Longitudinal Change in Youth Civic Engagement: Contextual Predictors and Academic Outcomes

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Michigan State University

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Background

- Office of University Outreach and Engagement
- Community Partnerships
  - Genesee Intermediate School District
  - Flint Community Schools
  - Bridges to the Future After-School Program
Listening to the Community

Coordinated Community Student Survey (C2S2)

• Comprehensive needs- and outcome assessment instrument

• Iterative co-development with partners

• 205 questions, 24 multiple indicator constructs

• Administered yearly to ~12,000 4th-12th graders in 127 schools across 24 districts

• Combined with other data sources
  – Unique identifier code
  – Program participation
  – Attendance, grades, standardized test scores, disciplinary referrals
### C²S² Longitudinal Sample

<table>
<thead>
<tr>
<th></th>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
<th>Time 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>12,450</td>
<td>4,323</td>
<td>1,957</td>
<td>963</td>
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<td>2007</td>
<td>--</td>
<td>5,828</td>
<td>2,433</td>
<td>1,150</td>
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<td>2008</td>
<td>--</td>
<td>--</td>
<td>7,207</td>
<td>3,173</td>
</tr>
<tr>
<td>2009</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>6,887</td>
</tr>
<tr>
<td>Total n</td>
<td>12,450</td>
<td>10,148</td>
<td>11,597</td>
<td>12,175</td>
</tr>
</tbody>
</table>
C²S² Longitudinal Sample

- Racial Background and Gender

![Bar graph showing racial background distribution and pie chart showing gender distribution.](image-url)
C²S² Longitudinal Sample

- Grade range at Year 1
Current Study

• County-wide Character Education initiative

  “In addition to producing students who are culturally literate, intellectually reflective, and committed to lifelong learning, high-quality education should teach young people to interact in socially skilled and respectful ways; to practice positive, safe, and healthy behaviors; to contribute ethically and responsibly to their peer group, family, school, and community; and to possess basic competencies, work habits, and values as a foundation for meaningful employment and engaged citizenship.”

  Greenberg, et al., 2003. (pp. 466-467)
Theoretical background

- Dynamic systems theory: The origins of human behavior and developmental change are within the mutually-influential, bidirectional, and “fused” relations between individuals and their contexts (Damon, 1998; Ford & Lerner, 1992; Gottlieb, 1997; Overton, 1998).

![Diagram showing the contributions to self and others with stages such as character, caring, connection, competence, and confidence leading to positive youth development.]

Lerner, et al., 2005
Prior studies

• High quality youth development programs are linked to:
  – Improvements in interpersonal skills, peer and adult relationships, lowered risk-taking behaviors, and greater academic achievement (Catalano, et al., 2002; Roth & Brooks-Gunn, 2003).

• Participation in extra-curricular activities positively linked to:
  – Grades, test scores, school engagement, and educational aspirations (Cooper, et al., 1999; Fredricks & Eccles (2006).
Prior studies

- Academic performance and learning are strongly affected by such socio-emotional factors as:
  - classroom management and climate
  - student–teacher social interactions
  - peer group
  - school culture
  - parental support

(e.g., Wang, et al, 1997).
Conceptual Model

- Boredom
- Alienation
- Lack of Performance
- Loss of Connection to goals and values
- Disengagement
- Caring adults
- Engaging activities
- Leadership/empowerment
- Connection to others
- Prosocial attitudes
- Civic engagement
Research Questions

• Are levels of civic engagement changing over time?
• What contextual factors predict civic engagement?
• Does civic engagement predict academic outcomes?
Target Variables

• Civic Engagement
• Academic Engagement
• Academic Performance

• Home Context
  – Parent Involvement

• School Context
  – Teacher Support
  – Peer Hostility

• Neighborhood Context
  – Neighborhood Adult support
  – Neighborhood Safety
Constructs

• Civic Engagement
  – 6 items; 4 pt. scale (strongly disagree – strongly agree)
  – $\alpha$ range= 0.83-0.88
  – I actively participate in my neighborhood’s activities
  – I do volunteer activities to help my neighborhood
  – I am interested in talking about ways to improve my neighborhood
Constructs

