Does Gender Make a Difference?

First results from the German tandem-study on pedagogical activity of female and male ECE workers

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The Tandem Study

The Tandem Study (Nov. 2010 - April 2013) pursues the objective of investigating and comparing the behaviour of male and female ECE workers in kindergartens (children between three and six years of age).

• Do male and female ECE workers, according to professional criteria, differ in their interactive behavior toward children?
• Can we confirm in the professional context the assumption of attachment theory, that women interact more on the level of attachment, and men, rather, are challenging and oriented to exploration?
• Can gender dependent tendencies be found in ECE workers undertaking different activities, and serving different content areas, with girls than with boys?
• Whether, and how, ECE workers come across as gender role models; how interactive processes (in the sense of a ‘doing gender’) take place?
• Can gender dependent arrangements and division of work responsibilities between ECE workers be found (tandem-effect)?
The Tandem Study - Design

Ad-hoc sample: 21 man/woman-tandems & 12 woman/woman-tandems

- Everyday-like quasi-experimental pedagogical (individual-) situation (with various materials and tools) (videotaped)
- Quasi-experimental group situation with both professionals (videotaped)
- Qualitative interviews
- Personality tests

Assessment of the individual situationa through a rating(s) process (19 items). Translation in quantitatively comparable data

- Assessment of the products made in the individual situations and the use of material and tools

Objectiv:
- Identification of key scenes of „doing gender“
- Qualitatively-analyses of the interviews

Conclusion
Individual situation – material and tools

Male or female ECE worker with one child
Two cases with a range of various materials and tools
Time frame of 20 min.
Rating results of the individual situations

Analysis of the ratings of the individual situations (man/woman tandems: n = 21/21)

• Empathy
• Challenge
• Dialogical communication
• Type of cooperation
• Content of communication

Interraterreliability: $ICC_{MW}$ unjust, random; Modell: Two-Way-Random; Typ: Absolut Agreement; the values for all items were clearly within the range above ICC = .70 (except 2.4, ICC = .69), with which, according to Wirtz & Caspar (2002), they are reliable.
Dimension Empathy

- This dimension includes items which aim at aspects of what is, from the attachment theoretical perspective, empathy as the most important factor for secure attachment.
- The comparison of the mean values for the men and women, for all items, results in only minimal and not significant differences, which, moreover, are compensated in the individual items.
- Based on these dimensions, no gender effect is revealed in our sample, and also the possible assumption, that women engaged in activity with children are more empathic, was not confirmed.
Differences between female and male ECE workers:  
**Empathy**

<table>
<thead>
<tr>
<th>Item (1 = does not apply at all, 5 = applies completely)</th>
<th>women</th>
<th>men</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE worker reacts to expressions &amp; impulses of the child appropriately &amp; promptly</td>
<td>3,73</td>
<td>3,63</td>
</tr>
<tr>
<td>ECE worker supports the child appropriately (without unrequested interference &amp; rules/regulations) (1.3)</td>
<td>3,28</td>
<td>3,31</td>
</tr>
<tr>
<td>ECE worker gives appropriate positive &amp; appreciative feedback (1.4)</td>
<td>3,23</td>
<td>3,14</td>
</tr>
</tbody>
</table>
Dimension Challenge

• This dimension includes items aimed at a challenging and exploration-fostering manner of interaction. Supplementary to these, and based on König (2009), the level of activity of the child as well as the question of the achievement-orientation of a situation are included, because they contain corresponding aspects.

• The conjecture suggested by attachment research, that men challenge children more, is not confirmed in our sample. Although minor differences favouring the male ECE workers were revealed, these are not significant and, furthermore, the spread amongst the men is high.

