

ACT:

Assessment of Character in the Trades

Comprehensive Report of Findings



WILLIAMSON
COLLEGE of the TRADES
Founded 1888



**Institute for Applied Research
in Youth Development**



**John
Templeton
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Table of Contents

Executive Summary.....	4
Introduction.....	6
Theory of Change.....	7
Key Questions.....	8
Method.....	9
Participants.....	10
Key Question 1.....	12
Key Question 2.....	16
Key Question 3.....	21
Final Conclusions.....	29
A Few Caveats.....	30
Further Readings.....	32

EXECUTIVE SUMMARY

OF THE ASSESSMENT OF CHARACTER IN THE TRADES STUDY

In this report, we present the key findings from the Assessment of Character in the Trades (ACT), a study of character in young men. The ACT Study was a three-year research project, which took place from August 2012 to May 2015, that included survey and interview data from young men attending the Williamson College of the Trades (WC) as well as from young men attending three post-secondary educational institutions in Pennsylvania (the comparison schools; CSs): Delaware County Community College, Pennsylvania State University at Brandywine, and Johnson College of Technology.

The Executive Summary presents our findings about three key questions regarding how WC promotes character development among its students.

1. Entrance Attributes: What are students like when they start at WC?

Entrance attributes help us understand the eventual effects of a program on the development of its students. WC students scored higher than CS students, on average, on character attributes such as reliability and excellence. WC students also reported more frequent engagement in helping behaviors and faith behaviors, such as attending church. They also reported greater strength of faith than CS students.

With respect to WC they share similar experiences as CS students in regard to family instability, high school experiences, and taking on responsibility. However, WC students are distinguished by their connection to the trades, an orientation to family, and a desire to pursue entrepreneurship.

2. WC Training: What are the influences on students' character at the WC?

WC students gave their teachers high ratings on character, competence, and caring. They perceived their shop teachers to have slightly higher character and competence than academic teachers.

We interviewed teachers, administrators, alumni, and students about the ways in which WC promotes character, and identified several themes. We found that **the system of structure and rules** was very important, and involved descriptions of accountability to a rule system, opportunities to develop character, role modeling character, and dismissing students.

Interpersonal relationships also influenced character development at WC. Students, alumni, teachers, and administrators reported that these relationships involved positive and caring teacher-student relationships, de facto parenting, brotherhood, and community building. The school provides students with these opportunities through character-building experiences and through teachers and administrators modeling character.

3. Success: What are the *patterns of development* in students' character attributes?

Changes in the “Five Cs” and Character Virtues

We collected survey data from students about various attributes of character, including the Five Cs (Competence, Confidence, Caring, Connection, and Character) and other character virtues such as excellence and reliability. WC students had higher competence, confidence, and connection than CS students. In addition, we noted an increase in the average confidence scores of WC students.

On average, WC students had higher scores on purpose, diligence, and reliability than CS students. Their average scores on faith, hope, and purpose increased while at WC.

Profiles of Character

We examined patterns, or profiles, of character attributes in our sample. We looked for different patterns of attributes, who was in the different profiles, and whether study participants moved into different profiles or stayed in similar profiles across the three years of the study.

Profile Patterns: There were different profile patterns distinguished by level of character attributes overall (some participants rated themselves lower on all attributes, with some scoring higher on all). Faith and purpose also distinguished profiles, with some participants reporting overall high scores on some character attributes (such as reliability and integrity) but lower scores on faith and purpose. We called these patterns of attributes “secular” profiles.

Profile Membership: WC students are more likely to be in profiles which report high levels of character attributes .

Profile Transitions: From Freshmen to Junior year, most WC students transition from “secular” profiles to the profiles which are marked by high scores on character attributes. However, students who are in the secular profiles as Juniors were more likely to stay in the secular profiles as Seniors. WC students who started in a profile marked by lower overall character were more likely to move to a profile marked by higher character.

INTRODUCTION

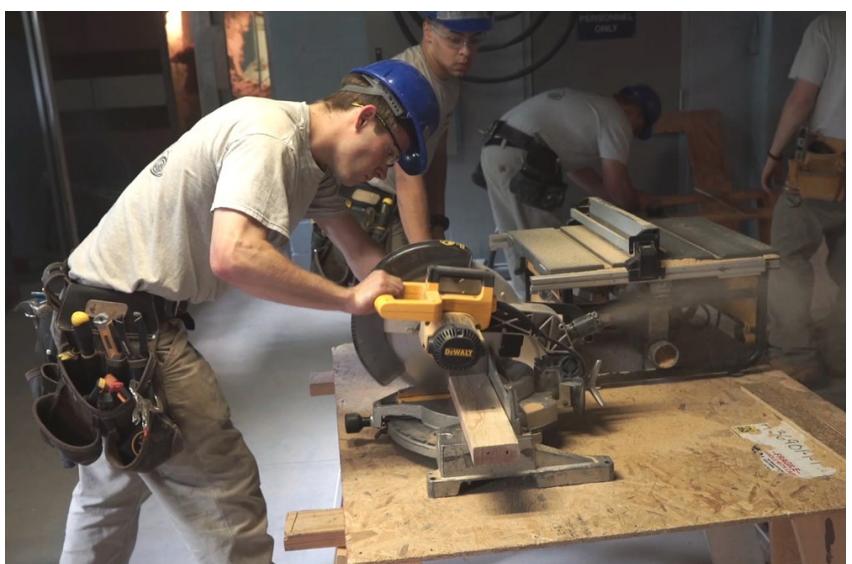
THEORY OF CHANGE AND KEY QUESTIONS

This report presents data from the **Assessment of Character in the Trades (ACT): A Study of Character in Young Men**. The ACT Study was a three-year research project, which took place from August 2012 to May 2015. It included quantitative and qualitative data from young men attending the Williamson College of the Trades (abbreviated WC) as well as from young men attending three post-secondary educational institutions in Pennsylvania (the comparison schools, abbreviated CSs): Delaware County Community College, Pennsylvania State University at Brandywine, and Johnson College of Technology.

Theory of Change and Key Questions

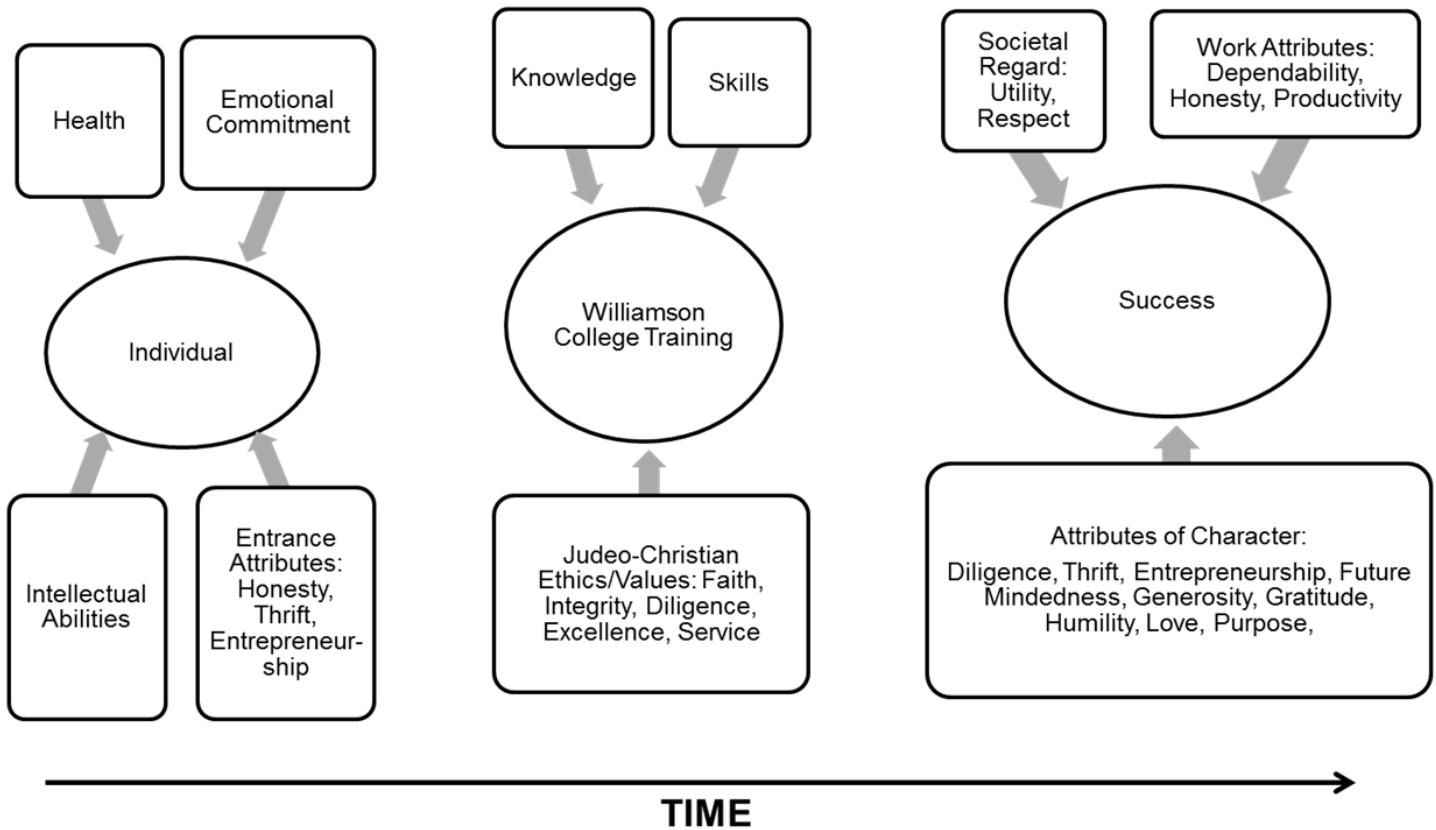
The ACT Study was designed to test the Williamson College “theory of change,” which describes the WC educational model and its expected influence on students. As illustrated in Figure 1, the theory of change posits that if healthy, able-bodied young men, who are intellectually and emotionally prepared, honest, frugal, entrepreneurial, temperate, and industrious, are given a curriculum that educates them with the knowledge and skills needed to pursue a good mechanical trade in the context of a school setting that provides Judeo-Christian ethics and values, then they will succeed in life. Success is marked by students becoming useful and respected members of society and dependable, honest, and productive workers.

