploration programs that might include a survey that generates career recommendations, RTN activities prompt students to look at their interests and passions as starting points for their career exploration. Students can learn about leaders in various fields of interest by searching the interview archive and, ultimately, by interviewing a leader working in their field of interest in their community.

Program Strengths

While the curriculum analysis operationalized the unique ways that the RTN program supports the Deeper Learning components related to long-term goals and self-awareness, the real evidence of impact came from other investigative lenses. Focus group participants at all three PLUS Academies said that the program helped them identify goals, and those students who already had career goals said the program helped them confirm and commit to these goals. Student Diagnostic data supported this: 93% of students have goals, 91% think about what they need to do to achieve their goals, and 88% know what they want to do after high school.

Figure 13. A focus group participant described how RTN helped him dedicate himself to his career goals.

Student Diagnostic data also revealed significant findings related to one component in particular: *Students recognize their weaknesses and anticipate needing to work harder in those areas.* Initial analysis of spring Student Diagnostic data showed RTN students consistently having lower mean scores at the item and component levels than PLUS Academy students not participating in RTN. (Note: the ordinal coding for response options is I Don't Know What This Is= 1; I Don't Know How=2; I Don't=3; I Can Do Better=4; I Do=5). For many items and components, RTN students' mean scores actually decreased between fall and spring. At the same time, RTN students had higher rates of positive responses to items related to program strengths using a binary coding (4,5=1; 0–3=0). Upon closer analysis, this data anomaly can be attributed to one simple phrase: "I can do better."



Students participating in RTN, at all three schools, for almost every item on the spring survey, most frequently selected "I can do better" over all other response options. For every item, the percent of RTN students selecting "I can do better" was greater than students not participating in the RTN program. And for every item, the percent of students selecting "I can do better" increased between fall and spring administrations of the Student Diagnostic. RTN students were effectively penalized by the ordinal scale, which explains why RTN schools' component means were slightly lower than comparison schools where students tended to answer either "I don't"

or "I do." It also explains why some item and component means decreased between fall and spring: many students who answered "I do" to survey items in the fall believed, by the spring, that they could still be improving.

This pervasive clustering around "I can do better," and the stark contrast to student responses at comparison schools, is significant evidence of the Roadtrip Nation Experience supporting students' development of self-awareness and desire to improve. And RTN students not only identified the need to do better—they did do better. RTN students ended the year with a higher average GPA than comparison students, and they improved their average GPA by twice the rate of their peers.

Opportunities for Improvement

Throughout RTN journal activities, students identified ways they incorporate lessons and themes into their lives. These activities, however, fall short of asking students to translate these insights into actionable short- and medium-term goals. The journal activities also do not ask students to reflect on previous improvements they identified and assess the extent to which they have integrated these insights into their lives. This presents an opportunity to develop a mechanism for students to use lesson insights to set concrete goals and monitor their progress through and beyond the RTN program.

Accounting for Implementation

The final set of considerations for this evaluation addresses the manner in which the curriculum was implemented at each of the PLUS Academy sites and how implementation affected students' demonstration of Deeper Learning. The RTN program curriculum is flexible by design: online and workbook components can be completed in or outside the classroom; supplemental DVDs support schools with limited access to the Internet; and there is no prescribed pacing for the lessons and project. This flexibility makes the RTN curriculum adaptable to a range of implementation contexts, from afterschool programs to advisory periods to regular classroom instruction. RTN's flexibility was especially important to the PLUS Academy context. Focused on credit recovery and on-time graduation, teachers are given large amounts of autonomy to make decisions over curriculum and instructional pacing that best meets the needs of the individual students in their classrooms.

This autonomy and customization was evident in the different implementation approaches at each PLUS Academy site. San Jose PLUS Academy embedded the RTN program into what they called "College and Career Fridays," where a portion of every Friday each week was focused on the students' futures through activities such as learning about financial aid and hosting guest speakers from local community colleges. While RTN work online, in the workbook, and in the final project accounted for part of students' grades in English Language Arts, the RTN curriculum was the foundation of College and Career Fridays throughout the year. Willow Glen and Lincoln PLUS Academies both embedded the RTN program more exclusively into their English Language Arts curricula, yet they paced the content and activities differently. Like San Jose, Lincoln PLUS Academy students completed program elements at regular intervals throughout the academic year. Alternatively, Willow Glen implemented the program as one curriculum unit over approximately six weeks.

