

People & Stories/ Gente y Cuentos

INITIAL ASSESSMENT REPORT



OVERVIEW

This report describes the methods and initial results of the first phase of HULA's assessment work with P&S/GyC. The survey implemented in this phase helps illuminate participants' experiences relevant to growth in key domains.

When reviewing this report, please keep in mind that the results are preliminary. One key limitation is that we cannot show change because we only assessed participants at the end of the program. Another limitation is that participants gave almost uniformly positive feedback. These are encouraging results, but they limit our ability to identify nuanced differences in participants' experiences.

Overall, this report provides an early look at participants' experiences. It also stimulates thinking about new directions for HULA's collaboration with P&S/GyC.

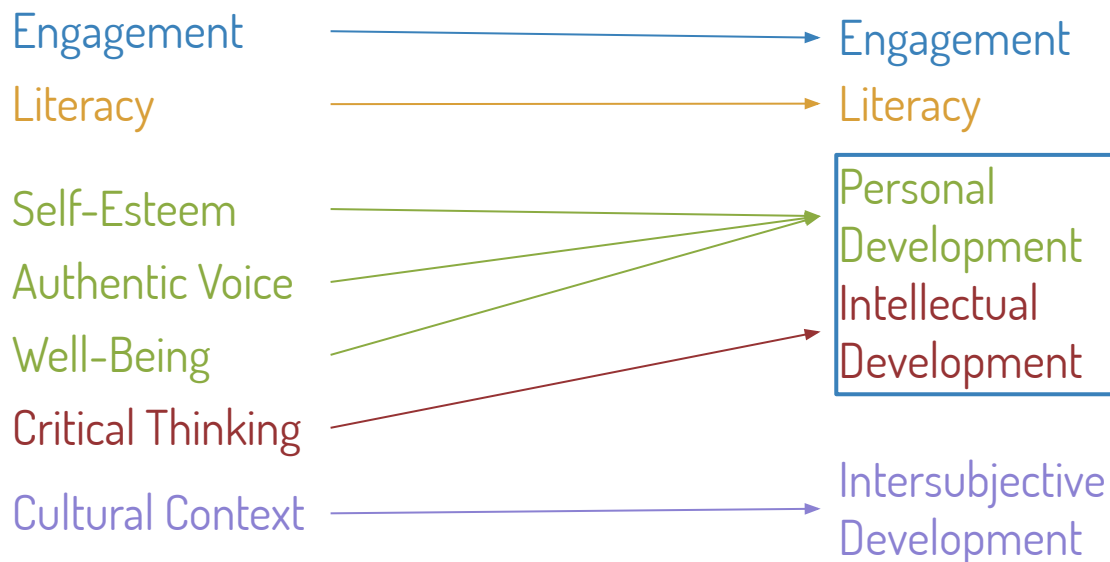
THE ASSESSMENT: OVERVIEW

The first part of this report describes the process through which the existing P&S/CyG participant survey was modified theoretically and methodologically to assess paths of human development. By working from existing materials, we aimed to retain focus on constructs central to P&S/GyC's understanding of its own practice and goals. The survey development was further informed by initial findings from HULA's archival research, as well as theories from psychological and educational research. Through this process, the original outcome domains were condensed into five domains: Engagement, Literacy, Intellectual Development, Intersubjective Development, Personal Development.

The second part of this report presents initial results from the first round of surveys administered at P&S/GyC programs. Though preliminary, these results provide some insight into the program's impacts on participants, and suggest means of improving the assessment strategy.

THE ASSESSMENT: ORIGINAL AND REVISED DOMAINS

The original outcome domains were refined into 5, as indicated in the figure below. Examination of the data revealed substantial overlap of the Personal and Intellectual Development measures, suggesting that they be combined into a single Personal/Intellectual Development index.



THE ASSESSMENT: OUTCOME DOMAINS

Engagement: The engagement domain, intended to reflect the extent to which participants felt involved in the program, was refined to include engagement with literature as well as with others in the group.

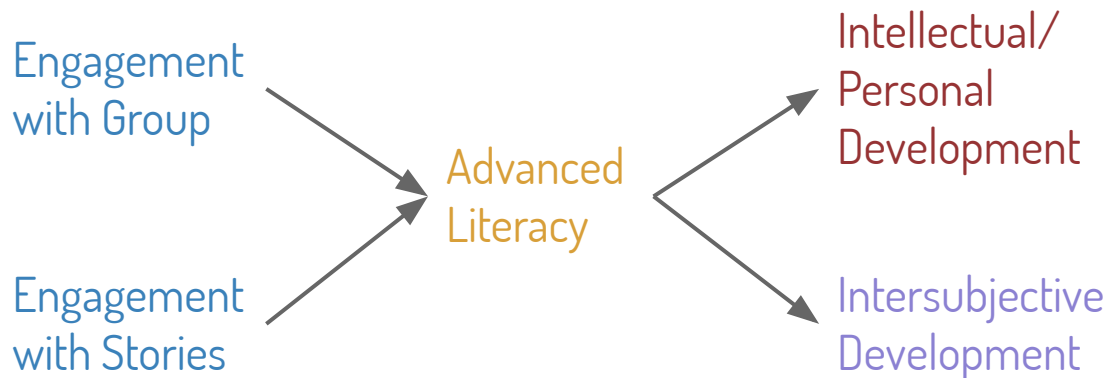
Literacy: The literacy domain is intended to primarily reflect advanced literacy (e.g., interpretation and appreciation of texts).

Personal/Intellectual Development: The conceptually overlapping constructs (e.g., self-esteem, well-being, authentic voice) were reorganized as subcomponents of a more general domain of personal development. The original domain of critical thinking was incorporated into an intellectual development domain that also included metacognitive skills, practical judgment, and imaginative thinking. The personal and intellectual development domains, though conceptually different, were empirically difficult to distinguish and therefore combined.

Intersubjective Development: The domain of cultural context was absorbed by an intersubjective development domain that was expanded to also include general intersubjective skills (e.g., perspective taking) and communicative skills.

LOGIC MODEL

People & Stories/Gente y Cuentos is expected to promote advanced literacy, and consequently foster development of intellectual, personal, and intersubjective capacities and skills.