The “key questions” are the research questions that we used to guide the analyses for this study. The theory of change and key questions are presented on the following pages.



THEORY OF CHANGE

How does Williamson College promote character development?



If healthy, able-bodied young men, who are intellectually and emotionally prepared, honest, frugal, entrepreneurial, temperate, and industrious, are given a curriculum that educates them with the knowledge and skills needed to pursue a good mechanical trade in the context of a school setting that provides Judeo-Christian ethics and values, then they will succeed in life

KEY QUESTIONS

To test the components of the WC theory of change, this report addresses three key questions:

1. Entrance Attributes: What are students like when they start at WC?
2. WC Training: What are the influences on students' character at the WC?
3. Success: What are the patterns of development in students' character attributes?



METHOD

ACT STUDY DESIGN AND PARTICIPANTS

To evaluate the WC theory of change, researchers at Tufts University worked with Williamson College staff and faculty to design the ACT Study. The ACT Study had three defining features:

Three-year duration: The study began in August 2012 and ended in May 2015. This duration enabled us to follow one cohort of WC students (WC Class of 1W15) for their entire three-period of education at WC.

Mixed Method: The study included both quantitative and qualitative types of data. Quantitative data were collected through surveys; qualitative data were collected through interviews and short-answer questionnaires.

Multi-reporter: We gathered data from stakeholders at both WC and the comparison schools, including currently enrolled students, alumni, teachers, and administrators.



ACT PARTICIPANTS

Data Collection

Table 1 shows the survey data collection schedule for each class. All three classes completed surveys in the first year (2012-2013), and we followed them for three years. We also added each new class of students as they started at WC or the CSs. For the class who started in 2012 (shown in the red box), we also conducted one-on-one interviews once per year for three years. Table 2 shows the number of participants in the study.

Table 1. Data collection timetable for students

Data Collection Period	Year of School Entry				
	2010	2011	2012	2013	2014
Wave 1 (2012-2013)	3 rd Year	2 nd Year	1 st Year		
Wave 2 (2013-2014)	1-Year Post Grad	3 rd Year	2 nd Year	1 st Year	
Wave 3 (2014-2015)	2-Years Post Grad	1-Year Post Grad	3 rd Year	2 nd Year	1 st Year

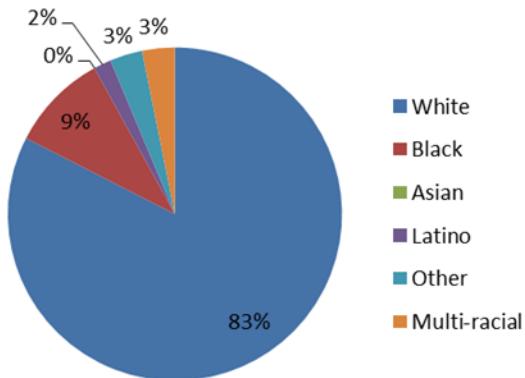
Table 2. Student Participants in the ACT Study

Matriculation Year	Williamson College		Comparison Schools	
	Graduation Year	Number of Participants	Graduation Years	Number of Participants
2014	1W7 (2017)	100	2016 to 2020	208
2013	1W6 (2016)	104	2015 to 2019	154
2012	1W5 (2015)	94	2014 to 2018	119
2011	1W4 (2014)	64	2013 to 2017	124
2010	1W3 (2013)	50	2012 to 2016	39
Total	---	412	---	644

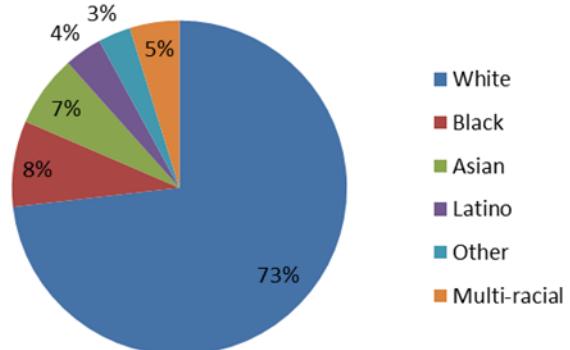
ACT PARTICIPANTS

Demographic Characteristics of the Sample

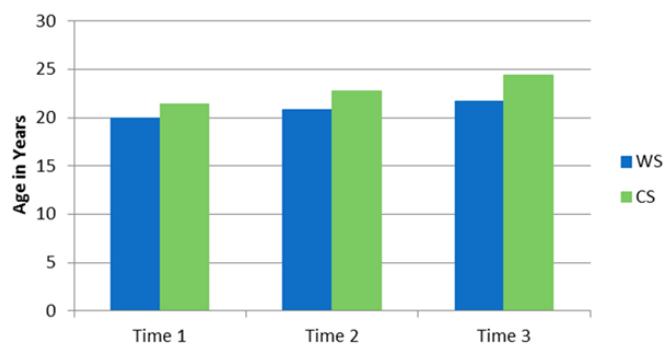
WC Student Race/Ethnicity



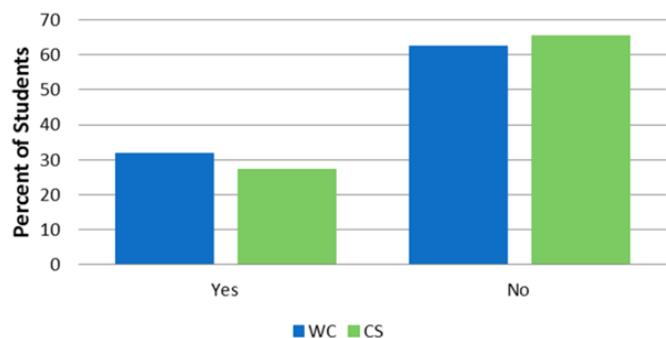
CS Student Race/Ethnicity



Average Age of Participants



Free/Reduced Lunch



We examined whether WC and CS students differed on race/ethnicity, age, and whether they received free/reduced lunch in high school (as an indicator of socioeconomic status). The CS students were slightly more diverse and a little older than the WC students, and these differences were statistically significant. There was not a significant difference between the two groups in whether they received free/reduced lunch.

KEY QUESTION 1

WHAT ARE THE STUDENTS LIKE WHEN THEY START AT WC?

Interview Findings: Backgrounds and Life Experiences

During the first year of the study (2012), we interviewed 30 randomly selected incoming WC students to find out about their backgrounds and life experiences. We also interviewed 30 students from the comparison schools (CSs) to try to identify similarities and differences among students in these two groups.

Similarities between WC and CS Students

We found that both WC and CS students' narratives about their lives prior to attending post-secondary school focused on family instability, high school experiences, and taking on responsibilities during adolescence.

Family instability. Family instability was a prominent aspect of students' narratives. About half of participants in both groups reported instability in the form of divorce or moving repeatedly during childhood.

- ◆ When discussing his childhood, one WC student shared: "*My dad was abusive to my mom and to us, so she finally left him after eight years... We lived with my grandparents for a couple years.*"
- ◆ Similarly, a CS student said: "*After my dad died, we moved in with friends... We would go to my aunts and uncles. We just bounced around a lot. I had 13 different houses in two years.*"

High school experiences. The narratives that students in both groups provided about their high school experiences were also similar. Specifically, they described a range of neutral, positive, and negative experiences in and associations with high school in reference to their social groups, academics, and relationships with teachers.

A WC student noted, for example: "*My high-school experience, it was pretty good. It was like any other high school. You got picked on some times; you got into little – some fights sometimes, well, verbal fights. You had friends that stabbed you in the back, friends that were good to you; some of the teachers that would help you out and some that would be strict as anything.*"

When reflecting on high school, a CS student similarly noted: "*And it was pretty good. I still wasn't like the coolest guy, but I made friends here and there. Eleventh grade I joined more sports, made more friends, had a girlfriend.*"

Taking on responsibilities. The majority of students in both samples also talked about different forms of responsibilities that they took on in high school, and there were several poignant examples of significant caregiving responsibilities provided by students in both groups. Two students, one WS and one CS, stood out in their descriptions of family responsibility. Fred and Nate (pseudonyms) provided narratives about taking on caregiving responsibilities to support the needs of their families.

