The Important Business of Play: Examining the Reliability and Validity of the Mature Play Observation Tool

Crystal Day-Hess, PhD & Carrie Germeroth, PhD
University of Denver, Morgridge College of Education

INTRODUCTION

• It is frequently postulated that mature make-believe play supports children’s acquisition of social, academic, and self-regulatory skills.1,2,3
• Correlational findings have linked high-quality make-believe play in early childhood to better language, social, cognitive, and academic skills.4
• However, few studies have causally linked make-believe play to child outcomes, in part, due to difficulty identifying and assessing this type of play.5
• Existing measures of make-believe play are often limited in terms of context, focus, reliability and validity, and availability of normative data.6

RESEARCH QUESTIONS

1. Is the MPOT a valid measure of make-believe play?
2. Is the MPOT a reliable measure of make-believe play?

METHODS

Participants
• 28 preschool teachers and classrooms from 3 large urban school districts in the western U.S.
• 298 preschool children

Procedure
• Evaluation of the MPOT was part of a larger, three-armed cluster randomized control trial examining the effects of a math- and play-based self-regulation intervention.
• Observations and assessments were conducted at the end of the second year of intervention implementation.
• MPOT Observation Training
  • Video, still photographs, live practice in the classroom
  • Raters achieved 100% reliability for certification
  • Raters achieved 97% reliability for data collection

Child Measures

Child Dimension

Self-Regulation

• Head Toes Knees Shoulders Task (HTKS)
• Forward & Backward Digit Span (FDS, BDS)
• Pencil Tap Task (PTT)

Literacy

• Phonological Awareness
• Literacy
• Screening (PALS)
• Renfrew Bus
• Story-North America (RBS-NA)

Math

• Test for Early Achievement in Math (TEAM)

Child Dimension

• The MPOT is unique in that it is a low-inference measure that assesses both child and teacher dimensions related to make-believe play in an authentic early childhood classroom-based setting (Table 1).

MATURE PLAY OBSERVATION TOOL (MPOT)

Table 1: Dimensions and Indicators Assessed by the Mature Play Observation Tool

<table>
<thead>
<tr>
<th>Child Dimension</th>
<th>MPOT Indicators</th>
<th>HTKS</th>
<th>FDS</th>
<th>BDS</th>
<th>PTT</th>
<th>Upper-case Letters</th>
<th>Lower-case Letters</th>
<th>Letter Sounds</th>
<th>Name Writing</th>
<th>RBS-NA</th>
<th>TEAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Created Props</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child Metaplay</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play Interaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children’s Role Playing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child Role Speech &amp; Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child Sum Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planned Play Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher Intervention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RESULTS

1. Is the MPOT a valid measure of make-believe play?
• Content validity is evidenced by the alignment between theoretical and operational definitions of mature make-believe play and the dimensions included in the MPOT.
• Concurrent validity is evidenced by previous research demonstrating significant differences between intervention and control classrooms on the MPOT, with intervention classrooms scoring higher on dimensions of the MPOT.
• Construct validity is suggested by bivariate correlations found between MPOT dimensions/Indicators and child outcome measures (Table 2).

Table 2: Bivariate Correlations Between MPOT Scores and Child Outcome Measures

2. Is the MPOT a reliable measure of make-believe play?
• Preliminary data show the MPOT demonstrates high overall reliability (Cronbach’s α = .909).

CONCLUSIONS

• Preliminary data show the MPOT is a valid and reliable measure of mature make-believe play in the preschool classroom.
• As predicted by theoretical and previous empirical findings related to make-believe play, many indicators in both child and teacher dimensions of the MPOT were found to have significant positive correlations with children’s scores on measures of emergent self-regulation, math, and literacy skills.
• To build on the correlational findings of the current study, future research should explore the causal relationships between mature make-believe play and child outcomes using the MPOT.
• Future investigations should also explore the usability and efficacy of the MPOT as a professional development tool for educational practitioners, supporting teachers’ self-assessment of levels of play in their own classrooms.

ACKNOWLEDGEMENTS

We would like to acknowledge the leadership and contribution of team members, particularly: Doug Clements (Principal Investigator), John Simon, Carolyn Layzer, Faith Uyeh, and collaborators Elana Bodrova, Chris Wolfe, Alissa Lange, and Carolyn Hilary. This presentation was made possible in part by funding from grant #R305B025204 and #R305B081107 awarded to the University of Denver by the Institute for Education Sciences, U.S. Department of Education. The opinions or views expressed herein are those of the authors and do not necessarily represent the official position of the Institute of Education Sciences, U.S. Department of Education.

REFERENCES