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Hybrid organizations in the privatized and harmonized Dutch ECEC system: Relations with quality of education and care

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ABSTRACT

Privatization and marketization have been introduced in early childhood education and care (ECEC) in many countries in the past decades. In the same time window, cultural and linguistic diversity has increased strongly, challenging countries to ensure equal opportunities for all children. To prevent or reduce early education gaps, public subsidies have been introduced in privatized ECEC systems to provide disadvantaged children with high quality education and care, increasing the hybridity of the system. The present study examined within an organization-sociological framework whether ECEC centers, seen as organizations, reveal different ways of adapting to system hybridity, taking the hybrid ECEC system of the Netherlands as a case in point. More specifically, the study examined whether different types of organizations emerged after successive privatization, marketization and harmonization reforms and how these organization types relate to the quality of care and education provided. Using cluster analysis on a sample of 127 ECEC centers, both for-profit and not-for profit, four organizational configurations were identified that differed strongly on several indicators of quality, including observed process quality. ECEC centers characterized as *engaged not-for-profit professional organizations* outperformed the centers of the other types on virtually all measures of interest. The findings are discussed with regard to the question how privatized and marketized hybrid ECEC systems can be governed to serve public goals optimally.

In the past decades, several developments took place in the context of early childhood education and care (ECEC) provisions. Privatization, the withdrawal of the state from the supply-side, and marketization, the shift from supply-driven to demand-driven provision in a competitive market, have been introduced in ECEC services in many countries, with cost-efficiency as main motive (Brennan, 2016; Ernst, Mader, & Mierendorff, 2014; Irvine & Farell, 2013; Naumann, 2011; Newberrry & Brennan, 2013). In roughly the same time window, cultural and linguistic diversity has increased strongly worldwide (Crul, Schneider, & Lelie, 2013; Vertovec, 2007), challenging countries' education systems and calling for policies to ensure equal educational opportunities as a public task. One prominent response, observed in many countries, has been the introduction of subsidized early education programs in (partly) privatized and marketized ECEC systems to prevent or reduce early education gaps (Brennan, 2016; Irvine & Farell, 2013; Leseman, 2009; Naumann, 2011; OECD, 2015). A pressing question is to what extent privatization and marketization of ECEC are compatible with public tasks such as ensuring equal opportunities for young children in a diversifying society.

To answer this question, we focus on ECEC centers as *organizations* that act in and adapt to a complex environment with divergent demands and incentives. We outline a framework based on Mintzberg's organizational configurations theory (Mintzberg, 1983; Mintzberg, Ahlstrand, & Lampel, 2005; Quinn, Mintzberg, & James, 1988) to typify organizations in terms of their responses to the demands and incentives in the wider context. This framework is then applied to the ECEC system in the Netherlands, as one of the countries that introduced privatization and marketization in ECEC together with an increased emphasis on the role of ECEC in preventing early education gaps.

The Dutch ECEC system, after successive reforms, can be characterized as a *hybrid system* (Brandsen, Van de Donk, & Kenis, 2006), in which both privatized for-profit and (former public) not-for-profit organizations have to serve two main public tasks: to provide quality care of children from dual earner families and to prevent or reduce early education gaps. More specifically, we examine whether different types of organizations have emerged in the context of the hybrid Dutch ECEC system and whether these types of organizations differ in the quality of their services.

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1. Privatization and marketization of ECEC and public interests

Previous studies on the effects of the introduction of privatization and marketization in ECEC have demonstrated several drawbacks. For example, in Germany, after privatization and marketization of ECEC, a strong relation was found between the fee centers charged to parents and the socioeconomic background of children attending these centers. As a consequence, children were increasingly unequally distributed over ECEC centers, leading to segregation and, overall, lower experienced quality for children with a low socioeconomic status (SES) or immigration background (Ernst et al., 2014; Mierendorff, Ernst, & Mader, 2018). Likewise, in Australia, after several liberalization reforms, Brennan (2016) found strong underrepresentation of non-English speaking children and children in poor remote areas in privatized childcare, while the care for diverse, disadvantaged and remote children was mainly left to the remaining community-based public provisions. Noailly and Visser (2009) examined the consequences of the privatization and marketization of the Dutch daycare market and found a shift in provision to wealthy urbanized areas with high purchasing power, resulting in lower availability of ECEC in poorer rural areas. A similar observation has been reported by Penn (2011) regarding the privatized daycare and preschool market in the UK.