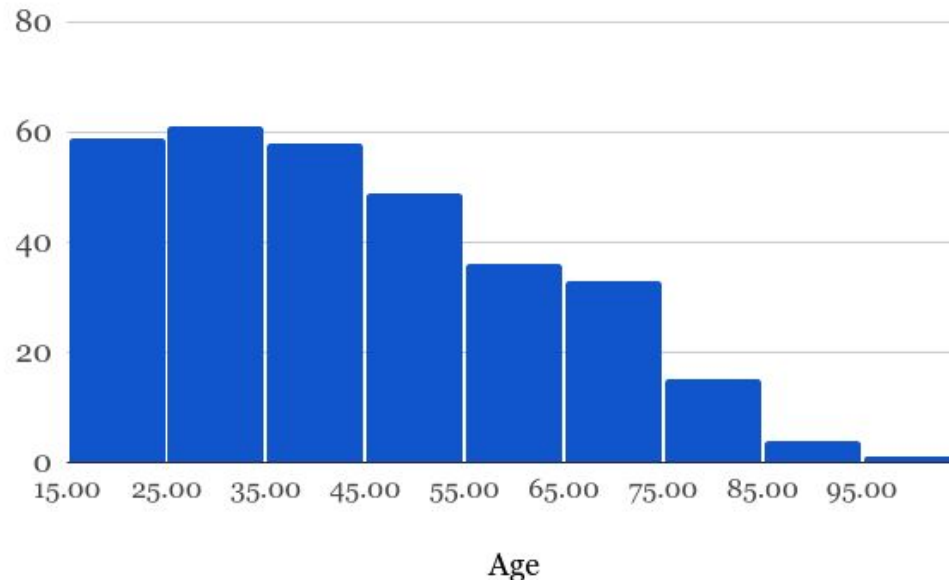
THE ASSESSMENT: SURVEY REVISION

1. Self-report rating scales assessed the five outcome domains
 - a. Engagement
 - i. With Stories [1 Item]
 - ii. With Group [2 Items]
 - b. Advanced Literacy [4 Items]
 - c. Personal/Intellectual Development (10 Items)
 - d. Intersubjective Development (4 Items)
2. Open-ended questions about participants' experiences (6 Questions)
3. Demographic information (Age, Gender, Race/Ethnicity)

WHO WERE YOUR
PARTICIPANTS?

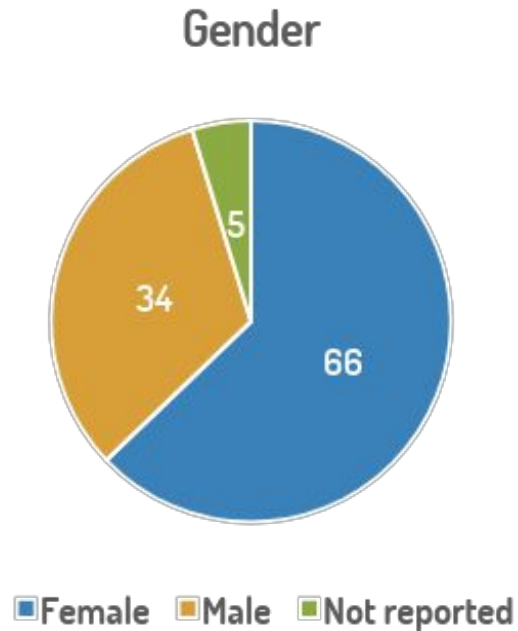
WHO WERE YOUR PARTICIPANTS?

The average age was 42.88 ($SD = 20.81$), with a range of 15 - 100. Ten participants did not indicate their age.



WHO WERE YOUR PARTICIPANTS?

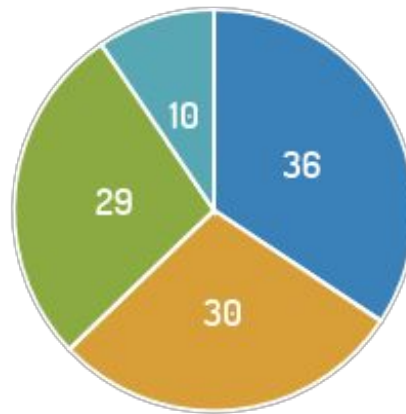
The chart below indicates the genders of your participants.



WHO WERE YOUR PARTICIPANTS?

The charts below represents the race/ethnicity of your participants:

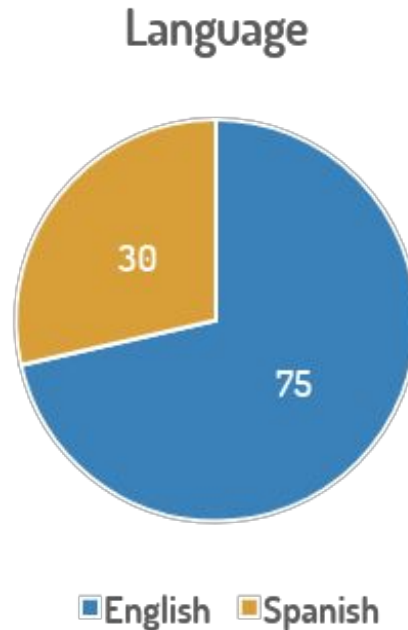
Race/Ethnicity



■ African American/Black ■ Hispanic/Latino ■ White ■ Other

WHO WERE YOUR PARTICIPANTS?

The chart below represents the numbers of English and Spanish surveys obtained.



PARTICIPANTS' EXPERIENCES: SURVEY RESULTS

THE ASSESSMENT: OUTCOME DOMAINS & INITIAL FINDINGS

The next section of this report presents the items used to assess each domain, and average scores for each domain observed in the first round of data obtained by HULA.

Valid survey responses were obtained from 105 participants at 12 different program locations.

Keep in mind that this report does not include data obtained in the Fall of 2017, but it will be updated when the open-ended responses from those surveys are coded. Interpretation of the findings is also constrained by limitations in the study design that will be discussed in more detail at the end of the report. To address these limitations, we conclude by proposing changes to the assessment strategy.

Please also note that the average scores on the different measures cannot be compared directly with each other, since they have not been normed. For example, the relatively higher score on the Personality/Intellectual Development measure than on the Intersubjective Development measure cannot be interpreted as indicating that more intellectual development occurred, just that the items in the measure elicited more agreement.