• It is noticeable that the slightly higher average level of challenge by male ECE workers was not accompanied by a greater emphasis on achievement-orientation, nor did less challenge lead to more boredom on the part of the child.
### Differences between female and male ECE workers: Challenge

<table>
<thead>
<tr>
<th>Item (1 = does not apply at all, 5 = applies completely)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>ECE worker encourages the child to experiment &amp; deal with unknown problems (1.2)</td>
<td>2,52</td>
<td>2,67</td>
</tr>
<tr>
<td>ECE worker asks questions which stimulate thinking (2.3)</td>
<td>2,40</td>
<td>2,67</td>
</tr>
<tr>
<td>ECE worker uses terms unfamiliar to the child (2.4)</td>
<td>1,76</td>
<td>1,87</td>
</tr>
<tr>
<td>The child loses interest during the activity, &amp; shows signs of boredom (3.5)</td>
<td>1,55</td>
<td>1,66</td>
</tr>
<tr>
<td>ECE worker arranges the activity as an achievement-oriented situation (3.6)</td>
<td>1,79</td>
<td>1,70</td>
</tr>
</tbody>
</table>
Dimension Dialogical Interaction

- This dimension includes items which are oriented to the items developed by König (2009), for the surveying of dialogical-interactional quality.
- The comparison of the mean values for the men and women results in only minimal and not significant differences. Based on these dimensions, *no gender effect* is revealed in our sample.
Differences between female and male ECE workers: Dialogical Interaction

<table>
<thead>
<tr>
<th>Item (1 = does not apply at all, 5 = applies completely)</th>
<th>women</th>
<th>men</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE worker takes up suggestions &amp;/or initiatives of the child (2.1)</td>
<td>3.65</td>
<td>3.62</td>
</tr>
<tr>
<td>ECE worker waits patiently for decisions of the child (2.2)</td>
<td>3.27</td>
<td>3.64</td>
</tr>
<tr>
<td>ECE worker is facing the child and seeks eye contact (2.8)</td>
<td>3.64</td>
<td>3.70</td>
</tr>
</tbody>
</table>
The items in this dimension have been developed to a considerable extent from the available material. In the preparation of the ratings instrument, and its matching to exemplary sequences, individual differences are clearly revealed in connection with the verbal or doing activities of the ECE workers, and with respect to division of work responsibilities and cooperation between ECE workers and child.

In our sample a tendency appears that male ECE workers put themselves somewhat more in the position of observer than do female ECE workers, and women are, to a minimal degree, more active than men, and let the child watch. This is consistent with male ECE workers more often organizing a common project, and female ECE workers more often a situation of parallel working on different sub-projects.

These differences are still minimal, and not significant.
## Differences between female and male ECE Workers: Type of Cooperation

<table>
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<th>women</th>
<th>men</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE worker observes the child &amp; involves him/herself only verbally (3.1)</td>
<td>2,13</td>
<td>2,34</td>
</tr>
<tr>
<td>ECE worker acts him/herself &amp; lets the child watch (3.2)</td>
<td>2,16</td>
<td>1,95</td>
</tr>
<tr>
<td>ECE worker &amp; child pursue different sub-projects in parallel activity, &amp; only partial cooperation (3.3)</td>
<td>1,98</td>
<td>1,72</td>
</tr>
<tr>
<td>Both work together on an object with continual coordination (3.4)</td>
<td>3,46</td>
<td>3,57</td>
</tr>
</tbody>
</table>
Type of Cooperation – Gender of the Children

• When one considers the gender of the children in the evaluation, significant differences appear, which are all the more remarkable given that such effects do not occur in the first two dimensions.

• Work with girls is clearly done more in parallel sub-projects, with only partial coordination, than work with boys. The significant effect appears in the direct comparison with the tandem partner, as well as in the general comparison of all ECE worker.

• Especially the male ECE workers appear to treat boys and girls differently. They work less with boys in the parallel form, whereas, with respect to this aspect, female ECE workers treat boys and girls in a more similar way.
Dimension: The content of communication

• The extent of primarily objective-concrete and functional expressions is judged, and the thematization of personal content, or the relationship of the actors, as well as associated phantasies or narrations during the play phase, are registered.