As a response to the observed segregation and unequal access to quality resulting from the freedom of choice of parents in a privatized market, governments put strong emphasis on external quality regulation, focusing in particular on structural costs-related aspects such as basic health and safety requirements, group-size, children-to-staff ratio and staff qualifications in order to level the playing field and to ensure safety and sufficient minimum quality for all children (OECD, 2012; Penn, 2011). However, in Australia, this policy could not prevent a widening split between community-based provision for disadvantaged children and private childcare services for non-disadvantaged children (Irvine & Farell, 2013; Press & Woodrow, 2018). In addition, in several countries, privatization and marketization have been associated with less stability of the ECEC system, as privatized markets are more vulnerable to economic trends and fluctuations in demand in relation to policy changes and austerity measures (Akgündüz, Jongen, Leseman, & Plantenga, 2013; Gallagher, 2017; Lloyd & Penn, 2012).

Raw market forces can possibly be counter-acted by giving prominence to public goals in statutory quality frameworks, in addition to the regulation of costs-related structural quality characteristics. Naumann (2011) analyzed the changes in the provision of services at the system level in Sweden (predominantly state-driven) and the UK (predominantly market-driven) in the past decades, showing converging tendencies. Marketization was introduced in Sweden in the1990s and private providers gradually increased their market share since then. However, the partly privatized market is still strongly regulated by public goals reflected in the national curriculum, preserving the basic universalist social rights-based character of the Swedish ECEC system. In the UK, privatization and marketization remained the main characteristics of the ECEC policy, yet the social investment agenda under the New Labor government in the 1990s led to massive public investments in ECEC provision in poor areas, along with the introduction of a detailed national quality framework that recognizes the social right of all children to high quality ECEC. Despite differences in governance and degree of privatization and marketization, the strong legal status of public interests and common values in both UK and Sweden seem to mitigate at least to some extent undesirable effects of marketization such as unequal access to quality, making the two systems more alike in this regard than expected (Naumann, 2011; see also Hobson, Hellgren, & Bede, 2015).

2. Organizational configurations

ECEC is provided by *organizations* that differ in structural and cultural characteristics such as size, type of management, legal form, focus on professional development, and norms and values. According to sociological contingency theory, organizations, in order to perform optimally, need to constantly adapt to the changing demands in their environment by combining structural and cultural characteristics into new organizational configurations (Morgan, 1992; Quinn et al., 1988). Focusing on ECEC centers as organizations within a sociological contingency approach can help to unravel how developments in ECEC systems can affect ECEC centers through initiating adaptative organizational changes.

Contingency theory has been further elaborated by Mintzberg (1983) into a typology of organizational configurations. Mintzberg assumes consistent combinations of organizational characteristics to correspond to consistent combinations of internal and external demands and incentives, seen as 'pull factors'. The different characteristics of the organizations fall into configurations. When these characteristics are mismatched, when the wrong ones are put together, the organization does not function effectively, because the organization "does not achieve a natural harmony" (Mintzberg, 1981: 103).

Mintzberg identified six consistent combinations of organizational characteristics or basic configurations, four of which were deemed most relevant for the present purpose (Mintzberg, 1983; Mintzberg et al., 2005; Quinn et al., 1988). The *simple structure organization* is characterized by direct, centralized staff supervision by one boss, often the owner. This type of organization has a small-scale organic structure, limited resources for overhead tasks such as professional development, and responds to the demand for flexible client-centered services in a local market. Although making profit is a goal, there is not a strong pull for commercial expansion. The *professional bureaucracy* emphasizes the continuous training of skilled autonomous professionals to maintain high quality standards of performance. This type of organization is characterized by a hierarchical administrative structure, line-management, standardization of procedures throughout the organization, and responds to a stable environment that demands complex services of high quality. The *commercial division organization* is a large organization characterized by a strong market-orientation. This type of organization responds to the pull to provide flexible, client-centered complex services in a competitive (regional, national or even global) market by splitting into semi-independent divisions with strong middle management, while the pull to increase profits and dividends for shareholders dominates decision-making. Finally, the *missionary organization* (Mintzberg et al., 2005) responds to a pull to contribute to societal change. This type of organization is built around a core value-based mission, which is shared among the team of staff. There is little hierarchy and standardization, and there is no commercial goal.

The two other types of organization, not deemed relevant for the ECEC field, are the *adhocracy* and the *machine bureaucracy*. The adhocracy reflects organizations that deal with complex but temporary issues and are characterized by little formalization. The machine bureaucracy refers to strongly hierarchical, technocratic organizations with low autonomy for employees and a high degree of job specialization for highly standardized (often simple) products.