THE ASSESSMENT: ENGAGEMENT

Item Format

All self-report scale Items were adapted to allow the consistent use of a single Likert-scale response format: *strongly disagree* (1) - *strongly agree* (7)

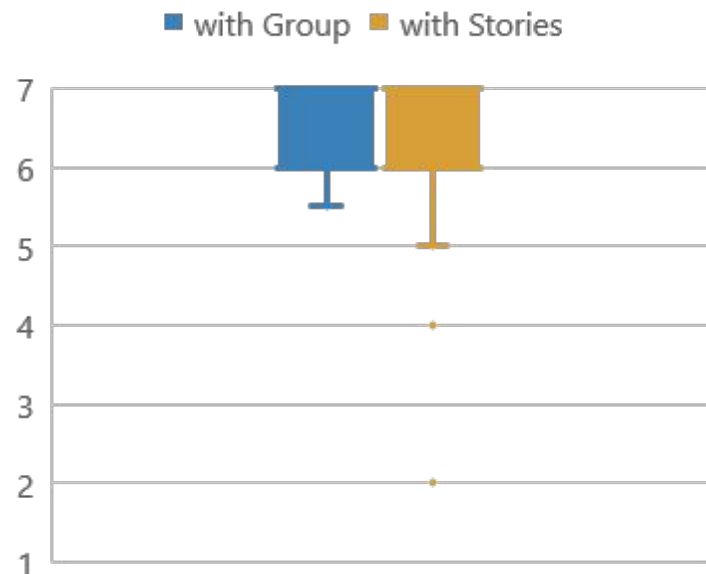
Engagement

Engagement with Stories (Average: 6.52, Range: 2 - 7)

1. I found that I was able to follow and enjoy the stories by hearing and discussing them.

Engagement with Group (Average: 6.61, Range: 5.5 - 7)

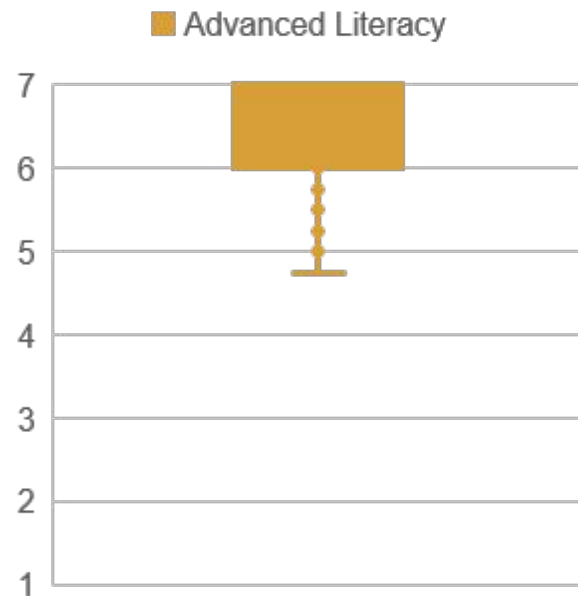
1. I enjoyed interacting with the other participants.
2. I was comfortable sharing my comments about the short stories with others.



THE ASSESSMENT: LITERACY

Advanced Literacy (Average: 6.48, Range: 4.75 - 7)

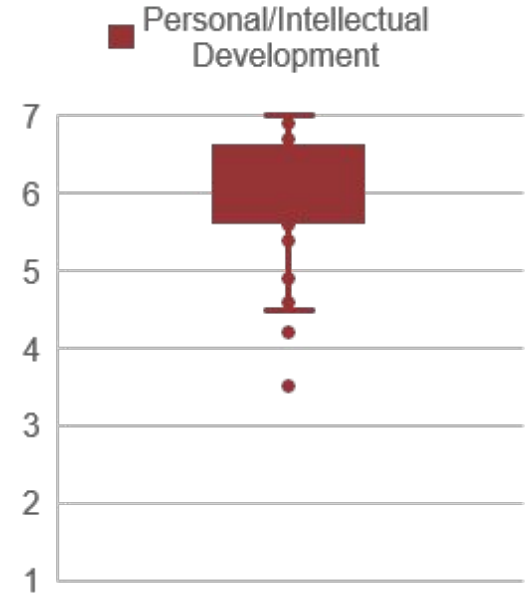
1. I want to read more after this program.
2. When reading and discussing stories, it was interesting to think about why characters in the stories acted the way they did.
3. When reading and discussing these stories, it was interesting to think about how the choices of characters in the stories changed the courses of their lives.
4. Literature helps people understand themselves, others, and the world.



THE ASSESSMENT: PERSONAL DEVELOPMENT

Personal/Intellectual Development (Average: 6.05, Range: 3.5 – 7)

1. Reading and discussing the stories helped me notice new things about my opinions and beliefs.
2. I felt like others listened to my comments about the short stories.
3. Discussing stories made it easier to share my own experiences.
4. I feel less alone in my experiences.
5. When stories were difficult to understand, I found that I could better understand them by putting in more effort.
6. I now have more confidence in my ability to read and interpret stories in the future.
7. I have learned new strategies for handling situations that I may encounter
8. Reading about how characters deal with problems in stories can help people think of new ways of dealing with the challenges in their own lives.
9. When others expressed views different from my own, it helped me better understand my own views.
10. I learned interesting things about others through reading and discussing

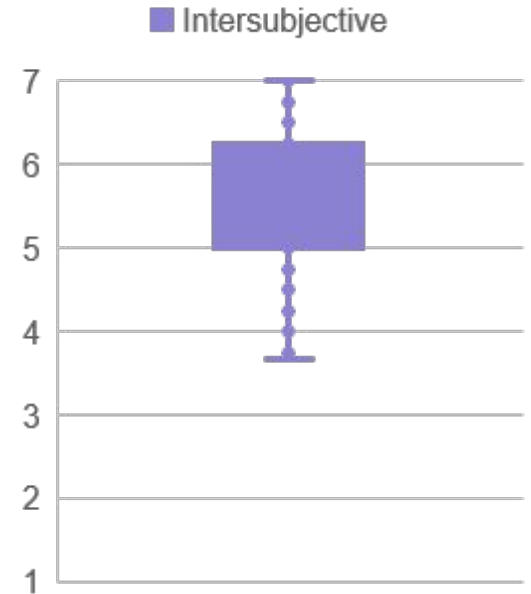


THE ASSESSMENT: INTERSUBJECTIVE DEVELOPMENT

Intersubjective Development (Average: 5.61, Range: 3.66 – 7)

1. When members of the group disagreed on something, it was because some of them were right and others were wrong. (reverse-coded)
2. This group would have been better if the members had more similar views and experiences. (reverse-coded)
3. It was a good thing that members of this group had different views on topics we discussed.
4. I learned more about the views of others different from me.

