



Curriculum and Quality Analysis and Impact Review
of European Early Childhood Education and Care



613318

CARE

**Curriculum Quality Analysis and Impact Review of European
ECEC**

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Early childhood education and care: promoting quality for individual, social and economic benefits

**D3.2: Professional Development and its Impact on Children in
Early Childhood Education and Care:
A Meta-Analysis Based on European Studies**

Final report: March 31, 2016

Short summary: This study reviews the European evidence on the impact of professional development (PD) of pre-school educators on child outcomes. A meta-analysis is used to investigate how PD of pre-school educators affects child outcomes. The studies included in the meta-analysis all concern PD in formal pre-school centers in Europe, and focus is on effects directly on child outcomes. Thus, potential effects of PD on the pre-school educators' skills, beliefs, attitudes and work conditions are not investigated. The geographical restriction excludes the wide range of studies from the US, but these studies still form the base for comparison of the estimated effect sizes. The range of relevant European studies is quite small, but despite the small number of studies included, our results show a significantly positive effect of PD on child outcomes. We find an overall effect size of 0.35 (with a 95 % confidence interval from 0.20 to 0.51).

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Title: Professional Development and its Impact on Children in Early Childhood Education and Care: A Meta-Analysis Based on European Studies

Organisation: Aarhus University

Authors (main authors in bold): **Peter Jensen** and **Astrid Würtz Rasmussen**

Email: pje@econ.au.dk and awr@econ.au.dk

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Dissemination Level		
PU	Public	x
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Executive Summary

This report is part of the project *Curriculum Quality Analysis and Impact Review of European Early Childhood Education and Care (CARE)*, funded by the European Union within the Seventh Framework Programme, and the current study is part of WP3 *Professional Development: Impact and Innovation*.

This report reviews the currently existing evidence on the impact of professional development (PD) in early childhood education and care (ECEC) on child outcomes in Europe. An essential part of this study is a meta-analysis of the results of existing European studies focusing on investigating the impact of PD of pre-school educators on child outcomes, i.e. we conduct a quantitative analysis of the effect of professional development on child outcomes in Europe. We systematically search for and collect a range of relevant studies of European experiences and conduct a meta-analysis of the results of these studies.

The studies included in the meta-analysis all concern PD in formal pre-school centers in Europe. Focus is on effects directly on child outcomes and we thus ignore potential effects of PD on the pre-school educators' own outcomes. We have chosen to focus primarily on the effects on child outcomes, as positive effects for children have to be the ultimate goal of engaging in PD.

Professional development is increasingly being addressed as a potential way of improving the teaching quality of ECEC and thereby improving child outcomes (Schachter, 2015). This has led to a growing interest in evaluating the impact of PD interventions and to the emergence of a number of reviews of the effects of PD in ECEC (e.g. Schachter, 2015; Powell and Diamond, 2010; Zaslow et al., 2010). These reviews are mainly based on US research.

The aim of this study is therefore to review the currently existing evidence on PD specifically focusing on the European research. This is of particular relevance in the context of the project CARE. Furthermore, we are not aware of previous studies collecting *general* evidence on European PD experiences, despite having knowledge of several studies investigating specific PD experiences in European countries. In summary, this review and meta-analysis aims to answer the following research questions in the European context:

1. For children age 0-6 years in formal childcare, can child outcomes be improved by professional development of pre-school educators?
2. What is the effect of in-service training of pre-school educators on child outcomes?

The meta-analysis in the current study initially includes nine European studies that pass some rather strict inclusion criteria. All included studies investigate PD in formal pre-schools (i.e. they only focus on changes within pre-schools) and are based on data from Denmark, France, Germany, The Netherlands, and Wales. The studies have different focus points despite all being concerned with child outcomes: Literacy, reading or language (Ecalte et al., 2015; Cviko et al., 2014, and Henrichs and Leseman, 2014), mathematics (Gasteiger, 2014), or behavior and self-regulation (Hutchings et al., 2013; Jensen et al., 2013; Jensen et al., 2015; Perels et al., 2009, and Rönna-Böse et al., 2009). Thus, there is a lot of variation in the outcomes investigated. Despite the small number of studies included and the wide variety of outcomes, our results show a significantly positive effect of PD on child outcomes. We find an overall effect size of 0.35 (with a 95 % confidence interval from 0.20 to 0.51).

Previous reviews primarily based on US studies (e.g. Fukkink and Lont, 2007; Zaslow et al., 2010) have similarly concluded that PD has a positive impact on child outcomes. Fukkink and Lont (2007) perform a meta-analysis and report an overall effect size of 0.55, although this is not statistically significant (at 5% level). This is slightly higher than our estimated overall effect size of 0.35 from European studies, but illustrates that the European studies do not necessarily deviate much from the US studies. Moreover, a recent meta-analysis of the effects of PD on child outcomes in language and emergent literacy (Markussen-Brown et al., 2015, also relying on studies from North America) finds statistically positive effects for different outcomes, with overall effect sizes in the range of 0.18-0.46.

To conclude, more research in a European context is clearly needed in order to shed more light on the effect of PD in pre-schools on child outcomes. The results from the US are interesting and encouraging but not necessarily directly comparable to effects of PD in Europe. It is therefore very important that we also have research-based evidence from Europe. The results from the current meta-analysis point in the direction that professional development has a clear positive impact on child outcomes. The exact mechanism(s) need to be further explored, but it can definitely be concluded that a greater focus on PD will be beneficial for children across Europe. With this evidence, and hopefully evidence from more studies in the future, we can compare to the lessons learned from the US context in more detail.