In line with the general contingency theory, Mintzberg presupposes that organizations are most effective when there is a fit between their type of configuration and the main pull factors in the organization's environment (Mintzberg, 1983; Mintzberg et al., 2005; Quinn et al., 1988). In an environment marked by *system hybridity*, such as in privatized and marketized ECEC systems to which important public tasks have been attributed, several possibly

diverging pull factors may co-exist, that can lead to the emergence of *hybrid organizations*, in which characteristics of different ideal-types are combined. Organizational hybridity, according to Mintzberg, can negatively affect the performance of organizations (e.g., lead to lower quality) when the configuration of organization characteristics does not support coherent action at all levels within the organization. Alternatively, system hybridity can also initiate innovation and lead to new types of effective organizations, when the hybridity of the organization reflects optimal adaptation to the hybridity of the system. This can occur especially when the hybrid system is well-coordinated at an overarching level by clear priorities that give direction to organizations' adaptations (Provan & Kenis, 2008). In the case of ECEC overarching priorities might be a child's rights perspective or a value-based public task such as promoting equity and inclusion (Hobson et al., 2015; Naumann, 2011).

3. Structural quality, process quality, and work climate

The performance of ECEC organizations can be evaluated with regard to several aspects such as cost-effectiveness, flexibility of services and client-centeredness, but the quality of education and care provided to children, in view of the public tasks of ECEC, is the most important performance indicator. Quality of ECEC is thought to consist of two main aspects: *structural quality*, referring to stable characteristics at the level of the group and the teacher, such as group size, children-to-staff ratio and teachers' pre-service training, and *process quality*, referring to the emotional and educational aspects of children's daily interactions in ECEC (Howes et al., 2008; Slot, Leseman, Verhagen, & Mulder, 2015). Increasingly also opportunities for in-service professionalization, a collegial and inclusive work climate, and good working conditions (e.g., low job stress) are mentioned as aspects of quality (e.g., Dennis & O'Connor, 2013; Eurofound, 2015; OECD, 2012; Pope & Stremmel, 1992; Tsigilis, Zachopoupou, & Grammatikoupoulos, 2006), which are quality characteristics at the organization level. Structural quality characteristics, and also professional development and an inclusive work climate, are thought to be *distal* determinants of child outcomes, necessary for high process quality but not directly affecting child outcomes, while process quality is thought to be a *proximal* determinant of child outcomes. Indeed, process quality characteristics, such as teachers' sensitivity to children's needs, regard for children's perspectives, stimulation of thinking and concept formation in children, and modeling of children's language use, have been consistently found to relate to children's wellbeing and social-emotional and cognitive development more than structural quality characteristics (e.g., Sabol, Soliday Hong, Pianta, & Burchinal, 2013).

With regard to the governance of ECEC quality, an interesting paradox emerges. Structural quality is related to the main costs-factors in ECEC. For example, a smaller group size or a higher pre-service education level of teachers leads to higher costs. Process quality, in turn, is related to the outcomes for children and the long-term benefits of ECEC for society. Ideally, there is a strong relationship between structural quality and the process characteristics that produce the benefits, however research shows otherwise. Many studies to date have shown small and often inconsistent effects of structural characteristics on process quality and even smaller effects on child outcomes (Sabol et al., 2013; Slot, Leseman, Verhagen, & Mulder, 2015; Slot, Lerkkanen, & Leseman, 2015). Other characteristics, relating to the structure and culture of ECEC centers as organizations, such as the opportunities for professional development and collegial support, have been found to be stronger related to process quality (Dennis & O'Connor, 2013; Slot, Leseman, Verhagen, & Mulder, 2015; Slot, Lerkkanen, & Leseman, 2015; Tsigilis et al., 2006), but are rarely prominent part of national quality frameworks.

With regard to the current topic, these findings are a cause for concern. Especially in privatized and marketized ECEC systems governments tend to stick to quality regulation on cost-related structural quality characteristics to level the (economic) playing field for different types of service providers (e.g., Irvine & Farell, 2013; OECD, 2012; Penn, 2011; Slot, Leseman, Verhagen, & Mulder, 2015; Slot, Lerkkanen, & Leseman, 2015), but this strategy alone, given the weak relation between structural quality and process quality, may not be sufficient to ensure equal access to sufficiently high process quality for all children, as indeed was found in a number of studies discussed above (e.g., Brennan, 2016; Ernst et al., 2014). Alternatively, including also organizational quality as a determinant of process quality and child outcomes could make regulatory frameworks more effective. To contribute to further insight in the issue of quality regulation in hybrid systems, the present study focuses on the organizational level of ECEC centers. The organization level includes both 'soft' cultural characteristics, such as opportunities for professional development and an inclusive work climate and 'hard' structural characteristics such as size, legal status and type of leadership. Following Mintzberg, the particular configuration of these characteristics reflects how an organization adapts to the context.

4. Privatization, marketization and harmonization of Dutch ECEC

ECEC in the Netherlands pertains to the care and education of children from 0 to 4 years of age. At age four, virtually all children enter the kindergarten departments of primary schools which is a universal public system free of charge providing a full day program for the whole week. Traditionally, the Dutch ECEC system is split in different types of care and education for different age groups, serving different public tasks, and subjected to different government bodies. In the past decades, the system faced several profound changes, due to successive liberalization and harmonization reforms initiated by the national government and the increased role attributed to ECEC in the prevention of social and educational inequality.