• The expectation that men and women have different styles of communication, that male ECE workers more often take up objective-functional content in communication, whereas female ECE workers engage in more narrative and associative communication, and go into personal aspects or the relationship, was only confirmed tendentially in our sample. The differences do not achieve a significant level.
## Differences between female and male ECE Workers: Content of communication

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<th>men</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE worker thematizes the relationship or the personal (attributes, experiences, feelings) or takes these up when this comes from the child (2.7)</td>
<td>2.32</td>
<td>1.98</td>
</tr>
<tr>
<td>ECE worker expresses him/herself primarily objectively-concretely &amp; functionally about the activity, or takes this up when this comes from the child (2.5)</td>
<td>3.48</td>
<td>3.69</td>
</tr>
<tr>
<td>ECE worker accompanies the activity with associative phantasies &amp; narrations, or takes these up when this comes from the child (2.6)</td>
<td>2.38</td>
<td>2.23</td>
</tr>
</tbody>
</table>
When one considers the gender of the child in the evaluation, there are then also significant results.

Male and female ECE workers speak with boys about activities in an objective-functional manner more than with girls.

The relationship or the personal (attributes, experiences, feelings) is thematized sooner with girls than with boys.

Also, in working with girls, the activity is to a greater degree accompanied by associative phantasies or narrations than with boys, though this effect is not significant.
Gender and Products made

- The research design, due to the variety of prescribed materials, and the resulting scope for making decisions, also permits statements about the different tendencies of men and women, or boys and girls, to fall back upon definite materials, and, according to interest, to carry out different projects.

- The products made in the individual situations can be distinguished with respect to whether they symbolise ‘subjects’, in the sense of living creatures, such as humans or animals (operationalized as ‘having eyes’), or ‘objects’ such as cars, buildings or aeroplanes (‘not having eyes’).
Products made
Gender and Products made

• When one sets these two basic types of products in relation to the gender of the ECE workers and the children, the influence of the gender factor appears.

• While it is more likely that ECE workers of both genders products subjects with girls, in the situations with boys it is more likely to be objects. This effect is significant.

• In connection to the gender of the ECE workers, it appears that women are more often involved in the construction of subjects, men in that of objects. However, this finding is not so clearly present as with the children, and is not significant.
Gender and Products made

- Products made in relation to the gender of the professional and of the child

- Men clearly more often build objects with boys, and with girls are more likely to make subjects, women produce objects or subjects in equal frequency with boys, and with girls favour subjects.
  - This finding corresponds with gender dependent differences in behaviour, with respect to the dimension of communicational content, and the type of activity: Whereas talk with boys is more likely to be functional object-oriented than with girls, with girls communication is more frequently personal relationship-oriented than with boys.
  - This is confirmed in the object-oriented products of the boys, and the subject-oriented products of the girls.
  - These differences between boys and girls more clearly emerge with male ECE workers.
## Use of Materials

<table>
<thead>
<tr>
<th>material</th>
<th>ECE worker (m)</th>
<th>ECE worker (f)</th>
<th>boys</th>
<th>girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>felt wool</td>
<td>36.4 %</td>
<td>57.1 %</td>
<td>29.4 %</td>
<td>12.3 %</td>
</tr>
<tr>
<td>pipe cleaners</td>
<td>45.5%⁺</td>
<td>76.2 %⁺</td>
<td>52.9 %⁺⁺</td>
<td>81.8 %⁺⁺</td>
</tr>
<tr>
<td>beads</td>
<td>4.5 %⁺⁺</td>
<td>52.4 %⁺⁺</td>
<td>26.5 %</td>
<td>30.3 %</td>
</tr>
<tr>
<td>craft eyes</td>
<td>4.5 %⁺⁺</td>
<td>33.3 %⁺⁺</td>
<td>17.6 %</td>
<td>27.3 %</td>
</tr>
<tr>
<td>wooden panels</td>
<td>59.1 %</td>
<td>42.9 %</td>
<td>61.8 %</td>
<td>39.4 %</td>
</tr>
<tr>
<td>nails</td>
<td>45.5 %</td>
<td>28.6 %</td>
<td>41.2 %⁺</td>
<td>18.2 %⁺</td>
</tr>
<tr>
<td>wine bottle corks</td>
<td>54.5%</td>
<td>42.9 %</td>
<td>50.0 %</td>
<td>30.3 %</td>
</tr>
<tr>
<td>cardboard rolls</td>
<td>36.4 %</td>
<td>28.6 %</td>
<td>50.0 %⁺⁺</td>
<td>21.2 %⁺⁺</td>
</tr>
<tr>
<td>coloured paper</td>
<td>22.7 %</td>
<td>47.6 %</td>
<td>14.7 %⁺⁺</td>
<td>54.5 %⁺⁺</td>
</tr>
<tr>
<td>washers</td>
<td>18.2 %⁺⁺</td>
<td>0.0 %⁺⁺</td>
<td>35.3 %⁺⁺</td>
<td>9.1 %⁺⁺</td>
</tr>
</tbody>
</table>