Note: Responses to reverse-coded items are subtracted from 8 before being included in the average for the scale, such that a response of “strongly disagree” is re-coded as “strongly agree”



THE ASSESSMENT: INTERPRETING AVERAGE SCORES

As shown in the charts on the previous pages, participants reported, on average, high levels engagement and experiences conducive to cultivating literacy, personal/intellectual, and intersubjective development. Average scores, though, can sometimes obscure important variation across individuals, making it important to consider the range of responses.

Although a small number of participants reported negative experiences, such responses constituted less than 5% of the entire sample. In fact, across all measures, only a few participants provided responses that fell below the scale's midpoint, indicating some degree of disagreement with statements reflecting engagement or development. In other words, variation in responses was almost entirely at the high end of the scales, suggesting nearly unanimous positive responses to the program.

OPEN-ENDED QUESTIONS

Participants were asked a series of 7 open-ended questions (listed below) to help elicit reports of their experiences and impressions in their own words. The final item tended to cause confusion, and so its responses could not be clearly interpreted.

Open-ended questions:

1. Please talk about a memorable moment during this program that you would like to share.
2. What was your favorite story and why was it your favorite?
3. Did people turn out to be different from how you expected when the program started? If so, how?
4. Did you get something out of this program that you did not expect?
5. What kept you coming to the sessions even if you didn't feel like coming?
6. What has meant the most to you about participating in this group?
- ~~7. Did you feel as if you and the others in your groups were all playing on the same team? Did your feelings about this change over the course of the program?~~

OPEN-ENDED QUESTIONS: CODING

Responses to the open-ended questions were coded on the basis of their indication of the deployment of different psychological capacities (e.g., intersubjective, cognitive analytic) or growth in different areas of intellectual and personality development (e.g., critical thinking, personality factors). For example, consider two responses to the question, “What was your favorite story and why was it your favorite?”

1. *Breaking and Entering because it showed me something I never paid attention to on life on life terms and that's whats going on in the outside world B and Es*
2. *My favorite story was about the train because I felt the little girl feeling how much she loved her father*

The first response was coded as indicating cognitive analytical processing, advanced literacy, critical thinking, literary appreciation, and personality development. The second was also coded as showing evidence of cognitive analytical processing, advanced literacy, and literary appreciation. It was further coded as showing metacognition and exercise of intersubjective and affective capacities. Unlike the first, the second response did not indicate critical thinking or personality development.

OPEN-ENDED QUESTIONS: COMPOSITE SCORES

Coding the open-ended responses made it possible to systematically examine indications of growth in the primary developmental domains targeted by P&S/GyC: Advanced Literacy, Personal/Intellectual, and Intersubjective. Codes were grouped according to these three domains based on their definitions. Composite scores for each domain were then calculated by adding the number of codes from each group applied across each participant's responses. The codes contributing to each composite score are defined on the following four pages.

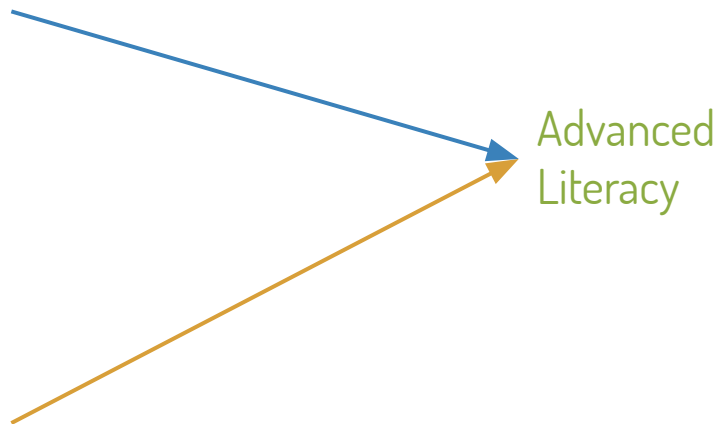
These composite scores are perhaps best understood as reflecting the most salient themes in participants' responses, rather than as direct evidence for the presence or absence of growth. For example, a participant's reflection on the value of group discussions neither proves that the participant increased their intersubjective skills nor that they did not develop critical thinking abilities. However, it does show that these interpersonal exchanges were especially meaningful to the participant, suggesting that the program was conducive to the deployment and cultivation of intersubjective capacities. In this way, the composite scores provide an additional perspective on how participants' experiences align with different domains of development.

COMPOSITE SCORES:

Grouping codes into the Advanced Literacy Development domain

Advanced Literacy: improved skill at reading and interpretation, including intertextual skills, or the capacity to set multiple “texts” in relation to each other or in relation to self or others. The relevant skills and capacities are captured in the [Common Core Reading Standards](#).

Appreciation: understanding the reasoning or creative work of another with regard to how it works or what it does, and also taking pleasure in it or assigning positive value to it.



COMPOSITE SCORES:

Grouping codes into the Intersubjective Development domain

Intersubjective: the psychological orientation of the audience or student to other people. The intersubjective domain captures issues of attunement and/or misattunement as well as interpersonal personality traits, for instance empathy and perspectival flexibility.



Intersubjective
Development

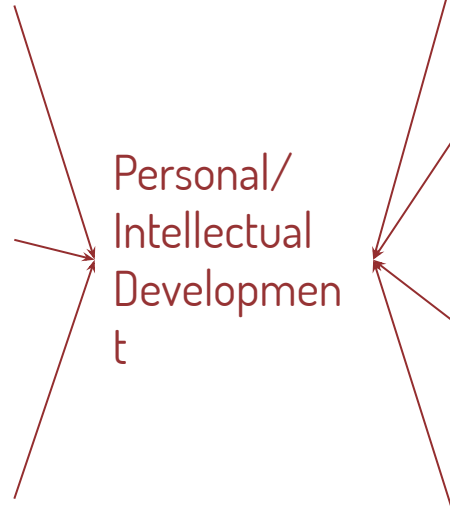
COMPOSITE SCORES:

Grouping codes into the Personal/Intellectual Development domain

Personality Factors: perseverance, self-esteem, self-confidence, self-expression, ambition and resilience, as well as other intra-personal traits, such as those often considered belong to the virtues or character development.