At the beginning of the millennium, before the formal introduction of privatization and marketization in 2005, most preschools, offering a half day program, and a substantial part of the daycare centers with a full day program were part of either public municipal welfare organizations or private not-for-profit charity foundations. Private *commercial* organizations were already active in daycare, but had only a small share in the market (Noailly & Visser, 2009; Portegijs, Boelens, & Keuzenkamp, 2002). In 2003, over 60% of all childcare centers and preschools were still part of public and private not-for-profit foundations, but in 2010 this figure was down to 30% (CPB, 2011). After 2010, the replacement of not-for-profit by for-profit organizations continued, with former public not-for-profit daycare centers being transformed into private companies and public preschools being taken-over by large commercial childcare organizations (Brancheorganisatie-Kinderopvang, 2015; Veen, Daalen, & Blok, 2014).

In 2010, new legislation was introduced to harmonize the ECEC system and its funding, and to level the playing field for different types of organizations (Rijksoverheid/Childcare Act OKE, 2010). A single statutory quality framework was introduced for all types of ECEC regardless legal form, organizational structure, and type of funding (public or private), while public tasks, including foremost the early prevention of educational disadvantages, were from then on allocated to the variety of ECEC organizations, for-profit as well as not-for-profit, increasing the hybridity of the Dutch ECEC system further (Brandsen et al., 2006). The harmonized quality framework specifies equal structural quality conditions and uniform develop-

mental goals and curriculum guidelines for all ECEC services, while the educational equity policy operating within this harmonized system makes all services eligible for additional public subsidy to provide high quality care and education to disadvantaged children.

Altogether, the complexity of the hybrid Dutch ECEC system presents an interesting case for studying the interplay between system characteristics, organizational characteristics and performance in view of the main public tasks of ECEC.

5. Current study

To summarize, the Dutch ECEC system has undergone major changes in the past decades, as have the ECEC systems in many other countries. Starting from a public system of half-day preschools and playgroups, on the one hand, and, on the other hand, a partly public, partly private system of full day daycare with different regulations and types of funding, successive new legislation has led to a fully liberalized and harmonized market. The recognition of the potential of ECEC to prevent early education gaps of children from low SES and migration backgrounds, moreover, has introduced new incentives to this market to which providers of ECEC have to adapt.

To review the possible consequences of these reforms, the present study presents a secondary analysis of data collected in 2012, two years after the last step in a series of liberalization reforms was completed. The following research questions will be addressed: (1) Is the co-existence of diverging pull factors in the hybrid Dutch ECEC system, especially after significant changes in legislation in 2005 and 2010, associated with a differentiation between types of ECEC organizations? (2) If so, how does this differentiation between types of ECEC organizations relate to the performance of ECEC organizations in terms of the structural quality, work climate experienced by the staff, and the quality of care and education provided to the children?

The present study used a cross-sectional design that does not allow for a direct comparison of the Dutch ECEC system at different points in time nor for causal conclusions regarding the impact of changes in the system. Therefore, changes in the ECEC system and how they may relate to changes in the policy context have to be inferred from a comparison of the situation before the major reforms briefly described above were implemented, and the situation after these reforms in 2012, which is the topic of the empirical research reported hereafter.

6. Method

6.1. Participants

The present study used data from the Dutch national cohort study pre-COOL collected in 2012. Pre-COOL investigates the effectiveness of preschool education and care provisions in the Netherlands on children's development and examines to what extent the quality of the provided education and care influences the effects of attending ECEC. The study was commissioned by the Dutch Ministry of Education, Culture and Sciences and the National Science Foundation (for previous reports, see Leseman et al., 2017; Mulder, Hoofs, Verhagen, Van der Veen, & Leseman, 2014; Slot, Leseman, Verhagen, & Mulder, 2015; Verhagen, Boom, Mulder, De Bree, & Leseman, 2019). The cohort started in 2010, when the children participating in the study were about two years of age. A stratified sample to ensure equal representation of half and full day programs in all parts of the country of about 500 ECEC centers were approached, of which 263 agreed to participate (52.6%). The participating preschools and day care centers were geographically spread over all parts of the Netherlands, were located in urban and rural areas, and did not differ significantly on these characteristics from non-participating centers (PreCool-Consortium, 2012). In pre-COOL about 3000 children, of whom 2700 were participating in ECEC at the first measurement occasion, were followed from age two until age 12 (end of primary school). Quality of ECEC before age 4 (when children transitioned to the kindergarten departments of primary schools) was assessed in 2011 and 2012, using surveys among center leaders and teachers, and classroom observations in a planned subset of the entire sample. The present study uses the quality assessment data of 2012, two years after the last harmonization reform of 2010 to maximize the time between the reform and the quality assessment. Later quality assessments in the pre-COOL study pertain to kindergarten (part of the public primary education system) and are not relevant here. The quality assessment of 2011 has been reported in Slot, Leseman, Verhagen, and Mulder (2015).