⁺ = significant χ² value (p value two-sided ≤0.05)  
⁺⁺ = significant χ² value (p value two-sided ≤0.01)
SUMMARY: Rating Results, Analysis of Products made und Materials used

- With regard to *formal professional qualities* and the *manner of interaction with the children*, no influence of the gender of the ECE workers can be recognized.

- With regard to *content* aspects of communicational behaviour, and relative to the manner of the division of work responsibilities between ECE worker and child, a *gender effect of the ECE workers* became apparent, but significant values were only reached when starting from the gender of the child.

- This finding in connection with content aspects of the interaction was confirmed in the analysis of the use of materials in the individual situations, and the products resulting from them.
In summary, one can say that the gender of the ECE workers has no influence on how they behave towards children.

An influence of gender only became apparent when the issue is what the professionals do with the children, to which themes and materials they incline, and which interests and inclinations of girls and boys they take up.

On the whole, the gender of the children appears to have greater effect than that of the ECE workers, whereby, however, the men more clearly tend to orientate their behaviour to the gender of the child.
Qualitative Approach: „doing gender“

• The results of the qualitative analysis based on the individual sequences are that, for most of the time, no manifest evidence of explicit thematizations of gender are identifiable.
• To interpret this in the sense of ‘undoing gender’ appears, however, misguided, as presumably the fact alone, that it is a man or a woman who acts, lends the particular occurrence an additional level of meaning.
• There is some indication that this level of meaning mostly does not become independently apparent, rather ‘accompanies’ the occurrence like an implicit subtext, and the actors (adults the same as children) are also often not conscious of it.
Key Scenes for „doing gender“

• It speaks for this theoretical assumption that *key scenes* can be identified in which the gender aspect steps into the foreground, and is then also directly or indirectly thematized by the actors.

• In the individual sequences such key scenes can be observed more often in gender-homogeneous than in gender-heterogeneous constellations, and they stand in connection to specific materials or activities (wood, nails, hammer for boys/male ECE workers, beads or felt wool for girls/female ECE workers) or phantasies/associations (guns, knight's castle for boys; hair, dresses for girls), which exhibit a matching gender connotation.
Key Scenes in Group Situations

An example case should clarify this:

In the beginning of the group process the gender theme is not noticeably present. In a play situation with a clearly competitive character, as a boy loses against a girl, because he falls over, the male ECE worker says to him, loudly across the playing surface: ‘That's not important – men are not as agile as girls. That's nothing to worry about.’ In response, standing in front of him, a girl protests: ‘Girls are more tender – but you are a boy!’. To this he responds: ‘But you are more agile, my treasure’.

We don't know how the girl interpreted the first statement of the male ECE worker, nor exactly what caused her protest. Fact is, that from now on the gender theme is clearly in the room as tension, and the key word ‘agile’ can be heard from the children repeatedly. As the male ECE worker finally challenges his colleague to play against him, and he loses, then the girls are jubilant and the boys are silent. After a number of children have played the game, the two professionals repeat their competition, and this time the male ECE worker wins, because this time he is clearly more engaged. Again the girls are jubilant, but they are lectured by a boy: ‘But Rosi [female ECE worker] didn't even win’.
Gender and Professionality

• It is notable that in scenes with a manifest gender connotation the male or female ECE workers often give the impression of acting in an especially authentic manner, tending to be rather more intuitive and less reflective.

• Consequently, references to gender often emerge obliquely to professional standards of behaviour, or even contrary to them. They are connected rather with *authentic* than with *professional* behaviour.
These are preliminary results. Thank you for your attention.