Despite different approaches to pacing and instructional design, there were several aspects of implementation common across all three sites that had direct impacts on the extent to which the RTN program supported Deeper Learning: teacher facilitation of classroom discussion, the existing culture of connectedness that students experienced as part of the PLUS Academy learning community, and time constraints for final projects at the end of the year. The significance of these aspects of implementation are evident when comparing the holistic scores for each of the Deeper Learning domains in the original curriculum analysis and the overall evaluation (Figure 14).

Deeper Learning Domain	Curriculum Analysis	Overall Evaluation
Master Core Academic Content	**4**	**4**
Engage in Expanding Structure of Knowledge	**3**	**3**
Think Critically and Solve Complex Problems	***4***	***3***
Communicate Effectively	**3**	**3**
Work Collaboratively	***3***	***4***
Learn How to Learn	**4**	**4**

Figure 14. Holistic scores for curriculum analysis and overall evaluation reveal discrepancies for the Think Critically and Solve Complex Problems and Work Collaboratively domains.

For example, the original curriculum analysis found that RTN program elements challenge students to think critically and solve complex problems at high levels of depth and relevance. Specifically, the final project component of the program presents a structured sequence of tools and techniques—researching, cold-calling, scheduling, and interviewing—for students to engage in an extended, complex problem-solving process. Student Diagnostic data for this Deeper Learning domain, however, had the lowest rates of positive responses across all schools, and RTN students' mean responses were slightly lower than students not participating in the RTN program. While focus group and teacher interviews at all three PLUS Academies identified the project as the most positive part of the program, they all cited the issue of time—or lack thereof—as a significant barrier to mastering the problem-solving techniques presented in the RTN program. Upon deeper investigation, the issue of time allotted for the final project was confounded by its timing toward the end of the school year. Between spring break, preparing for and completing California State STAR exams, and other academic demands for finishing the school year, the RTN final project faced steep competition for student and teacher attention in and outside the classroom.

To better support student development of problem-solving skills, this evaluation found an opportunity for improvement by integrating the specific tools and techniques of the final project more explicitly throughout the earlier lesson components of the online and workbook activities. Time constraints are a perennial issue in any classroom, yet this

issue of timing in the academic year can be identified early in RTN professional development supports so that teachers can better anticipate and plan for the final project.

While holistic scores dropped for the Think Critically and Solve Complex Problems domain between the curriculum analysis and overall evaluation, holistic scores increased for the Work Collaboratively domain. The original curriculum analysis identified modes of collaboration available to RTN participants, yet other investigative lenses of the evaluation revealed an even greater depth and relevance of PLUS Academy students' classroom discussions and group work on the final project. Where document review of instructional materials noted suggested discussion questions for each lesson, classroom observations revealed rich conversations facilitated by PLUS Academy teachers where students collectively unpacked lesson content and strategized approaches for project components. Where the curriculum analysis identified the final project as a potential context for collaboration to take place, focus group participants at all three PLUS Academies described the group work in the final project with sophistication and enthusiasm. Students' strategic processes for selecting groups, identifying interviewees, and holding one another accountable demonstrated authentic collaborative practices beyond a procedural approach to completing a group project.

Further investigation of these observations isolated two variables that are specific to the implementation context of the PLUS Academies: PLUS teachers acting as facilitators of collaborative learning and the existing culture of connectedness in the PLUS Academy classrooms. As noted earlier, PLUS teachers are given a great deal of autonomy to design their instruction to best meet the needs of their students. In field interviews, each of the PLUS teachers described their students as talkative and opinionated, so teachers focused on classroom discussions to deepen engagement with RTN program content. Focus group participants consistently described their experiences as students in the PLUS Academies in social terms: "community," "family," "tribe," and "my people." These descriptors stand in stark contrast to their prior experiences in traditional high schools, where they often felt isolated, disconnected, disregarded, and "left behind." For most students, PLUS Academy classrooms were the first places they ever experienced academic success, and they consistently cited the people of the program—teachers, counselors, and their peers—as the reason for their success.

Teacher autonomy and connected learning communities are not unique or discrete characteristics of the San Jose, Lincoln, and Willow Glen classrooms; these are the signature features of the whole of the San Jose Unified School District PLUS Academy

program. Looking at Student Diagnostic data, however, PLUS Academy students participating in RTN had higher rates of positive responses than comparison PLUS Academy students not participating in RTN across all items related to the Work Collaboratively domain. This data reveals a significant dynamic. Where teacher-facilitators and classroom culture deepened the collaboration skills of the RTN program beyond what was observed in the curriculum analysis, the RTN curriculum itself was a vehicle to effectively channel, translate, and transform these signature features into students' Deeper Learning.