Fred from WC explained: “*All of 11th grade I went down and lived at [my aunt’s] house for a year, doing online schooling, to help raise her three kids while she was on bed rest, and then helped them with the newborn for the first nine months.*”

He expressed that although moving in with his aunt presented him with significant responsibilities; it also provided him an opportunity to turn his life around. He said that after living with his aunt: “*I had to go home and fix my life, make something of myself. So I went back to school. I passed [high school] no problem. I got a job. I was working. I stayed out of trouble.*”

The CS student, Nate, indicated that when he was 15, his sister gave birth. According to Nate, his sister ran away and left him and his mother with her child to care for. He noted: “*My mom was working full time, so was my brothers. I was her dad. I did everything for her. I watched her from morning to night.*”

Differences between WC and CS Students

In addition to similarities, we also identified substantive differences related to the histories of WS and CS students.

Connection to the trades. The majority of WC students had meaningful connections to the trades, whether in school, work, or through family ties to tradespeople, and this connection was largely not present in the CS students’ narratives.

When describing connections to tradespeople, for example, a WC student noted: “*I was just gonna go to a Community College but... my oldest brother went here, and he told me to try it out. So I studied, did all my work and I got accepted.*”

Seven CS students also had experiences related to the trades, but some of these experiences were narrated as negative and deterred these students from pursuing trade careers. In response to a question about prior experiences with the trades, one CS student explained: “*One brother works at Home Depot. They do manual labor. So that’s what I want to get away from ‘cause I don’t want to have to work until I die.*”

Family orientations. There was a substantive difference in family orientations articulated by participants. Although just over one third of both WC and CS students described wanting a family as a life goal, WC students described this goal as related to their more immediate futures, and in more definite terms.

One WC student explained: *"I'm sure you've picked up that I'm very family-oriented, and I plan on having a family. I want to have a family and I want to be there. I want to be the best dad I can be. I want to be the best husband."*

In contrast, most CS students spoke of family in vague terms or when prompted repeatedly by our interviewers to answer the question of what their future life goals were. They spoke specifically about maybe wanting families...eventually. In response to the probe of: "Do you have any life goals related to family?" one CS student said: *"Eventually, maybe in ten years, whatever, I'll have a family, but I'm not really rushing into that."*

Entrepreneurship. Another difference was that 17 WC students discussed hoping to have their own businesses, compared to only three CS students.

One WC student said, for example: *"I wanna start – obviously I wanna start working in masonry. Probably get into union jobs and everything like that. Build up my character and everything like that, and then open my own business."*



Survey Findings: How do WC and CS students compare on entrance attributes of character?

Table 3 shows WC and CS students' scores on attributes of character. Both WC and CS students showed high levels of the entrance attributes across all three time points. Significant differences are indicated by an asterisk (*). At Time 1, WC students scored higher than CS students on **entrepreneurship** and **dependability**, and WC students reported higher levels of **religiosity** (both religious behaviors and importance of faith in their lives) compared to CS students.

Where WC and CS students have similar levels of particular character attributes (such as community service), readers should note that the content of these specific attributes may be manifested differently even from the beginning of their educational experiences. For example, our qualitative analyses revealed that WC students' experiences of service more commonly revolved around their religious institutions.

Table 3. Participants' Self-Reported Character–Related Attributes and Virtues at Time 1

Attribute (Virtue)	Definition/ Sample Item	Average Score (1-5 scale)	
		Time 1	
WC	CS		
Emotional School Engagement	Participants' sense of belonging at school. "I felt a part of my school"	3.71*	3.30
Cognitive School Engagement	How much participants valued school. "I wanted to learn as much as I could at school"	4.33*	4.22
Humility	Participants' tendency to be modest or unassuming. "I feel that I can learn a lot from other people"	3.78	3.74
Reliability	Participants' sense of themselves as dependable. "I show up on time"	4.40*	4.21
Excellence	Participants' tendency to pursue perfect results and high standards. "I drive myself rigorously to achieve high standards"	3.95*	3.81
Integrity	Participants' social consciousness and personal values. "Doing what I believe is right, even if my friends make fun of me"	4.23	4.15
Helping Behaviors	General voluntary behaviors that participants do to help others. "Help a neighbor"	3.27*	3.07
Community Involvement	Specific voluntary activities that participants do in their communities. "Been a leader in a group or organization"	1.70	1.76
Strength of Faith	Participants' religiosity and belief or faith in God. "My faith is an important part of who I am as a person"	3.52*	3.03
Faith Behaviors	How frequently participants engaged in behaviors related to their faith or religion. "attended religious services"	3.41*	2.63

KEY QUESTION 2

WHAT ARE THE INFLUENCES ON STUDENTS' CHARACTER AT WC?

The distinctive environment of WC plays a very important role in the education that students receive there. We investigated how the WC environment was perceived by both current and former students, using both survey data and interviews.

...There's lifelong – other than the physical trade itself, which is a very important aspect of the training we received—it's really more about the skills, attitudes, disciplines and behaviors that were sort of by osmosis, injected into us, that carry on for the rest of our life... It wasn't necessarily a classroom setting where somebody said this or that, but over the period of time that you're there, it's kind of a transfer that occurs, that you begin to realize becomes a part of you.

WC Alumnus

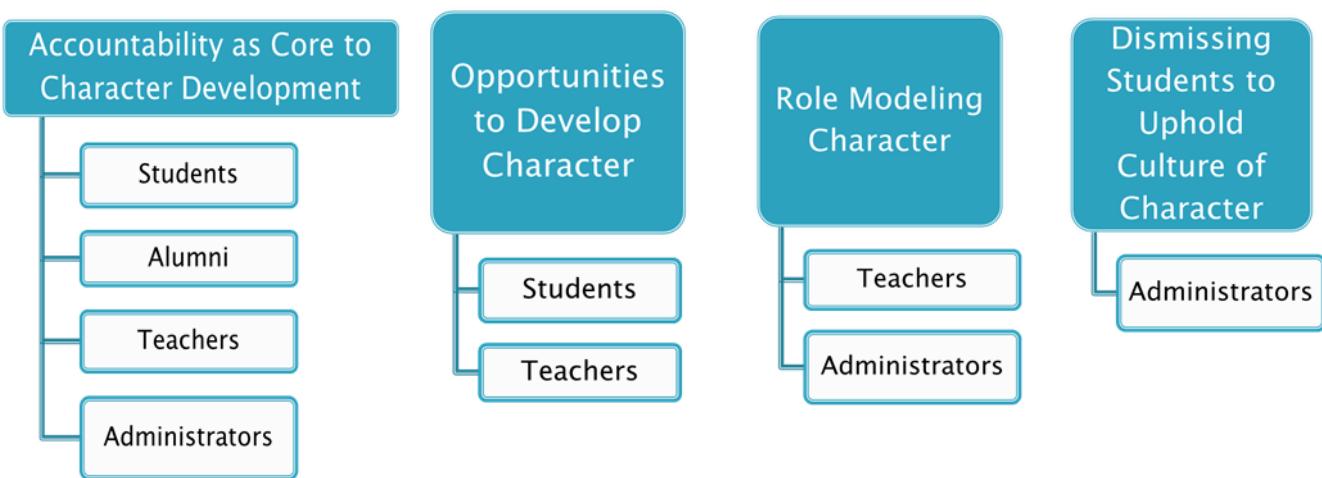
Interview Findings: Perception of WC Environment

We collected data from students, teachers, alumni, and administrators about perceptions of the WC environment and the process of character development that occurs at the WC. Several key themes emerged from these interviews, and we grouped the themes into two categories: Structure and Rules, and Interpersonal Relationships. On the following pages, we describe our findings from the interviews in greater detail.



Structure and Rules

Different stakeholders emphasized specific ideas about how structure and rules promote character development. For example, all stakeholders (students, alumni, teachers, and administrators) pointed to accountability of students for observing the rules and ethics of the WC as an essential feature of the character development process at the WC. On the other hand, only the administrators stakeholder group described dismissing students as necessary for maintaining the culture of character at the WC.



Accountability as core to character development

Accountability was described as an essential component of character development at WC, and as one way in which the structure and discipline positively influenced students. These data point to connections between “being held accountable” for one’s actions by teachers and administrators and students adopting accountability and responsibility as their own behavioral standards, as well as the deeply interpersonal nature of students’ character development.

“Encouragement, constantly building them up to feel good about their successes as well as their failures, but realizing that sometimes they need to be reprimanded and held accountable...this too helps in their personal development.” WC Teacher

Opportunities to develop character

Teachers and students described how they contributed to the process of promoting and developing character. Both groups also described how developing character is built into the WC model and the training students receive. These data suggest that students are surrounded by teachers who model character for them and that students are learning about how to become a person of higher character, at least according to the WC model.

Opportunities to develop character (Cont'd)

For example, one instructor described the Power Plant Technology trade program as providing “a lot of opportunities to build character” because students “provide the campus with continued services and handle any situation that arises”.