- **Academic Engagement**
  - 11 items; 4-pt. scale (not at all like me - a lot like me)
  - $\alpha$ range = 0.82-0.91
  - I work hard at my school work
  - I participate in class
  - I do the best I can do in school
Constructs

- **Academic Performance**
  - Michigan Educational Assessment Program
  - Grade 3-9
  - $\alpha$ range = 0.69-0.93
    - Mathematics
    - Science
    - Social studies
    - English language arts
    - Reading
    - Writing
Constructs

- Parent Involvement
  - 9 items; 4-pt. scale (never – a lot)
  - $\alpha$ range = 0.82-0.91

How often do your parents/caregivers….:
- Check whether you have done your homework
- Talk to you about your problems
- Limit the amount of time you can watch TV
Constructs

• Teacher Support
  – 6 items; 4-pt. scale (strongly disagree – strongly agree)
  – $\alpha$ range= 0.73-0.80

  – There is a teacher or some other adult at my school who really cares about me
  – It is easy to talk with a teacher or counselor at my school
  – The teachers are fair to students at my school
Constructs

• Peer Hostility
  – 4 items; 4-pt. scale (strongly disagree – strongly agree)
  – \( \alpha \) range = 0.71-0.83
  – I feel alone when I’m at my school
  – There are students at my school who really care about me (reverse coded)
  – It is hard to make friends at my school
  – I usually spend lunch and/or recess time alone at my school
Constructs

• Neighborhood Adult Support
  – 3 items; 4-pt. scale (strongly disagree – strongly agree)
  – $\alpha$ range = 0.88-0.94

There are adults in my neighborhood who….
  – Look out for me.
  – I can turn to for advice.
  – Are willing to help me with my problems.
Constructs

• Neighborhood Safety
  – 4 items; 4-pt. scale (strongly disagree – strongly agree)
  – $\alpha$ range= 0.84-0.89

  In my neighborhood….
  – I worry about people with guns and knives
  – Drug dealers are a problem
  – I am scared of some of the people
  – There are people who might hurt me
Results
Trends in Attitudes toward Civic Engagement

Note. All declines significant except for 4th 06-07; 8th 06-07 and 06-08; all changes in 9th and 10th
## Predicting Year 2 Civic Engagement

### 4 Step Hierarchical Regression Analysis

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Standardized Beta (Full Model)</th>
<th>ΔR² (Per Step)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>0.06**</td>
<td>0.01***</td>
</tr>
<tr>
<td>Race (dichotomized)</td>
<td>0.01 n.s.</td>
<td></td>
</tr>
<tr>
<td>Urban vs. Other</td>
<td>0.00 n.s.</td>
<td></td>
</tr>
<tr>
<td>Y1 Parent Involvement</td>
<td>0.16***</td>
<td>0.10***</td>
</tr>
<tr>
<td>Y1 Teacher Support</td>
<td>0.12***</td>
<td>0.03**</td>
</tr>
<tr>
<td>Y1 Peer Hostility</td>
<td>0.03 n.s.</td>
<td></td>
</tr>
<tr>
<td>Y1 Neighborhood Adult</td>
<td>0.31***</td>
<td>0.08***</td>
</tr>
<tr>
<td>Y1 Neighborhood Safety</td>
<td>0.03 n.s.</td>
<td></td>
</tr>
</tbody>
</table>

Note. * p<.05; ** p<.01; *** p<.001
# Predicting Year 3 Academic Engagement

## 2 Step Hierarchical Regression Analysis

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Standardized Beta (Full Model)</th>
<th>$\Delta R^2$ (Per Step)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
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<td>0.06***</td>
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<tr>
<td>Race (dichotomized)</td>
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<tr>
<td>Urban vs. Other</td>
<td>0.01n.s.</td>
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<tr>
<td>Y3 Civic Engagement</td>
<td>0.28***</td>
<td>0.08***</td>
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</tbody>
</table>

Note. * p<.05; ** p<.01; ***p<.001
## Predicting Year 3 Academic Performance: Mathematics