Meta-cognitive: involves thinking about thinking and/or self-regulation of cognition. The term, “meta-cognitive,” applies to thinking about one’s own thought processes, which could be theoretical or involve strategic occurrences.

Affective: the emotional and motivational make-up of the audience or student. The affective domain also captures intrapersonal personality traits, for instance, independence of judgment, self-confidence, attraction to complexity, aesthetic orientation, openness to experience, risk-taking.



Personal/
Intellectual
Development

Critical Thinking: capacity to reason effectively, especially using analytical cognitive capacities. Critical thinking may be reactive, generative, and evaluative.

Understanding: synthetic grasp of material on the basis of which students can perform their own pro-active mental acts with the material or going beyond the material.

Cognitive Analytic: capacities to transform representations via inference, induction, deduction, analogy, identification of similarities and differences, categorization, and the manipulation of concepts.

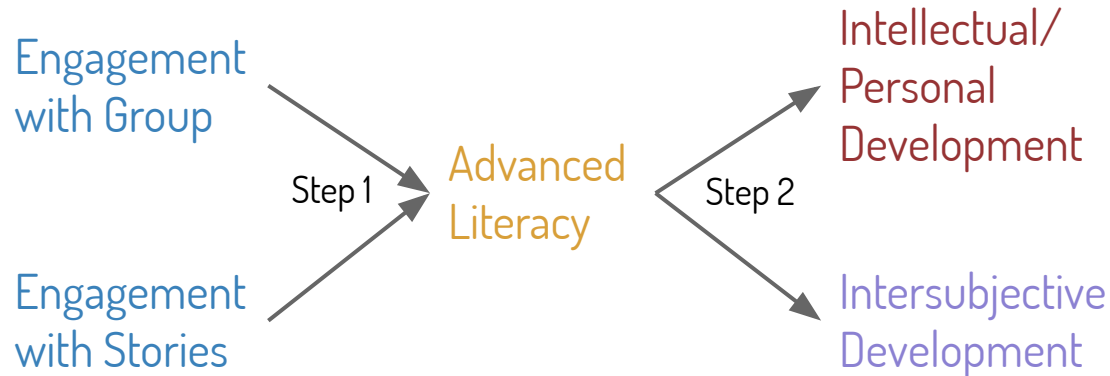
Cognitive Undetermined: used to mark cases that are clearly deploying cognitive activity, but where the cognitive activity is not described sufficiently to be identified as either imaginative or analytical.

TESTING THE LOGIC MODEL

OVERVIEW OF ANALYSES

The next section of this report presents a series of statistical analyses aimed at testing the relations hypothesized in the logic model depicted below. The analyses first address the question, “What sorts of engagement support advanced literacy?” Then, analyses are conducted to determine how advanced literacy supports more general forms of personal/intellectual and intersubjective development.

As described above, coding the open-ended responses yielded a set of measures of key variables parallel to the measures derived from the close-ended survey items. Testing the hypothesized relations using measures based in different methods helps assess the consistency and reliability of individual findings. Results using the closed and open-ended measures will be presented side-by-side to facilitate identification of the most consistent findings.



PATHS TO DEVELOPMENT: INTERPRETATION

The relations between each form of engagement and development were tested in a series of statistical models that allow the relations of multiple variables to be tested simultaneously. This makes it possible to assess the relative strength of different relations.

For example, suppose that age and educational attainment are strongly related to each other and to general knowledge. The statistical technique used here would make it possible to determine how much age contributes to general knowledge independent of educational attainment. Depending on the test of general knowledge, it may turn out that most of the relation between age and general knowledge is better explained by education. In the present context, this analytic approach helps illuminate the relative importance of engaging with literature and with others to the more distal forms of development, personal/intellectual and intersubjective.

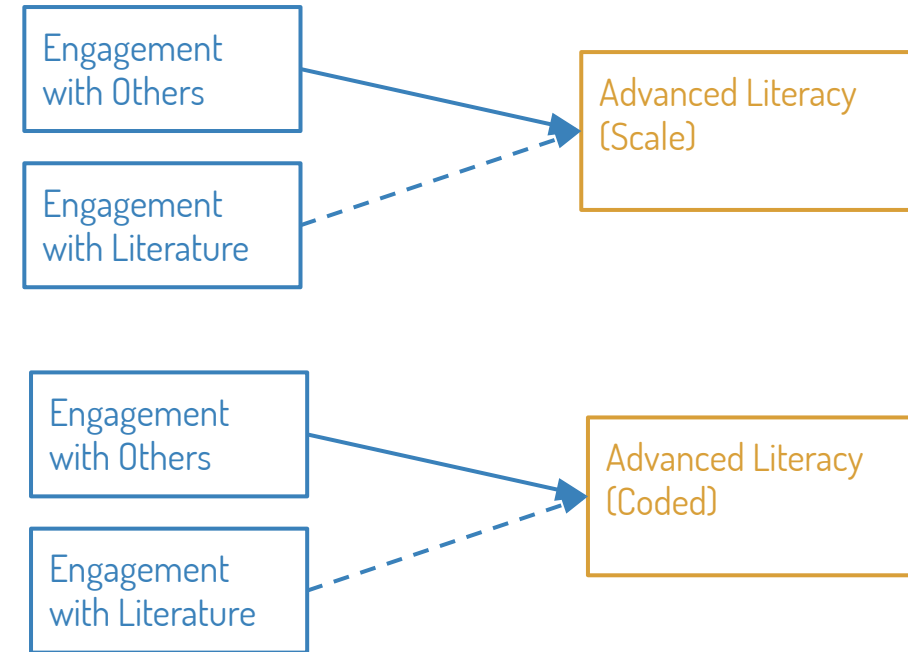
OVERVIEW OF ANALYSES : LIMITATIONS

Although the logic model depicts causal relations, the absence of a pre-test or control group makes it impossible to draw clear causal conclusions. For example, an individual who enters the program with strong abilities to critically analyze fiction may report high levels of engagement with literature and strong intellectual skills, just as might a participant who developed those abilities in the program. Yet, testing the relations between each form of engagement and measures of the key developmental domains makes it possible to determine if participants' experiences are consistent with the model of development underlying P&S/GyC. Thus, a significant positive relation between engagement with literature and intellectual development does not prove a causal relation exists, but it does support its plausibility.