Role modeling character

Teachers and administrators described role modeling as central to their contributions to students’ character development. The teachers’ comments illustrated their perspective that faculty (successfully) model the disciplinary code to set an example for the students. Students also articulated their view that role modeling is an important part of character development at WC.

“[My teacher] cares for you like he’s your grandfather [and] wants you to be just like him.”

WC Student

“I set the example. [Students] said that they always look on their shoulders and there’s a little [me] sitting on their shoulder, telling them you better not. That’s what I want to be.”

WC Teacher

Dismissing students to maintain culture of character

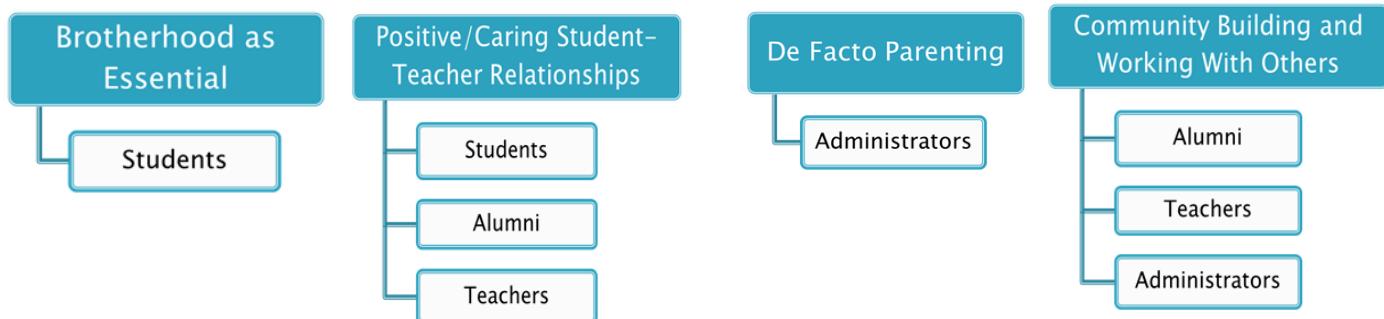
Administrators emphasized that they believed that their mission was to do what’s best for the school overall, which could include expelling students: “When a student is dragging down other students, potentially, by his behavior...it’s a good thing to dismiss certain students who are only going to bring the school down and change who we are.” Administrators may believe that expelling students, or routing students away from WC, benefits the school because these students are viewed as negatively influencing the character development of their peers. Moreover, these administrators may understand character development to be a group process to which all students contribute. It is also possible that administrators view their own contributions to character development at WC as related to maintaining an environment that fosters character development in students; that is, to maintaining a level of “fit” between students and the WC context.

Survey Findings: Students’ Perceptions of WC Teachers

We asked students to rate academic and shop teachers on dimensions of character, competence, and caring. Overall, students rated all teachers high on the three dimensions (between 5.5 and 6 out of 7 points). There were small but statistically significant differences by teacher type: students rated shop teachers slightly higher on character and competence.

Interpersonal Relationships and their Influence on Character Development

Different stakeholders emphasized specific ideas about how interpersonal relationships at WC promote character development. For example, only students described brotherhood as an essential part of the character development process. Administrators uniquely pointed to their role in teaching students to take care of one another.



Brotherhood and Students Caring for One Another

Students expressed the value of close relationships they had formed with their fellow WC students. It is possible that having close relationships with peers, and participating in this scaffolding model, helps students learn to be humble about what they know, and to learn to take direction from their superiors. Given that team structures are frequently replicated when students graduate from WC and begin their trade careers, such skills could be vital to their success. The administrators also described peer-peer relationships as an important component of the WC experience, but their perspective also included ideas about how such relationships may relate to students' character development. Administrators, indicated that relationships help students care for and lead others, and may provide incentives for surviving and thriving in the WC program. One administrator described the "positive peer pressure" students get from their relationships with one another to make it through the WC, noting that "if [students] can take care of themselves then they'll be able to take care of someone else. That's the essence of leadership."

"When someone's falling down there's someone right there to pick you up and that's really important anywhere you go."

WC Student

"[Seniors] pretty much set the bar. Whatever they tell you, you have to do, you don't really have a choice...so it's kind of passed down which really formed you, really forms respect and diligence definitely."

WC Student

Positive/caring teacher-student relationships

Students described how the positive relationships they had with teachers helped them to learn about life and grow as young men. Teachers also described how they bonded with students, in part, to influence their character development, as well as their development as tradesmen. Alumni also frequently mentioned their “shop instructors and teachers that were dedicated to the students,” when asked what they appreciated most about the WC.

“[The instructor] not only teaches us carpentry, he teaches us life lessons... if we ever had like—call it a father/son moment, father/son question—he’s able to help us.” WC Student

“I try to influence [students] through my own life transparency lessons and by...demonstrating how much I value and care for them.” WC Teacher

“De facto parenting”

Administrators described how they, along with the teachers, sometimes take on a parental role. For example, one administrator described how “the faculty and staff all come along side the students and encourage them” in order to help the students’ personal development. Another described how he believes WC socializes students in powerful ways, as if administrators and instructors were their “de facto parents” of WC students. Administrators suggest that they contribute to the process of character development by caring for students and holding them to high standards, but also by reprimanding them when needed, as parents would.

Community building and working with others

Teachers expressed that community building is essential because “the most important thing is [the students] have to work together” while at the WC and in the future. Administrators noted the importance of creating opportunities for team building. One administrator described how the students “work hard all day, but in the evenings, they have time to build that bond with their classmates.” Administrators and faculty appeared to believe that giving students the opportunity to build bonds and work together was vital to their success as tradesmen and as people and may be important to the WC’s character (and trade skill) development model. Alumni, reflecting back on their time at WC, also described the practical implications of community building and learning to work with others as part of their training.

“I graduated in the Power Plant trade and have worked in this trade since my graduation. It has helped me succeed in business and has improved my ability to work and direct others.” WC Alumnus

“[WC] taught me to build walls but also to build relationships.” WC Alumnus

KEY QUESTION 3

WHAT ARE THE PATTERNS OF CHANGE IN STUDENTS' CHARACTER ATTRIBUTES?

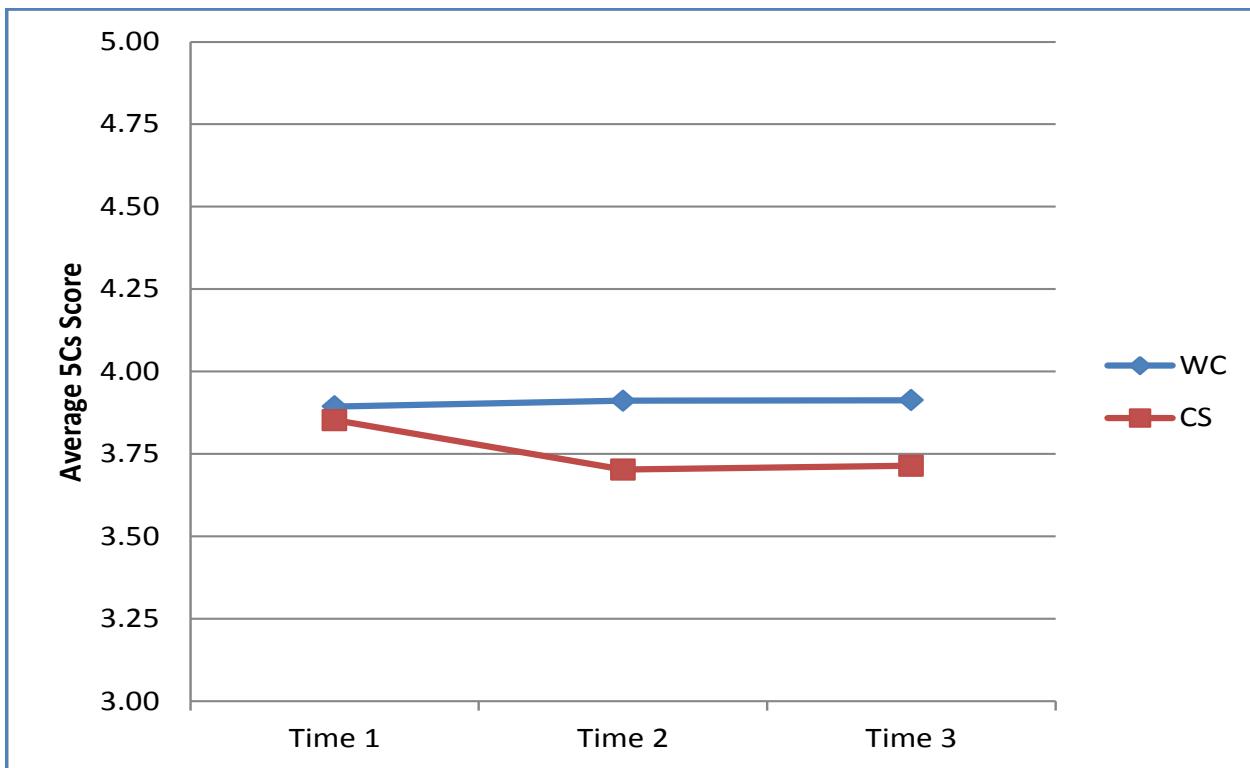
Two Ways of Measuring Character Development

Are there different patterns of positive development at WC versus the CSs? We measured character attributes in two ways. First, we used the Five Cs Model of Positive Development: Competence, Confidence, Connection, Caring, and Character. Next, we looked at specific character virtues that were interesting to both Williamson College staff and faculty and the John Templeton Foundation.

