The Relationship Between Gender and Time-on-Task

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Curry SURP, 2019
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The Classroom

[Images of classroom settings]
Literature Review

❖ Montessori Education (Montessori & George, 1964)
  ❖ Multi-age classrooms
  ❖ Special set of educational materials
  ❖ Student-chosen work in long time blocks
  ❖ Absence of grades and tests
Literature Review

- Gender differences in self-regulation, motivation, and learning style (Logan, 2010; Matthews, Pointz & Morrison, 2009)

- In the early elementary years, girls are more attentive in the classroom and score higher on reading tests (Samuels & Turnure, 1974)

- Attention is positively related to scores on achievement tests (Lahaderne, 1968)
Research Questions

Is there a relationship between gender and percentage of time students spend on task in Montessori classrooms?

Is there a relationship between gender and the average amount of time students spend on each task completed during a work period?
Methodology

Participants

- Observations from 10 classrooms
- n = 115 (f= 56)
  - Gender – based on guide/ administration pronoun cues
- Ages 3-6 (m = 4.46)

Data Collection

- Pre-existing data (2018-2019)
- # minutes working
- Length of work period
- # of objects engaged with
## Data

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Girls</th>
<th>Boys</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>% of time spent on-task</strong></td>
<td>64.74% S=17%</td>
<td>67.30% S=15%</td>
<td>62.31% S=19%</td>
</tr>
<tr>
<td><strong>Avg. # of objects of engagement</strong></td>
<td>7.53 S=3.34</td>
<td>7.89 S=3.33</td>
<td>7.19 S=3.35</td>
</tr>
<tr>
<td><strong>Avg. # of minutes on a task</strong></td>
<td>9.95 Minutes S=9.29</td>
<td>9.40 Minutes S=6.94</td>
<td>10.47 Minutes S=11.10</td>
</tr>
</tbody>
</table>
% Time on Task

Work Period = 60 Minutes

\[
\frac{39 \text{ Minutes on-task}}{60 \text{ Minutes}} = 65\% \text{ on-task}
\]

Work Period = 45 Minutes

\[
\frac{26 \text{ Minutes on-task}}{45 \text{ Minutes}} = 57.7\% \text{ on-task}
\]
Time Per Task

80 minutes on task / 5 Tasks
= 16 minutes per task

Time Per Task

120 minutes on task / 10 Tasks
= 12 minutes per task
Results

Relationship Between Gender and % Time-on-Task

(p = 0.1109)

Relationship Between Gender and Time per Task

(p = 0.547)
Conclusions

❖ No significant relationship found between gender and average time spent on each task or % of time spent on-task.

❖ Goes against previous literature and differs from results found in traditional classrooms
Implications & Next Steps

❖ Why does the relationship between gender and time-on-task repeatedly appear in traditional classrooms but not in Montessori classrooms?
  ❖ Elements of Montessori education that mitigate gender differences.

❖ Limitations
  ❖ Localized population of participants
  ❖ Age group
References


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Questions