FOSTERING ADVANCED LITERACY

The hypothesized logic model underlying People and Stories/Gente y Cuentos posits that cultivating sophisticated engagement with literature (advanced literacy) provides a foundation for human development. Advanced literacy requires more than simple comprehension. It involves interpreting texts in multiple ways and appreciating text as a work of art. Facilitators foster advanced literacy by helping to ensure that all participants are able to understand the stories by reading them out loud, and by guiding discussions of the text that make interpretation a collaborative effort. Thus, both basic literacy (comprehending the stories) and a positive group climate in which participants feel comfortable are expected to be important contributors to advanced literacy. The next page presents the results of the statistical tests of this hypothesis.

SOCIAL ENGAGEMENT AND BASIC LITERACY AS PREDICTORS OF ADVANCED LITERACY



A series of statistical analyses revealed that social engagement is a more powerful predictor of advanced literacy than basic literacy, pointing to the importance of the social aspect of the program. In the diagrams on left, the significant relation between social engagement and advanced literacy is represented by a solid connecting arrow, while the hypothesized but not statistically significant relation between basic literacy and advanced literacy is depicted by a dashed connecting arrow.

FOSTERING ADVANCED LITERACY: CONCLUSIONS

Literacy development is most apparent when examining indicators of advanced literacy. This is the case when literacy development is measured using rating scales and when it is identified in responses to the open-ended questions.

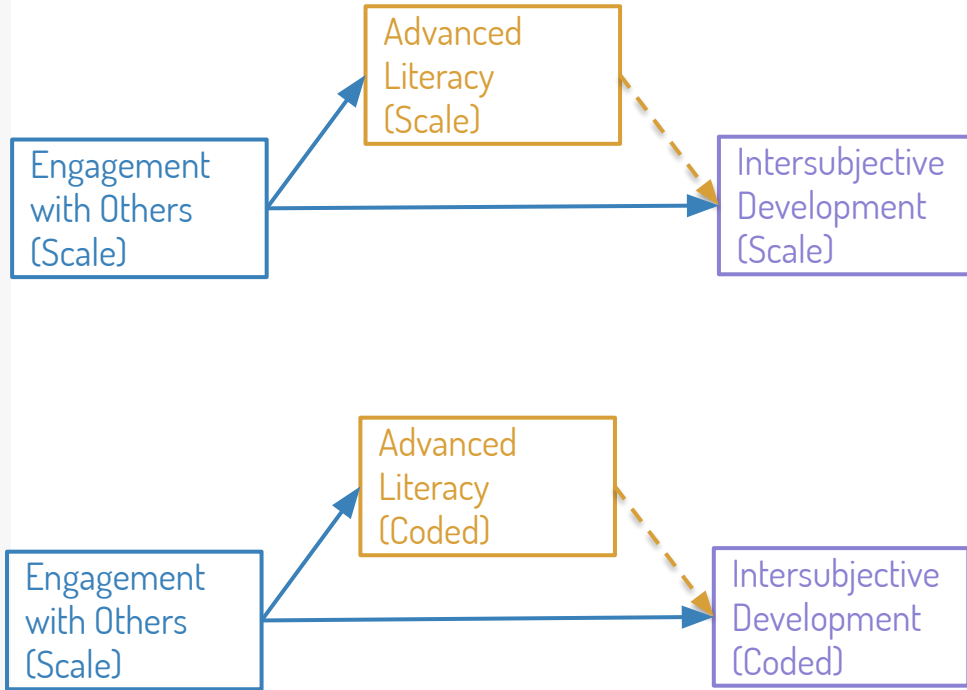
Unexpectedly, engagement with literature, assessed using rating scales, predicts neither the quantitative nor qualitative measures of literacy development. This points to the need to better assess engagement with literature. However, engagement with others strongly predicts advanced literacy development, affirming the importance of the social environment in fostering development.

One participant, for example, reported the following in response to the question about a memorable moment: *“the discussion on Ouroshki’s Trains there many different points view about children, the family, the town’s people and trains.”* When responding to the question about gaining something unexpected, this participant wrote, *“the reading and the different opinions,”* indicating the importance of the discussion to their appreciation of the stories.

INTERSUBJECTIVE DEVELOPMENT

The ability to engage constructively with others requires intersubjective skills. *People and Stories/Gente y Cuentos* emphasizes discussions about literature that help people express and recognize diverse and sometimes conflicting perspectives. Beyond creating a warm and inclusive group environment in which participants feel comfortable interacting with others, discussing literature is expected to facilitate deeper engagement with others and cultivate the perspective-taking skills needed for intersubjectivity. That is, advanced literacy is expected to account for much, if not all, of the effects of creating a comfortable group environment on intersubjective development. In statistical terms, advanced literacy is expected to *mediate* the effect of engagement with others on intersubjective development.

ADVANCED LITERACY AS A MEDIATOR OF THE EFFECTS OF SOCIAL ENGAGEMENT ON INTERSUBJECTIVE DEVELOPMENT



A series of mediation analyses tested whether advanced literacy could account for some or all of the relation between engagement with others (comfort in the group) and intersubjective development. As before, parallel analyses using the scale survey responses and coded open-ended answers were conducted. Both revealed significant relations between engagement with others and intersubjective development. However, advanced literacy did not account for this relation, suggesting that intersubjective development is, at least as assessed here, independent of advanced literacy.

INTERSUBJECTIVE DEVELOPMENT: CONCLUSIONS

Using only the quantitative scale measures, intersubjective development was most strongly related to engaging with others in the program. The same finding emerged when examining the composite score calculated from the coded open-ended responses.