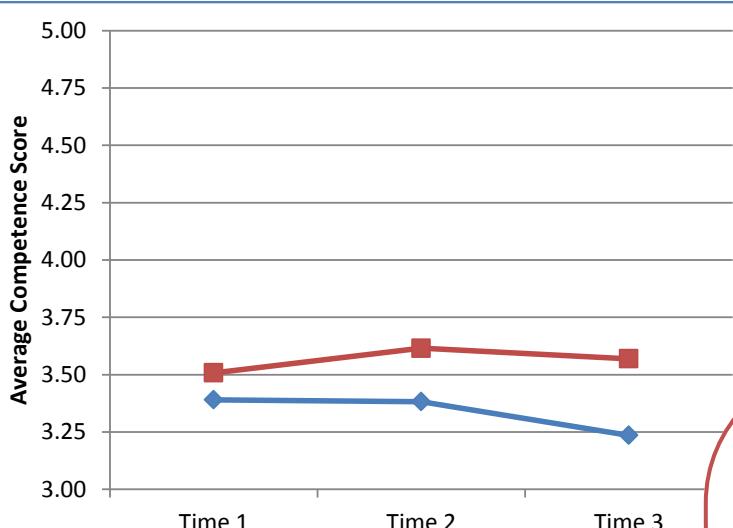
We looked at scores for participants across 3 Years. WC and CS participants were “matched” for the most accurate comparisons. We matched these students based on demographic characteristics, such as class, race, and where they grew up.

Changes in The Five Cs

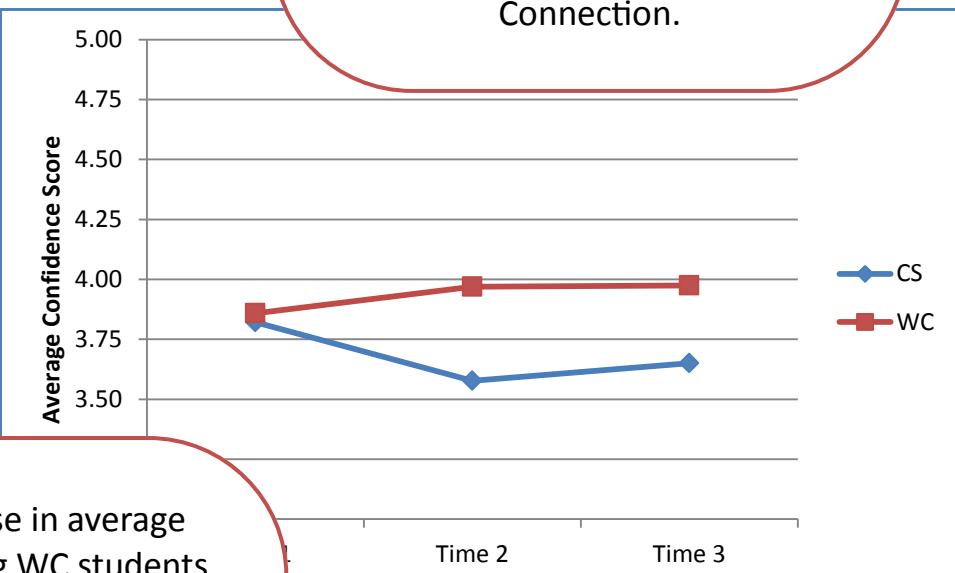
Overall, WC students had higher levels of competence, confidence, and connection than CS students. In addition, student confidence increased over the three years they attended WC. WC students’ competence, connection, and caring did *not* significantly increase over the three years they attended the school. WC students did not differ from CS students in levels of caring. For the combined 5Cs score, WC students and CS students started with almost the same average score, but CS students show a slight decrease over time.



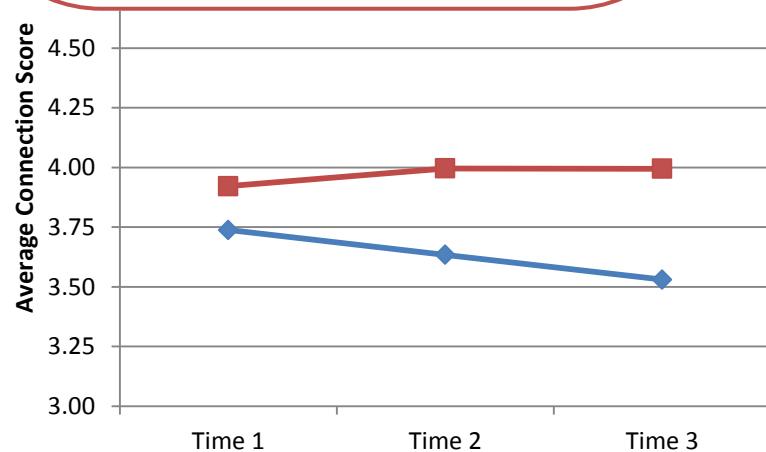
Changes in The Five Cs



WC students scored higher on average than CS students on Competence, Confidence, and Connection.



We observed an increase in average Confidence scores among WC students and a decrease in Confidence scores among CS students.

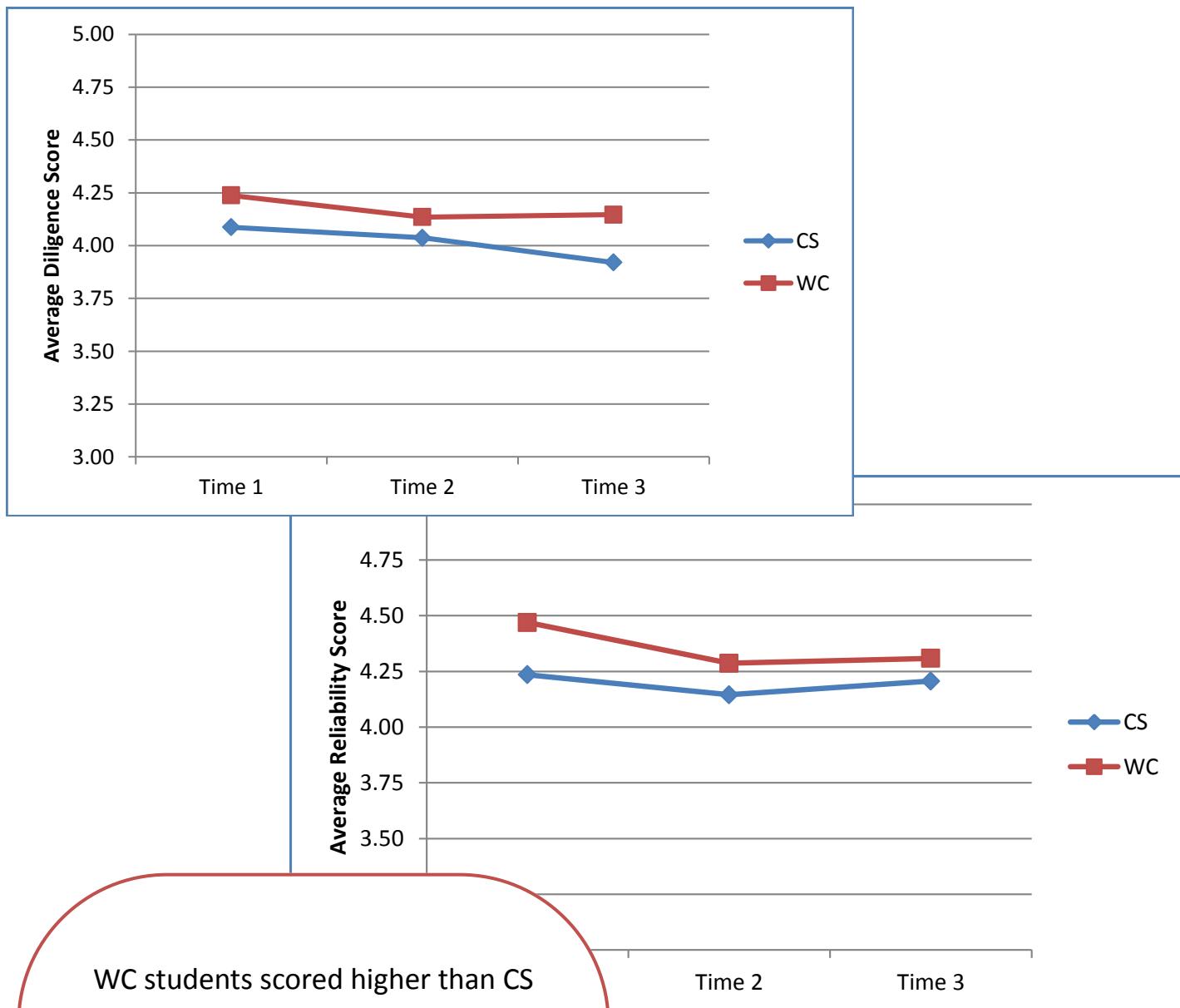


There were no differences in scores on Caring (not shown).