For the measurement wave in 2012, a questionnaire was sent out to the managers of the participating centers asking them to fill out questions on organization characteristics, staff professional development policy, the center's mission, and a number of other aspects to be detailed below. In total, 127 questionnaires were returned (48.3%), representing 127 both stand-alone centers and centers that were part of larger organizations. In addition, a questionnaire for teachers working in the participating centers was sent out, asking them to fill out questions on structural quality aspects and job climate. A total response of 243 completed teacher questionnaires was obtained (estimated response rate about 54%), of which 157 (64.6%) could be matched to 105 (82.7%) of the 127 centers for which management information was obtained (the average number of teachers per center is 1.50). Almost all responding teachers were women (99.2%) and predominantly Caucasian (89.4%). Finally, classroom observations were conducted. For logistic and methodological reasons, observations were only conducted in classrooms with at least four children participating in the age two child assessments of the pre-COOL study (not reported here), resulting in 151 centers with observation data, of which 106 (70.2%) could be matched to 106 (83.5%) of the 127 centers with management information (one classroom per center). Table 1 gives an overview of the response rates and matches of the different data sets.

6.2. A configuration-centered approach

The typological approach of Mintzberg requires the use of a configuration instead of variable-centered approach to do justice to the presumed complex interactions between organizational characteristics. We chose for k-means cluster analysis (in SPSS 24) as a configuration-centered technique to identify clusters of characteristics constituting organization types. A related technique, Latent Class Analysis, was considered not feasible because of the required sample size (Gudicha, Tekle, & Vermunt, 2016). K-means cluster analysis is a descriptive non-statistical technique that groups cases on the basis of distances in a Euclidian space, that is, on observed similarities with regard to k characteristics, without the assumption of existing classes in the population and, therefore, applicable to small samples. Disadvantages to k-means cluster analysis are that statistical criteria to evaluate the cluster solution are lacking, while the cluster solution is strongly dependent on the specific sample. K-means cluster analysis requires variables measured on different scales to be standardized or dichotomized. We chose for dichotomization as several variables were either already dichotomous or measured on polytomous ordinal or nominal scales.

Table 1
Overview of the response rates and the proportions of matching manager-classroom and manager-teacher cases.

	Centers	Managers	Classrooms	Teachers
Approached centers	500			
Responding centers, approached managers, classrooms, teachers	263 (52.6%)	263	325[a]	≈ 450[c]
Responding managers, observed classrooms, responding teachers		127 (48.3%)	151[b] (46.5%)	243 (≈ 54%)
Matches of responding managers-observed classrooms		106 (82.7%)	106 (70.2%)	
Matches of responding managers-responding teachers		105 (83.5%)		157 (64.6%)

[a] Only classrooms with 0- to 4-year-old children were selected; centers sometimes also offered separate care for 0- to 2-year-olds and after-school care for 4- to 12-year-olds; these classrooms were not selected.
[b] Only classrooms with four or more children assessed at age 2 were observed.
[c] Estimated total number of teachers approached in the selected classrooms; exact numbers are not available.

Table 2
Descriptive statistics of organizational characteristics, based on managers' reports ($N = 127$).

Categorical variables	Value	Label	*F*	%
Size of the organization	1	1 location	12	9.6
	2	2–5 locations	15	12.0
	3	6–10 locations	11	8.8
	4	>10 locations	87	69.6
	Missing		2	
Legal form	1	Foundation	83	74.1
	2	Firm, single owner	3	2.7
	3	Company	26	23.2
	Missing		15	
Center management	1	<1 day present	41	38.0
	2	1 day present	18	16.7
	3	2 days present	5	4.6
	4	3 days present	6	5.6
	5	>3 days present	38	35.2
	Missing		19	
Systematic professionalization	1	No	1	0.8
	2	Yes, incidentally	40	32.0
	3	Yes, systematically	84	67.2
	Missing		2	
Team professionalization	1	No, hardly ever	20	16.1
	2	Yes, incidentally	52	41.9
	3	Yes, systematically	52	41.9
	Missing		3	
Continuous variables	*Range*	*Mean*	*SD*	*Missing*
Number of staff (in fte's)	1–25	9.05	8.07	46
Number of staff (imputed, in fte's)	1–25	8.89	7.07	0
Flexibility of use	1–3	1.17	0.43	1
Outreach to parents	1–5	3.49	0.66	2
Service profile	1–5	2.89	1.12	11
Education profile	1–5	4.08	0.77	10
Social play profile	1–5	3.86	0.66	10