Figure 15. Focus group participants describe their biggest takeaway from their Roadtrip Nation Experience.

IV. Conclusion: The Road Ahead

The five investigative lenses of this study found extensive evidence of the Roadtrip Nation Experience's impact on San Jose PLUS Academy students. Perhaps the most concrete finding of the study was the improvement in students' course grades: RTN students at the PLUS Academies ended the academic year with a higher average GPA than PLUS Academy students not participating in the RTN program, and they improved their grades by twice the rate of their peers. This finding is significant considering research identifying grade point average (GPA) as one of the strongest predictors of secondary and postsecondary success.[11] Vastly stronger than that of standardized test scores, the predictive relationship between GPA and students' outcomes is largely attributed to the supposition that course grades capture important student attributes over and above content knowledge and core academic skills.[12] Grades also reflect the degree to which students have demonstrated a range of behaviors, attitudes, and strategies that are critical for success in school and in later life.[13]

The increase in RTN students' average GPA is interesting at face value, because the program itself does not focus on academic achievement. There are no lessons that encourage students to study harder or get good grades. The Roadtrip Nation Experience does, however, focus squarely on the behaviors, attitudes, and strategies—termed "noncognitive" factors by educational researchers—that hold a direct positive relationship to students' concurrent and future outcomes. These noncognitive factors are well represented in the Hewlett Deeper Learning Rubric and are demonstrated throughout this study's findings: students utilized *metacognitive strategies* to learn the "big ideas" of academic content; they *persevered* by using different approaches to overcome obstacles; they incorporated and provided *peer feedback* to execute group work; and they collectively demonstrated a strong increase in *self-efficacy* through the pervasive selection of the Student Diagnostic survey response "I can do better," just to cite a few examples.

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[11] Allensworth, E., and Easton, J. Q. (2007). *What matters for staying on-track and graduating in Chicago Public Schools.* Chicago: University of Chicago Consortium on Chicago School Research.

[12] Farrington, C. A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T. S., Johnson, D. W., & Beechum, N. O. (2012). *Teaching adolescents to become learners. The role of noncognitive factors in shaping school performance: A critical literature review.* Chicago: University of Chicago Consortium on Chicago School Research.

[13] Farkas, G. (2003). Cognitive skills and noncognitive traits and behaviors in stratification processes. *Annual Review of Sociology, 29*, 541–562.

Considering the broader education field's growing interest in noncognitive factors, this study provides unique insights. Not only did this study measure student *demonstration* of these strategies, attitudes, and behaviors, but this deep dive investigation also operationalized specific ways the RTN program supported student *development* of metacognitive strategies, perseverance, self-efficacy, and other Deeper Learning skills. In other words, this study goes beyond a simple case-study validation of the relationship between noncognitive factors and GPA. It is instructive to the education field on how to better foster these strategies, attitudes, and behaviors that are so critical to student success.