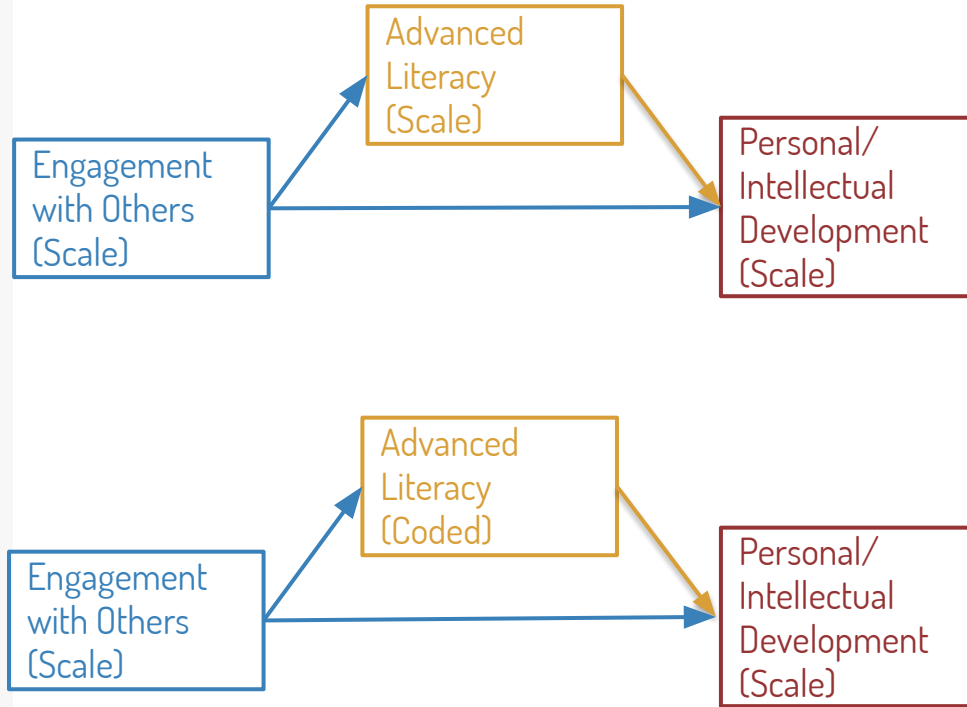
Contrary to expectations, advanced literacy did not mediate the relation between positive engagement with others and intersubjective development. It may be, though, that engagement with literature provides a context for positive interpersonal engagement. For example, in response to the question about whether people turned out differently than expected, one participant wrote, *“Yeah, it was good to hear everyone’s different points of how they perceived the storytelling, everyone had different points to ponder.”*

PERSONAL/INTELLECTUAL DEVELOPMENT

People and Stories/Gente y Cuentos is expected to help participants develop personality and intellectual capacities (e.g., self-reflection, critical thinking) by engaging them with literature. In learning to examine literature, participants also hone their abilities to be aware of their own thoughts and feelings, and also to critically evaluate their own and others' interpretations. Though developed in the context of literature, these capacities are expected to have broader impacts and, to some extent, generalize to other contexts. As with intersubjective development, advanced literacy is expected to account for much of the effect of engaging with others on personal/intellectual development.

ADVANCED LITERACY AS A MEDIATOR OF THE EFFECTS OF SOCIAL ENGAGEMENT ON PERSONAL/INTELLECTUAL DEVELOPMENT

37



A series of mediation analyses tested whether advanced literacy could account for some or all of the relation between engagement with others (comfort in the group) and personal/intellectual development. As before, parallel analyses using the scale survey responses and coded open-ended answers were conducted. Both revealed significant relations between engagement with others and personal/intellectual development. In both case, advanced literacy accounted for a significant amount of this effect, but not all. Thus, both advanced literacy and social engagement seem critical to personal/intellectual development.

PERSONAL/INTELLECTUAL DEVELOPMENT: CONCLUSIONS

Using both the quantitative scale and coded open-ended response measures, personal/intellectual development was strongly related to both engagement with others and advanced literacy.

As suggested by these results, participants' responses to the open-ended questions suggests both impacts of engaging with literature and engaging with others. For example, one participant reported, *"I like the way we all come together and explain our different beliefs and feelings each one of us has."* The same participant reported that they kept coming because of *"The joyment of dissecting the stories and getting different view points (Fun!)"* and that what meant most to them was *"Once again, to be around people with the same concern and different or maybe even the same view point!"* These responses clearly demonstrate intellectual interest in and appreciation of different ideas, but both stories and peers seem to be important to supporting this participant's intellectual engagement.

CULTIVATING HUMAN DEVELOPMENT

In addition to understanding development in terms of the domains described above, HULA also takes a broader view, seeing human development as oriented towards Existential, Civic, and Vocational flourishing.

The Existential domain includes the long term development of our experience as an individual, our sense of identity and subjectivity, and our experience of intimate relationships.

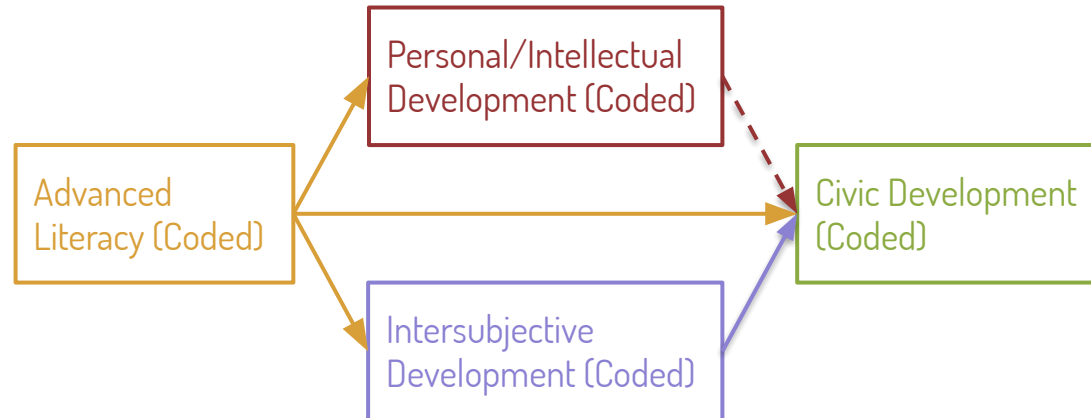
The Civic domain reflects the arc of our development as people who participate in organizational and political communities—local, national, or global.