6.3. Measures and procedures

6.3.1. Organizational characteristics (managers)

Center managers filled out a short questionnaire addressing structural and cultural organization characteristics. The questionnaire was not specifically designed to test Mintzberg's organizational configurations theory. Measured characteristics, therefore, were post hoc related to this theory. In Appendix A we provide an overview of Mintzberg's theory and how the measured organizational characteristics, to be described below, match the theory. Completed questionnaires were returned by pre-paid mail, sometimes after a reminder by phone. Descriptive statistics are presented in Table 2; proportional scores after dichotomization are presented in Table 3, in the rightmost column.

Size of the wider organization of which the particular center was part, was based on managers' answers on a scale with values 1 (one location only), 2 (two to five), 3 (six to ten) and 4 (11 or more locations). To create comparable scales for all organization characteristics for the planned cluster analysis and to obtain a more equal distribution of scores over categories, the scale was dummy-recoded into the values 0 (original values 1 to 3, small to middle-sized organization) and 1 (original value 4, large organization).

Number of educational staff was a one item variable representing the amount of full-time equivalents (fte) of licensed teachers (thus not including other staff) employed at the center, ranging from 1 fte (one employee, small center with one group of children) to 25 fte's or more (big center with many groups). Because of the relatively large number of missing values, multiple imputation was applied using information of other variables (number of children per center (not used further), center management, half vs. full day care, legal form, social play profile; see below) to impute missing values. For the present purpose, based on the imputed variable, a dummy variable was created based on median split with values 0 (1 to 7 fte, small) and 1 (7.1 to 25 or more fte, big).

Legal form was indicated on a three point scale, representing the three main types of legal forms in Dutch ECEC at the time of study. To obtain a more equal distribution, the scale was recoded into the values 0 (for-profit single-owner firm, for-profit company with shareholders) and 1 (non-profit foundation).

Center management was based on one item, asking managers to indicate how many days per week they, as managers, were present at the local center to supervise staff, to fulfill administrative tasks and to run the center. The values ranged from 1 (less than one day per week) to 5 (three days or more). Of note, based on in-depth information from a multiple case study, low-presence

indicated hierarchical line management, while high presence indicated decentralized management (Van der Werf, Slot, Kenis, & Leseman, 2019). High presence of the manager was associated with the manager performing general managerial tasks, including administration, finance and planning, while lower presence indicated a specific focus on staff supervision and quality assurance. For the purpose of the subsequent analyses, to obtain an optimal distribution of scores, the scale was recoded into two levels, with values 0 (one to two days present) and 1 (three to five days present).

Flexibility of use was based on three items, indicating on a three point scale to what extent parents could bring or pick-up their children at flexible times and could change days (Cronbach's alpha = .774). For the present purpose, to obtain an optimal distribution of the scores, the mean scores were recoded into 0 (value 1; not flexible) and 1 (values 1.1 to 3; flexible).

Systematic professional development was a one item variable, asking managers to rate whether educational staff were provided with professionalization activities with values 1 (no), 2 (yes, but incidentally) and 3 (yes, systematically), for analysis purposes recoded into 0 (no to incidentally) and 1 (systematically) for a more equal distribution of scores.

Team-professionalization was also based on one item, asking managers to indicate whether professionalization activities involved the whole team of educational staff with values 1 (no, professional development only on an individual basis), 2 (sometimes, only part of the team) and 3 (always the whole team), also recoded into 0 (original values 1 or 2, individually to only part of the team) and 1 (value 3, always the whole team).

Outreach to parents was based on managers' responses to three items addressing the center's acceptance of low parental involvement (reversely coded), reluctance to exploit extra activities toward difficult-to-reach parents (reversely coded) and attempts to educate and support parents to the benefit of the child (Cronbach's alpha = .618). Answers were coded on a five point scale ranging from 1 (not applicable to my center at all) to 5 (highly applicable to my center). For further analyses, the mean of the three items was computed and recoded by median split into 0 (scores 1 to 3.6; not applicable at all to somewhat applicable; low outreach) and 1 (scores 3.7 to 5; applicable to highly applicable; high outreach).