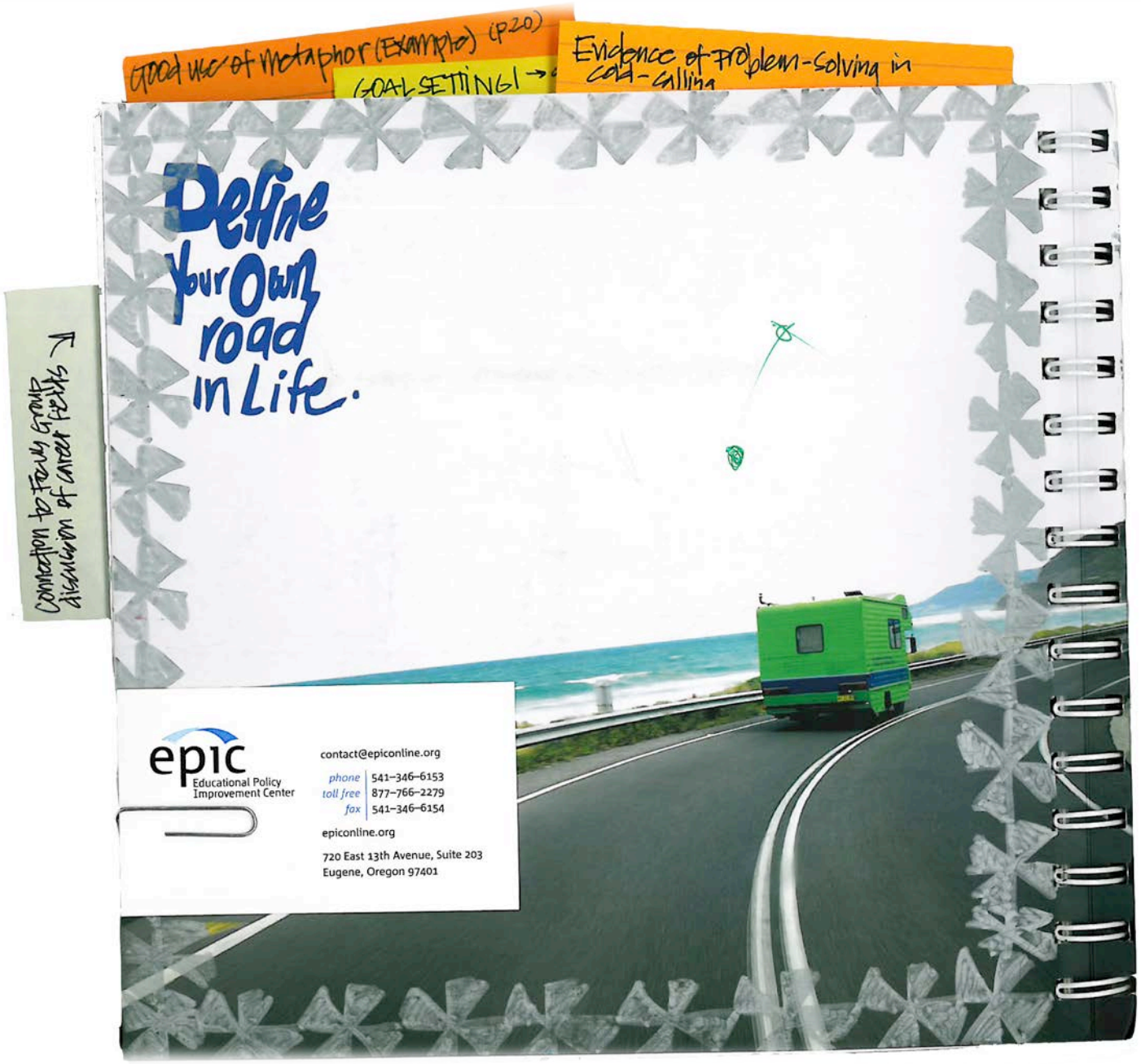
Because of the specific research approach of this deep dive investigation, however, there are limitations to the generalizability of the findings. Pre- and post- Student Diagnostic results from PLUS Academies not participating in the Roadtrip Nation Experience provided data to benchmark and compare RTN students' development of Deeper Learning, yet it is difficult to isolate the effects of any intervention from myriad other factors in school settings. Such causality is best confirmed through randomized controls, a research design that is highly resource intensive. Generalizability is also limited by this study's exclusive focus on implementation in the San Jose PLUS Academies—schools that serve students with the highest needs and are at the highest risk of not graduating. The flexibility of the RTN program design allows for implementation in a number of different contexts, and as such students participate in the Roadtrip Nation Experience through afterschool programs, advisory periods, and classrooms in regular and alternative high schools across the country, situations that might not provide the same support as the Plus Academies.

Future evaluations of the Roadtrip Nation Experience might consider sampling a broader array of implementation sites. Such a design could identify how the Roadtrip Nation Experience works in different contexts, what context and classroom variables are most critical to effective implementation, and what kinds of students benefit most from the program. Pre- and post- administrations of the Student Diagnostic (or a similar noncognitive assessment instrument) and a common scoring guide for the final project based on the Deeper Learning Rubric could be included as regular RTN program components, building in vital feedback loops for both educators and Roadtrip Nation staff.

Despite the limitations to generalizability, this study does provide considerable evidence that the Roadtrip Nation Experience fostered Deeper Learning in the San Jose PLUS Academy students. Alongside specific program strengths in this implementation context,

the study also identified a number of opportunities for improvement. The Roadtrip Nation education staff is already using preliminary findings from the study to do just that. For example, in response to students' stated need for more concrete resources and steps to pursue their career interests, RTN has a range of resources in development to help students "Take the Next Step" and create a continuum of exploration for their futures. Additionally, feedback related to time constraints and the final project is already being incorporated into professional development resources for the 2012–2013 school year.

Just as PLUS Academy students increasingly responded "I can do better" after their Roadtrip Nation Experience, Roadtrip Nation is using the insights of this study to fortify the program's strengths, build upon its opportunities to improve, and continue its journey toward Deeper Learning.


Good use of metaphor (Example) (p20)
GOAL SETTING! →
Evidence of problem-solving in cold-calling
Connection to Family Group Discussion of career fields
Define Your Own road in Life.
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