### 2 Step Hierarchical Regression Analysis

<table>
<thead>
<tr>
<th>Grade (Year 3)</th>
<th>Predictor</th>
<th>Standardized Beta (Full Model)</th>
<th>ΔR² (Per Step)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th</td>
<td>Gender</td>
<td>-0.01n.s.</td>
<td>0.03**</td>
</tr>
<tr>
<td></td>
<td>Race (dichotomized)</td>
<td>0.07n.s.</td>
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</tr>
<tr>
<td></td>
<td>Urban vs. Other</td>
<td>-0.15**</td>
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<tr>
<td></td>
<td>Y3 Civic Engagement</td>
<td>-0.04n.s.</td>
<td>0.00n.s.</td>
</tr>
<tr>
<td>7th</td>
<td>Gender</td>
<td>-0.16***</td>
<td>0.08**</td>
</tr>
<tr>
<td></td>
<td>Race (dichotomized)</td>
<td>0.13**</td>
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</tr>
<tr>
<td></td>
<td>Urban vs. Other</td>
<td>-0.17**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y3 Civic Engagement</td>
<td>0.04n.s.</td>
<td>0.00n.s.</td>
</tr>
</tbody>
</table>

Note. * p<.05; ** p<.01; ***p<.001
### Predicting Year 3 Academic Performance: Science

#### 2 Step Hierarchical Regression Analysis

<table>
<thead>
<tr>
<th>Grade (Year 3)</th>
<th>Predictor</th>
<th>Standardized Beta (Full Model)</th>
<th>$\Delta R^2$ (Per Step)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7th</td>
<td>Gender</td>
<td>-0.18***</td>
<td>0.08**</td>
</tr>
<tr>
<td></td>
<td>Race (dichotomized)</td>
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</tr>
<tr>
<td></td>
<td>Urban vs. Other</td>
<td>-0.10*</td>
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</tr>
<tr>
<td></td>
<td>Y3 Civic Engagement</td>
<td>-0.05 n.s.</td>
<td>0.00 n.s.</td>
</tr>
</tbody>
</table>

Note. * $p<.05$; ** $p<.01$; *** $p<.001$
## Predicting Year 3 Academic Performance: Social Science

### 2 Step Hierarchical Regression Analysis

<table>
<thead>
<tr>
<th>Grade (Year 3)</th>
<th>Predictor</th>
<th>Standardized Beta (Full Model)</th>
<th>$\Delta R^2$ (Per Step)</th>
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<tr>
<td></td>
<td>Urban vs. Other</td>
<td>-0.09 n.s.</td>
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</tr>
<tr>
<td></td>
<td>Y3 Civic Engagement</td>
<td>-0.01 n.s.</td>
<td>0.00 n.s.</td>
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Note. * p<.05; ** p<.01; *** p<.001
## Predicting Year 3 Academic Performance: Reading

### 2 Step Hierarchical Regression Analysis

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<tr>
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<th>Predictor</th>
<th>Standardized Beta (Full Model)</th>
<th>ΔR² (Per Step)</th>
</tr>
</thead>
<tbody>
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<td>6th</td>
<td>Gender</td>
<td>-0.06\text{n.s.}</td>
<td>0.04^{***}</td>
</tr>
<tr>
<td></td>
<td>Race (dichotomized)</td>
<td>0.12^*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban vs. Other</td>
<td>-0.12^*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y3 Civic Engagement</td>
<td>-0.04\text{n.s.}</td>
<td>0.00\text{n.s.}</td>
</tr>
<tr>
<td>7th</td>
<td>Gender</td>
<td>-0.03\text{n.s.}</td>
<td>0.08^{**}</td>
</tr>
<tr>
<td></td>
<td>Race (dichotomized)</td>
<td>0.12^*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban vs. Other</td>
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<tr>
<td></td>
<td>Y3 Civic Engagement</td>
<td>0.06\text{n.s.}</td>
<td>0.00\text{n.s.}</td>
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</tbody>
</table>

Note. * p<.05; ** p<.01; ***p<.001
## Predicting Year 3 Academic Performance: Writing