The Vocational domain includes the long term development of our competence to fend for ourselves economically.

The open-ended responses were also coded in relation to these domains, indicating a strong emphasis on Existential and Civic development. Mediation models shown on the next pages tested whether intersubjective and personal/intellectual development would mediate the effects of advanced literacy on these forms of human development. Insufficient responses were coded as indicating Vocational development for analysis.

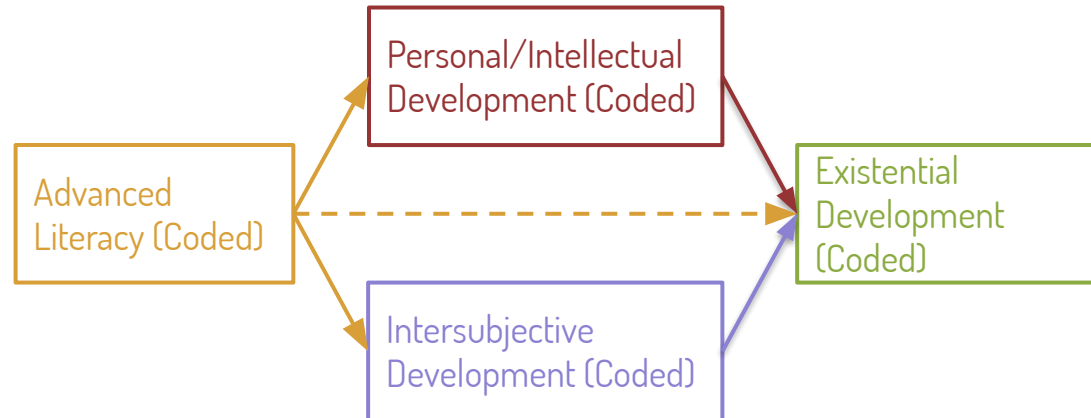
CULTIVATING HUMAN DEVELOPMENT: CIVIC

As shown below, there was a significant relation between advanced literacy and civic development that could not be fully accounted for by the coded measures of personal/intellectual or intersubjective development. However, a significant portion of the effect was accounted for by intersubjective development. This suggests that advanced literacy fosters civic development in part by honing intersubjective skills. Interestingly, there was no significant relation between personal/intellectual development and civic development once the other variables were accounted for.



CULTIVATING HUMAN DEVELOPMENT: EXISTENTIAL

In the case of existential development, the mediation analysis shows that the effect of advanced literacy could be fully accounted for by the combination of personal/intellectual and intersubjective development. This result suggests that advanced literacy has important effects on personal/intellectual and intersubjective development that contribute to existential growth.



SUMMARY: IMPLICATIONS, LIMITATIONS, & FUTURE DIRECTIONS

SUMMARY

Implications

- ▶ Higher levels of reported engagement with others, or comfort interacting with the group, was associated with advanced literacy.
- ▶ Advanced literacy and engagement with others predicted attainment differently across the outcome domains.
 - ▶ Engagement with others is likely to foster intersubjective development independently of its effects on advanced literacy.
 - ▶ Advanced literacy accounts for a significant portion of the impact of engagement with others on personal/intellectual development.
- ▶ Analyses of the coded open-ended responses yielded results consistent with analyses of the quantitative self-report measures. This consistency attests to the robustness of the findings, which cannot be attributed to a single methodological approach.
- ▶ The two forms of human development, civic and existential, had distinct relations with advanced literacy. Civic development was independently related to advanced literacy, but also related to intersubjective development. The relation between advanced literacy and existential development, however, was fully explained by intersubjective and personal/intellectual development.

SUMMARY

Limitations

- ▶ The present results are based on a limited sample, and analysis of a more complete data set may reveal a slightly different pattern of results if the present sample is not representative of the full range of P&S/GyC locations, facilitators, and participants.
- ▶ Scores on all measures were clustered at the high end of the rating scale, making it difficult to detect more subtle differences in participants' experiences. The low variability in responses also limits the power of statistical tests. This makes it critical to revise the measures to provide a more nuanced understanding of participants' experiences and growth.
- ▶ The high level of overlap among the different measures points to the need to more clearly distinguish between the targeted domains, and choose measures reflecting those distinctions.
- ▶ The lack of a pre-program assessment or the ability to control for external factors precludes clear inferences of causation. While the present analyses reveal that engagement is *related* to outcome attainment, they cannot establish that it is *causally related* to attainment.

SUMMARY: FUTURE DIRECTIONS

Survey Design

- ▶ The survey will be abbreviated to reduce the amount of time required for participants to complete it. This will be done by removing items that are highly redundant and/or proved difficult for respondents to understand.
- ▶ Participants will be asked to rank the importance of each form of engagement and extent of attainment in each of the outcome domains. This will help elicit degrees of achievement obscured in the rating scale responses by the consistently high scores observed across all measures.
- ▶ The open-ended questions will be revised to more directly solicit reports of personal and intersubjective development.

Survey Administration

- ▶ An assessment administration packet will be assembled to help standardize how the surveys are administered across program locations.
- ▶ Where possible, online data collection (e.g., via tablet or smartphone) will be encouraged to facilitate ease of completing the survey and recording responses.

METHODOLOGICAL APPENDIX

SELF-REPORT RATING SCALES

Self-report rating scales are widely used in psychological research to assess participants' understanding of their own experiences. Although they are susceptible to errors of introspection and presentation bias, self-report measures administered under conditions of anonymity and a clear context regularly yield valid data (Duckworth & Yeager, 2015).

Based on principles of psychological measurement, multiple questions were used to assess each domain in order to reduce measurement error introduced by the particular wording of any single question. This strategy makes it possible to 1) evaluate the unity of the different facets of the domain represented in the questions by assessing the consistency of responses and 2) obtain a measure of the underlying latent construct by calculating the average response to the multiple specific questions. Care was taken to focus questions on specific elements of the target domains and minimize value-laden or leading language. In particular, questions were developed to invite criticism or expression of negative experiences in order to attenuate potential bias.

SURVEY ADMINISTRATION

The survey was administered during P&S/GyC sessions on paper. In some cases, facilitators read the questions out loud or helped respondents understand the questions and response format. This variability in the administration of the survey will be further explored in follow-up discussions with facilitators in order to determine an effective standardized strategy for administration.