The *external mission profile* was determined based on the managers' responses to a series of questions in which they had to compare the profile and mission of their organization with other ECEC organizations. For example, managers had to indicate the degree in which the statement "the center provides care in a small-scale, cozy home-like environment" was more or less characteristic of their center compared to other centers, rating answers on a scale from 1 (much less characteristic) to 6 (much more characteristic). Based on conceptual grounds, three mission profiles were distinguished and used in the subsequent analyses. The *service profile* was based on three items (Cronbach's alpha = .843). A high score indicated that providing flexible care, meeting parents needs in terms of opening hours and affordability of care was regarded as especially characteristic of the center. To obtain a more equal distribution of the scores, the scale was recoded based on median split into 0 (values 1 to 3; low to moderate service profile) and 1 (3.1 to 5; high service profile). The *educational profile* (three items, Cronbach's alpha = .779) indicated the degree in which an orientation on promoting children's language and cognitive development, especially concerning children with a disadvantaged background, was thought characteristic of the center. For subsequent analyses, scores were recoded into 0 (1 to 4; low to moderate) and 1 (scores 4.1 to 5; high educational profile). The *social play profile* (three items, Cronbach's alpha = .714) indicated centers that, compared to others, emphasized social play and group activities in a small scale stable groups setting. The scale was recoded into 0 (scores 1 to 3.9) and 1 (scores 4 to 5; high social play profile).

6.3.2. Structural classroom and center characteristics (teachers)

Teachers filled out a questionnaire addressing several characteristics of the centers and their own background. Completed questionnaires were returned by pre-paid mail. For the present purpose, the following structural quality variables were constructed, based on a wide body of research in ECEC (Slot, Leseman, Verhagen, & Mulder, 2015). Descriptive statistics are given in Table 4 (the two rightmost columns represent the whole sample).

Teacher's education was defined as the highest level of completed formal pre-service education by the teachers and was measured on a scale representing the levels of the Dutch secondary and tertiary education system, ranging from 1 (lower preparatory vocational education) to 8 (university education).

Teacher's ethnic background was based on the reported country of birth of the teachers or of their parents. Non-Dutch, non-Western-European ethnic background was assigned if the teacher or her mother or father was born in a non-Western-European country, mostly concerning countries such as Turkey, Morocco, Surinam, and the Dutch Antilles.

Group size was computed as the reported average number of children in the classroom during the three most busy days of the week.

Teacher-to-children ratio was computed by dividing the number of licensed professionals present by group size during regular days as reported by the teachers, thus not including student-teachers on an internship, household personnel, center managers or, occasionally, volunteering parents.

Ethnic-cultural group composition was based on teachers indications' of the percentage of children with a first or second generation non-Western immigration background in the classroom. Answers were rated on a scale from 1 (0–10%) to 10 (91–100%).

Education program reflects the use by teachers of a structured education program, also referred to as *curriculum* in the research literature (Jenkins & Duncan, 2017). In the Netherlands, several education programs are currently available for ECEC, in both day care centers and preschools. Although these programs differ in how teachers are trained, they all aim at broad developmental and educational goals, emphasize emotional support and sensitivity to children's needs, and provide a mixture of play and pre-academic activities (see also Slot, Leseman, Verhagen, & Mulder, 2015). For the present purpose, a dummy variable was created, indicating whether an education program was used with the values 0 (no) and 1 (yes), without further distinguishing between programs.

Finally, *Type of provision* represented whether the classroom was part of a day care center (full day program), a play group or preschool (half day program), or combinations of both. This variable is used for descriptive purposes only.

6.3.3. Teachers' work appraisal (teachers)

Teachers' appreciation of the work climate at the centers was assessed with the following scales; descriptive statistics are reported in Table 5. This part of the questionnaire was derived from recent studies on effective models of professional development in ECEC (Zaslow, Tout, Halle, Vick Whittaker, & Lavelle, 2010) and psychological studies on team collaboration, staff learning attitudes, self-efficacy and work stress (Goddard, 2001; Skaalvik & Skaalvik, 2011; Van Veldhoven, De Jonge, Broersen, Kompier, & Meijman, 2002).

Professional development (seven items, Cronbach's alpha = .702) as experienced by the teachers assessed the implementation of continuous professional development at the center. Teachers rated how frequently several activities of professional development occurred on a scale with values 1 (never), 2 (less than once a

month), 3 (once a month), 4 (twice or thrice a month), 5 (weekly), 6 (two to four times a week), and 7 (every day). Examples of professional development activities were: having regular staff meetings to discuss the developmental and educational goals of working with young children, using collegial observation and feedback to improve practice, opportunities for in-service training and personal coaching, team-based reading of professional literature, and visiting professional conferences.

Team cohesion (five items, Cronbach's alpha = .715) assessed teachers' perception of the collaborative climate within the team of colleagues at the center, with items such as "we are an enthusiastic and idealistic team", "me and my colleagues are always prepared to go for the extra mile" and "in my team, everyone goes for herself" (reversed coded). Teachers rated their agreement on a five point scale ranging from 1 (completely disagree) to 5 (completely agree).

