Association between the process and the product of the basic throw and jump movement patterns
M.Sc. Magally Marquez-Barquero and Ph. D. Walter Salazar-Rojas

Characteristics of evaluation instruments

**PROCESS:** They assess the characteristics of the gesture. Example how the event occurs, or the coordination of the trunk and limbs during the execution of the movement (Jiménez et al., 2013).

**PRODUCT:** They evaluate the outcome of the motor gesture. Example how fast the person runs, or jumps (Jiménez et al., 2013).

**Purpose** was to analyze the association between product tests and process tests in jumping and throwing skills.

### Results

![Table 3. Correlations between product and process in jumping and throwing](image)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Tried 1</th>
<th>Tried 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jump</td>
<td>.413**</td>
<td>.962**</td>
</tr>
<tr>
<td>Process/Product</td>
<td>.104</td>
<td>.311</td>
</tr>
</tbody>
</table>

*P < .01

**Practical Implications**
1. Do not assume that the improvement in process is an improvement in product.
2. The positive and significant correlation is not directly associated with an association between changes.

### Discussion

Developmental mechanisms that influence the trajectories of physical activity in infants (Stodden et al., 2008)

![Diagram: Positive Spiral of Engagement](image)

### Methodology

**Design:** Descriptive correlational.

**Subjects:** 40 children age 10.03 ± 0.3 years, weight 37.82 ±13.9 kg, height 139 ± 28 cm, BMI 19.38 ±4.5 kg/m². Eligibility criteria: children without medical or physical disabilities, schooling, who voluntarily agreed to collaborate with the study and who gave informed consent and assent.

**Instruments:**

**Process:** Basic Movement Patterns Test (IPBM) (Jiménez-Díaz et al., 2015), was applied to launch (r = .915) and to jump (r = .821).

**Product:** in launching the speed was recorded in km/h and in jumping the length in cm of the jump was recorded.

**Procedures:** The children performed the skills in order to jump and throw. They were recorded with video from a side view. In launching the camera it was located on the launch side. After the researcher demonstrated each skill, the children made three attempts to warm up each skill. In addition, participants were asked to execute with maximum effort. One registration instrument was used per group, to guarantee the same order of execution in both tests.

**Statistical analysis:** r Pearson correlation.

### References


magally.marquez.barquero@una.go.cr