Changes in Character Virtues

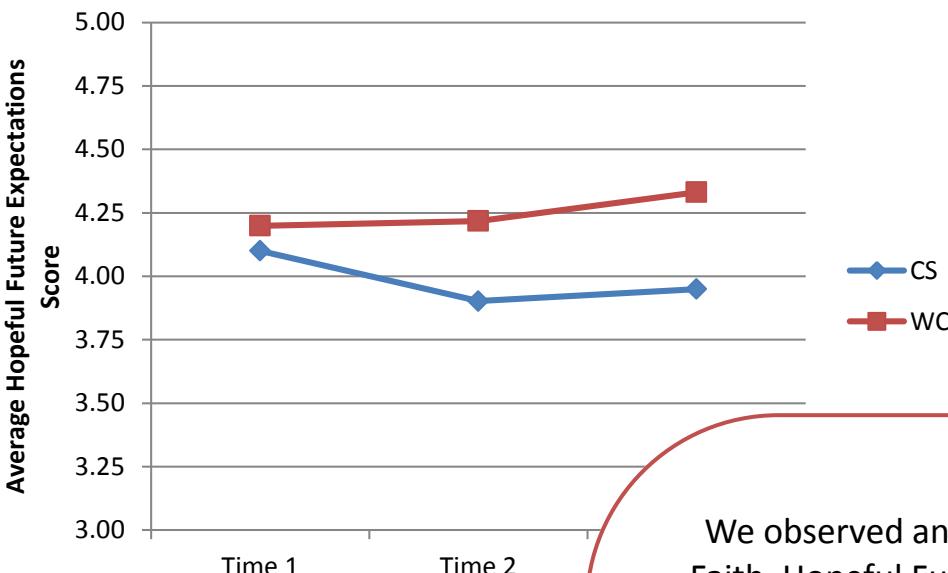
We examined several character virtues: Purpose, Reliability, Integrity, Excellence, Diligence, Faith, Honesty, and Hopeful Future. Again, we looked at scores for participants across 3 Years, and WC and CS participants were “matched” for the most accurate comparisons.

Overall, WC students had higher levels of purpose, diligence, and reliability. While at WC, their levels of purpose, hopeful future expectations, and faith increased. There were no significant differences in average integrity, honesty, or excellence scores between the two groups, and no significant changes over the three years of the study.

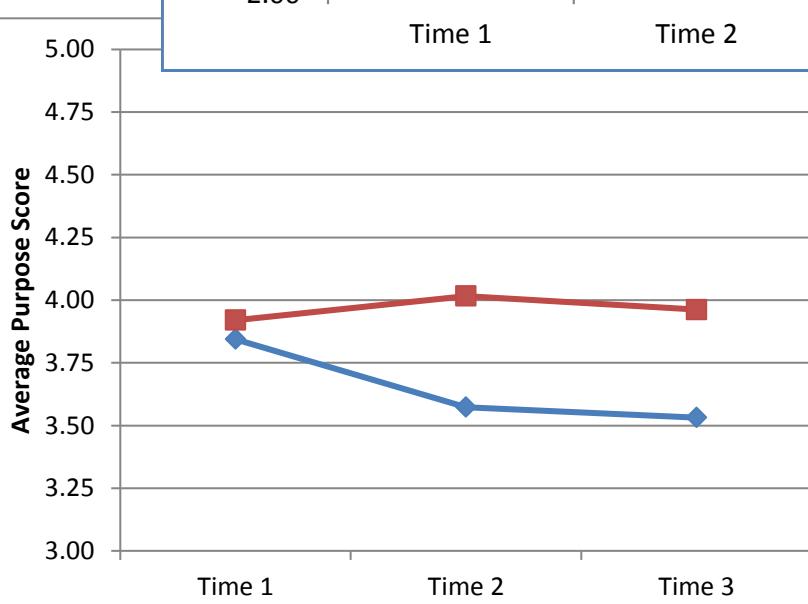
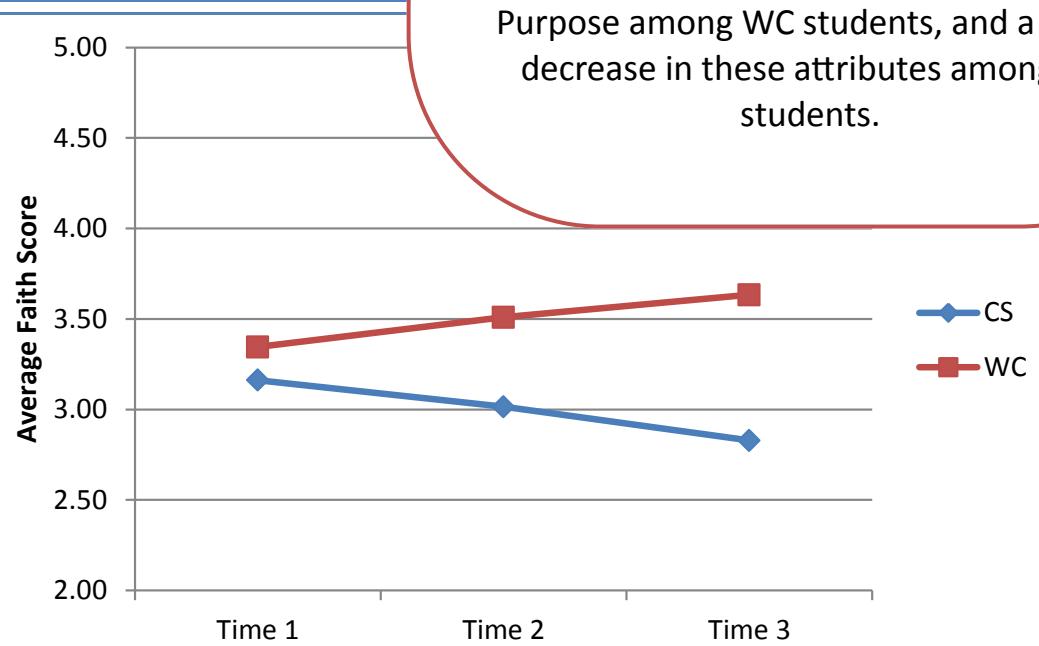


WC students scored higher than CS
students on Purpose, Diligence, and
Reliability.

Changes in Character Virtues



We observed an increase in scores on Faith, Hopeful Future Expectations, and Purpose among WC students, and a slight decrease in these attributes among CS students.



There were no differences in scores on Honesty, Integrity, or Excellence (not shown)

Focus on Purpose



We asked WC students,

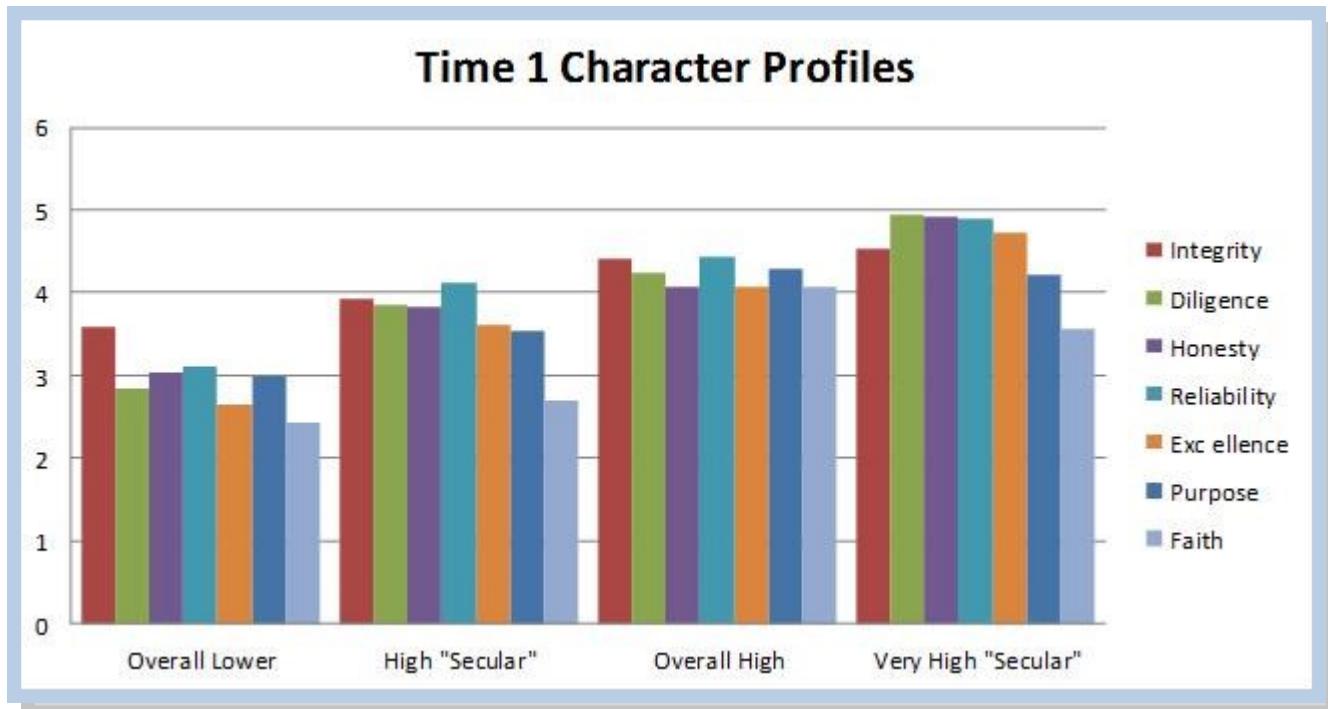
"What would you say is THE most important purpose of your life?"