### 2 Step Hierarchical Regression Analysis

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<th>Grade (Year 3)</th>
<th>Predictor</th>
<th>Standardized Beta (Full Model)</th>
<th>ΔR² (Per Step)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th</td>
<td>Gender</td>
<td>0.18***</td>
<td>0.06***</td>
</tr>
<tr>
<td></td>
<td>Race (dichotomized)</td>
<td>0.10 n.s.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban vs. Other</td>
<td>-0.13*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y3 Civic Engagement</td>
<td>-0.04 n.s.</td>
<td>0.00 n.s.</td>
</tr>
<tr>
<td>7th</td>
<td>Gender</td>
<td>0.06 n.s.</td>
<td>0.04**</td>
</tr>
<tr>
<td></td>
<td>Race (dichotomized)</td>
<td>0.10 n.s.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban vs. Other</td>
<td>0.13*</td>
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</tr>
<tr>
<td></td>
<td>Y3 Civic Engagement</td>
<td>0.06 n.s.</td>
<td>0.00 n.s.</td>
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</tbody>
</table>

Note. * p<.05; ** p<.01; ***p<.001
Predicting Year 3 Academic Performance: English Language Arts

2 Step Hierarchical Regression Analysis

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<tr>
<th>Grade (Year 3)</th>
<th>Predictor</th>
<th>Standardized Beta (Full Model)</th>
<th>ΔR² (Per Step)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th</td>
<td>Gender</td>
<td>0.09 n.s.</td>
<td>0.06***</td>
</tr>
<tr>
<td></td>
<td>Race (dichotomized)</td>
<td>0.12*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban vs. Other</td>
<td>-0.13*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y3 Civic Engagement</td>
<td>-0.04 n.s.</td>
<td>0.00 n.s.</td>
</tr>
<tr>
<td>7th</td>
<td>Gender</td>
<td>0.00 n.s.</td>
<td>0.05***</td>
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<tr>
<td></td>
<td>Race (dichotomized)</td>
<td>0.12*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban vs. Other</td>
<td>-0.13*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y3 Civic Engagement</td>
<td>0.07 n.s.</td>
<td>0.04 n.s.</td>
</tr>
</tbody>
</table>

Note. * p<.05; ** p<.01; ***p<.001
Predicting Academic Performance: Academic Engagement

• Adding academic engagement to the prior models significantly improved model fit for all models and grades
  – Accounted for an additional 4-7% of the variance
  – Standardized beta weights of 0.20 – 0.29

• For 6th grade students, civic engagement became a significant predictor for Mathematics, Reading, Writing, and English Language Arts
  – Standardized beta weights of -0.13 – -0.17
Model Summary

Year 1

- Parent Involvement
- Teacher Support
- Neighborhood Adult Support

Year 2

- Civic Engagement

Year 3

- Academic Engagement

Note. Numeric values are standardized beta weights; all values significant at the 0.05 level.
Model Summary

![Diagram showing relationships between Parent Involvement, Civic Engagement, and Academic Engagement across years 1, 2, and 3.]

Sobel test statistic = 8.06, p<.001

Note. Numeric values are unstandardized beta weights; all values significant at the 0.05 level.
Model Summary

Year 1

Teacher Support

Civic Engagement

Teacher Support

Academic Engagement

Year 2

.25

Year 3

Academic Engagement

Civic Engagement

Sobel test statistic = 7.70, p<.001

Note. Numeric values are unstandardized beta weights; all values significant at the 0.05 level.
Model Summary

Sobel test statistic = 8.93, p<.001

Note. Numeric values are unstandardized beta weights; all values significant at the 0.05 level.
Conclusions

• Cross sectional and longitudinal declines in civic engagement
• Multiple contexts are independently related to civic engagement
• Civic engagement is related to academic engagement but not academic performance
• Home, school, and neighborhood contexts predict academic engagement both directly and indirectly through civic engagement
Future Directions

• Add civic behaviors in addition to attitudes
• Control for the nested nature of students within schools
• Use structural equation modeling to test these relationships
• Etc., etc. etc…..
How to Reach Us

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