Their responses are displayed above in a word cloud. Larger words represent greater frequencies. Students used words such as “family”, “happy”, “successful”, “God”, and “others” most frequently to describe the most important purposes of their lives.

Character Profiles

We examined whether students' character attribute profiles mapped on to the character attributes emphasized at the WC. We used a statistical technique called *latent profile analysis* to investigate the following questions:

1. Are there distinct profiles (patterns) of character attributes?
2. If so, which students are more likely to be in each of the profiles (profile membership)?
3. Do students' character profiles change (transition) as they move through their programs?



We found two notable ***patterns*** in the profiles.

First, we found that there are different “levels” of character attributes – students who rate themselves lower, high, and very high on the attributes we measured. Second, we noticed that the profiles are distinguished by differences in students’ scores on purpose and faith, with some showing more “secular” profiles than others. For instance, in the *Very High “Secular”* profile at Time 1, above, we see very high scores on all the attributes except for purpose and faith.

We next wanted to know ***who*** was in each profile.

We found that WC students are over-represented in profiles marked by high scores on character attributes, compared with CS students. In addition, CS students are over-represented in profiles marked by lower scores on character attributes, and in the “secular” profiles.

Finally, we examined profile ***transitions***.

Profile transitions refer to whether students move to different character profiles across the three time points.

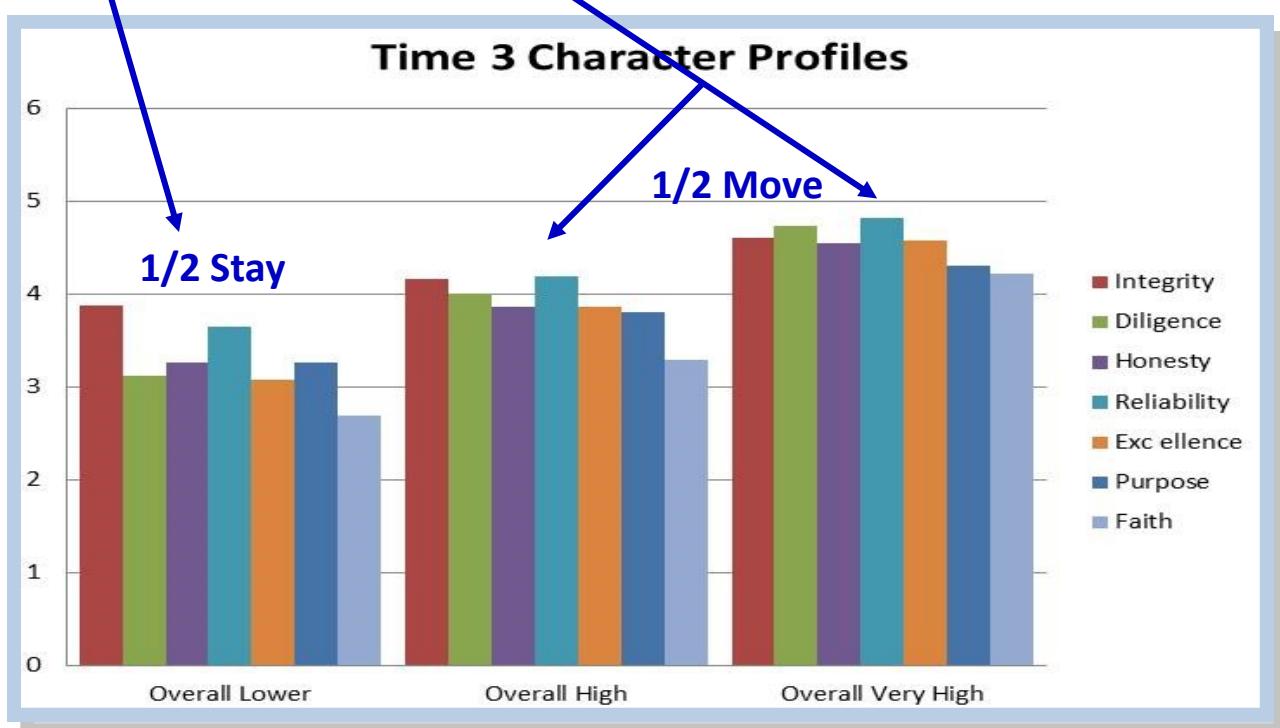
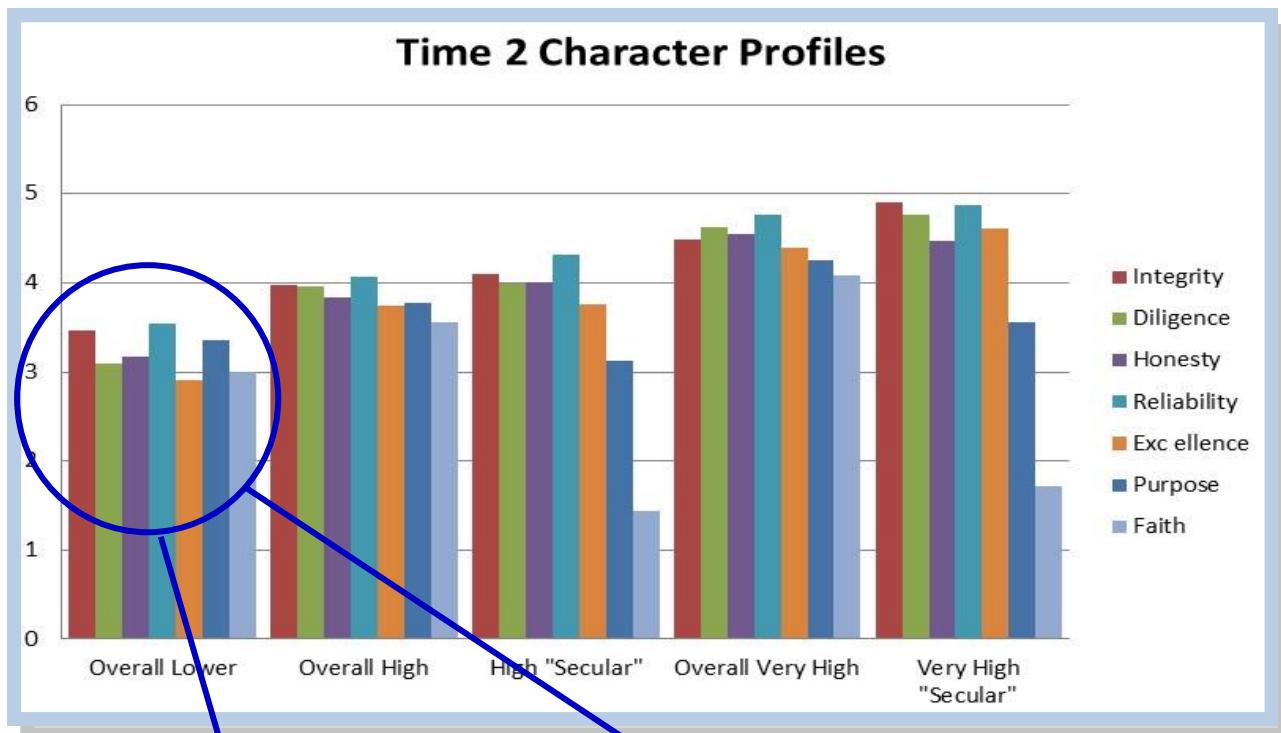
We found that most of the WC students who start in the high/very high “secular” profiles at Time 1 transition to the overall high/very high profiles at Time 2 (indicated in the figure, below). From Time 2 to Time 3, most WC students who start in the more secular profiles stay in secular profiles.

Therefore, if teachers or administrators at the WC seek to promote character attributes of purpose and faith among students, they will likely see their efforts having the most success earlier in the program, when the students are Freshmen. By the time students are Juniors and Seniors, they are more likely stay where they’re at in regard to purpose and faith.



We also identified which students stayed in or moved away from the profiles marked by lower scores on character attributes.

WC students who start in the lower profile at Time 1 tend to move into higher profiles at Time 2. For WC students who are in the lower profile at Time 2, about half stay in lower profile at Time 3 and half move into higher profiles. More research is needed to understand what determines these transitions.



FINAL CONCLUSIONS

LESSONS FROM WILLIAMSON COLLEGE FOR TRADE EDUCATION AND THE NATION

From our three years of research, we can tell an important story about Williamson College. It's a story of the tremendous contributions that Williamson College is making to the lives of young men. It is also a story of obvious success in imbuing in them the skills necessary for a successful career in the trades but, more than that, it is a story about how character develops through the model of education provided by Williamson and how these young men are becoming pillars of contribution and caring to their communities and to their families. It is a story about providing a model of how, through trade education and character development, seamlessly integrated, we can transform the lives of millions of American young people.

There are two takeaway messages from our study. One is based on our specific research findings. The other is a summary of my three years of observing the students and faculty of WC.

In regard to research, and although we didn't have a long amount of time to study character development, the fact that we *saw* character development over such a relatively short period was surprising, gratifying, and reinforcing. These findings provide evidence for what has been a belief that the college years are transformative. But it's very hard to point, in psychology, to studies that actually show that. People have said it's more apparent than real. Here at WC, we see, it's *real*.

The other takeaway is an important, summative judgment: Williamson matters, and it matters in three ways to me. One was not surprising— Williamson matters because it gives young men from challenged socioeconomic backgrounds the opportunity to learn a set of skills which can make them successful in their profession. Second, Williamson matters because it changes lives. A lot of people get educated, but they vary in terms of whether they're successful in life. What we're seeing is that Williamson matters because it transforms the character of young people.

Character is, in my view, a relational construct; it's how you navigate your world in ways that matter to others and matter to yourself. What we're seeing is that this success is predicated on mattering to family, to community, to others, and to transcendent feelings toward God and faith. Finally, the third way that Williamson matters is that it provides a now-proven model of how a trade education can be an invaluable tool to enrich the lives of diverse Americans, and how we can elevate the quality of our economic life but, more than that, the quality of our moral and spiritual life, by pursuing a model like the one embodied in Williamson College.

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A FEW CAVEATS

NOTES ABOUT INTERPRETING THE FINDINGS IN THIS REPORT

Constraints on Conclusions

Where we did find statistically significant differences, the reader should interpret these findings with caution.

Effect Sizes: Effect size refers to the strength of a finding. For example, WC participants scored .19 points higher on Gratitude, and this difference was statistically significant. But how meaningful is a .19 difference on a scale that ranges from 1 to 5? Using a statistical procedure to calculate effect size, we found that this difference is in fact relatively small, although it is significant.

The stronger the finding, the more meaningful we can say it is. For instance, we found that Williamson students scored higher on Emotional School Engagement than comparison school students. When we calculate the effect size for this difference, we found that there was a fairly large and meaningful difference between the two groups.

Design Constraints: Our research study design is limited in two ways. First, our ideal comparison school would be a school that is nearly identical to Williamson in its curriculum, and focused on trade education, but without the focus on character development. None of the schools in our study fit these criteria exactly. Therefore, the best way for us to match the samples is to look at the background characteristics of the participants. Using this matching procedure requires a large number of participants in order to increase our ability to match participants on background variables such as parent education, family income, race/ethnicity, and age. We used this matching procedure to compare WC and CS students across cohorts in this report.

Availability of Measures: In the ACT Study, we used the best available measures to assess character development. However, measuring psychological characteristics using surveys does not always give researchers the most accurate understanding of a phenomenon like character. Therefore, we have included a qualitative component in this research. We interviewed a random sample of Williamson School students, as well as teachers and alumni. These interviews helped us better understand and interpret our quantitative findings.

A Note about Interpretation

In this report, we present the quantitative data from WC students alongside the quantitative data collected from CS students. In most instances, we present the average score on a particular variable (for example, honesty) for WC students alongside the average score for CS students. In other cases, we present percentages of WC and CS students who chose specific answers to a question.

There are a few points to consider when interpreting these averages and percentages:

The Meaning of the Overall Average Score or Percentage: First, it is important to note the overall average score or percentage – whether it is high, medium, or low – when considering the possible values for that variable. Percentages range between 0 and 100, and most other variables are presented on a 1 to 5 point scale unless otherwise noted.

The Meaning of Differences between WC and CS: We conducted statistical tests to evaluate the equivalence of scores/percentages between WC students and CS students. These tests help us determine whether differences between students at each institution on the variables we studied were due to chance, or if they reflect statistically significant and meaningful differences between students at WC versus CS. Throughout the report, we have noted with asterisks (*) and in text when differences between groups (WC and CS) are “statistically significant.”

Across time, even small effect sizes can create a cascade of effects that eventuate in major differences later in life – in chaos theory within modern physics, this phenomenon is termed “The Butterfly Effect.” However, identification of such life-span effects requires long-term longitudinal research that is beyond the scope of the present three-year project.

Throughout the report, we have included some excerpts from interviews with WC students to illustrate what these character attributes of interest may look like in these students as they progress through their WC education.



FURTHER READINGS

REFERENCES TO PUBLICATIONS AND PRESENTATIONS ABOUT THE ACT STUDY

ACT Study Publications

- Arbeit, M. R. (2013). *I mean, we're guys': Exploring gender at an all-male trade school*. Unpublished Empirical Qualifying Paper. Medford, MA: Tufts University.
- Arbeit, M. R., Hershberg, R. M., Johnson, S. K., Lerner, J. V., & Lerner, R. M. (2015). "I Mean, We're Guys" Constructing Gender at an All-Male Trade School. *Journal of Adolescent Research*, 0743558415590659.
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- DeSouza, L. M. (2016). *Civic Identity and Civic Engagement: Meaning, Structure and Measurement*. Unpublished Master's Thesis. Medford, MA: Tufts University.
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ACT Study Publications (Continued)

- Lerner, R. M. & Callina, K. S. (2014). The Study of Character Development: Towards Tests of a Relational Developmental Systems Model. *Human Development*, 57(6), 322-346.
- Tirrell, J. (2014). *Exploring the Relations between Civic Identity and Character Attributes in Young Adult Men*. Unpublished Empirical Qualifying Paper. Medford, MA: Tufts University.

ACT Study Presentations

- Arbeit, M. R. & Hershberg, R. M. (2013, October). Learning to be a man: Analyzing the experiences of students at an all-male trade school. Poster presented at the biennial meeting of the Society for the Study of Emerging Adulthood, Chicago, IL.
- Arbeit, M. R. & Hershberg, R. M. (2013, November). Working to become a man: Embodying gender at an all-male trade school. Poster presented at the biennial meeting of the Society for the Study of Human Development, Fort Lauderdale, FL.
- Arbeit, M. R., Hershberg, R. M., DeSouza, L. M., & Rubin, R. O. (March 2014). "I'm hoping that I can have better relationships": Exploring Interpersonal Connection for Male Adolescents. Poster presented at the biennial meeting of the Society for Research on Adolescence, Austin, TX.
- Callina, K. S. (2013, November). Social Trust as a Mediator of the Relations between Hope and Civic Contributions: Findings from the Assessment of Character in the Trades (ACT) Study. Poster presented at the biennial meeting of the Society for the Study of Human Development, Ft. Lauderdale, FL.
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- DeSouza, L. M., Johnson, S. K. , Hershberg, R. M., Arbeit, M. R., Gasca, S. , Callina, K. S., Warren, D. W., & Lerner, R. M. (2013, November). Addressing self-selection in an evaluation of a trade school educational model: Quantitative findings from Wave 1 of the ACT Study. In S. K. Johnson (Chair), Designing and implementing mixed methods studies in developmental science: The example of the Assessment of Character in the Trades study. Symposium conducted at the biennial meeting of the Society for the Study of Human Development, Ft. Lauderdale, FL.
- Hershberg, R. M., Arbeit, M. R., DeSouza, L. M., Gasca, S., Johnson, S. K., Callina, K. S., Warren, D., & Lerner, J. V. (2013, November). Qualitative exploration of educational decision-making: Qualitative findings from Wave 1 of the ACT study. In S. K. Johnson (Chair), Designing and implementing mixed methods studies in developmental science: The example of the Assessment of Character in the Trades study. Symposium presented at the biennial meeting of the Society for the Study of Human Development, Ft. Lauderdale, FL.
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ACT Study Presentations (Continued)

- Johnson, S. K. (2013, October). Civic and vocational identity among emerging adult men. Poster presented at the biennial conference of the Society for the Study of Emerging Adulthood, Chicago, IL.
- Johnson, S. K. & DeSouza, L. M. (2013, May). Validation of a measure of civic identity. Poster presented at the annual meeting of the Society for Research on Identity Formation, St. Paul, MN.
- Johnson, S. K., Hershberg, R. M., Arbeit, M. R., DeSouza, L. M., Gasca, S., Callina, K. S., Warren, D. W., & Lerner, J. V. (2013, November). Testing a theory of change for character development in the trades: A cohort-sequential mixed-methods evaluation. In S. K. Johnson (Chair), Designing and implementing mixed methods studies in developmental science: The example of the Assessment of Character in the Trades study. Symposium conducted at the biennial meeting of the Society for the Study of Human Development, Ft. Lauderdale, FL.
- Johnson, S. K., Hershberg, R. M., Callina, K. S., & Lerner, J. V. (2014, March). The structure of moral, performance, and civic character among late adolescent men: Relations with self-reported grades and school engagement. In S. K. Johnson (Chair), Measuring and modeling character development in context: Findings across adolescence and educational contexts. Symposium conducted at the biennial meeting of the Society for Research on Adolescence, Austin, TX.



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