Learning attitude (three items, Cronbach's alpha = .753) of the teachers indicated their willingness to learn new professional skills. An example item is: "In my job, I try out new ways of working". Answers were rated on a five point scale ranging from 1 (never) to 5 (always).

Self-confidence (five items, Cronbach's alpha = .856) measured the confidence teachers had in their skills to cope effectively with a number of challenges in daily classroom work. Examples of items are: "I am sufficiently competent in dealing with children of different ages" and "I am sufficiently competent in working with withdrawn or anxious children". The five point answer scale varied from 1 (completely disagree) to 5 (completely agree).

Job stress (four items, Cronbach's alpha = .841) assessed teachers' feelings of exhaustion, work stress, experienced lack of collegiality and general dissatisfaction in work. Answers were given on a five point scale with values ranging from 1 (never) to 5 (always).

6.3.4. Observed process quality (classrooms)

The Classroom Assessment Scoring System Toddler (CLASS Toddler; La Paro, Hamre, & Pianta, 2011) was used to assess classroom process quality and followed the procedure outlined in Slot, Leseman, Verhagen, and Mulder (2015), reporting on classroom observations in the pre-COOL study at another measurement wave. All observers were trained by a licensed CLASS trainer and achieved at least 80% agreement within one scale-point deviation with the trainer on an online test before they were admitted to the data collection (average agreement was 86.2%; agreement by chance was 33%). After passing the online test, the trainer conducted live observations with all observers once, prior to the data collection. Inter-observer agreement of the live observations within one scale-point deviation was 83.3%. Each classroom was observed during one morning and all classrooms were observed within a three-month period in the Spring of 2012. Trained research-assistants observed classroom processes and teacher behavior during four 15 to 20 min cycles on the observation morning. Quality was rated on eight dimensions, part of two broader domains, using seven point scales with values 1 or 2 (classroom is low on that aspect); 3, 4 or 5 (classroom is in the midrange); and 6 or 7 (classroom is high on that aspect). Descriptive statistics of the scores are displayed in Table 6.

Regarding the domain *emotional quality*, the classroom processes were evaluated on five dimensions: *Positive climate* reflects the warmth, respect, and enjoyment displayed during interactions of the teacher and children; *Negative climate* reflects the overall negativity expressed by the teacher and the children (reversed coded; a high score indicates low negativity in the classroom); *Teacher sensitivity* is the extent to which the teacher is aware of and responsive to individual children's needs; *Regard for child perspectives* assesses the degree to which the teacher's interactions with children and the provided activities match children's interests, and to what extent children's independence is encouraged; *Behavior guidance* refers to the teacher's ability to promote positive behavior and redirect problem behavior.

Regarding the domain *educational quality*, observed processes were evaluated on three dimensions: *Facilitation of learning and development* considers how well the teacher facilitates activities to support children's learning and development; *Quality of feedback* assesses the degree in which the teacher's feedback promotes learning and expands children's participation through feedback; *Language modeling* refers to the extent to which the teacher fosters, models and encourages children's use of language.

6.4. Analysis

The analysis proceeded in two main steps. First, a k-means cluster analysis in SPSS (version 24) was performed on the structural and cultural characteristics of the ECEC organizations as reported by the center managers ($N_{managers}$ = 127), using binary recoded variables to accommodate for categorical variables and scale differences. Because there were a number of variables with missing values with an apparent random pattern, pairwise deletion was applied. For one variable, number of staff in fulltime equivalents, the percentage of missing values was 36%. Multiple imputation was applied, using organizational characteristics (size of the organization, single owner firm, type of leadership, and number of children served – the latter was not further included in the present study) to impute missing values. We did not use multiple imputation for the other variables, because the proportions of missing values were relatively small but occurred in many variables. Predicting missing values of many variables based on other variables in the data set, as in multiple imputation, risks to increase statistical dependencies between these variables. Applying common criteria for evaluating different cluster solutions, to be further detailed in Section 7, a four cluster solution was found most satisfactory. Cluster membership was determined for all 127 centers, saved and merged with the teacher and observation data.

Second, a series of Multivariate Analysis of Variance (MANOVA) were conducted, followed by univariate tests and pairwise comparisons if the multivariate effect was significant, with cluster membership as independent and, respectively, teacher reported structural quality characteristics and work climate ($N_{teachers}$ = 129–157), and the observed process quality as dependents ($N_{classrooms}$ = 92–105; note that the variation in sample sizes was due to missing values in some variables).

Although the data had a nested structure (classrooms and teachers within centers), multilevel analysis was not deemed feasible. For all centers, observation data of only one classroom and per classroom of only one or two teachers, occasionally more, were available (on average 1.50 teachers per classroom), thus not meeting the minimum sample size criterion for multilevel analysis of at least 5 teachers per classroom (Hox, 2010).

7. Results

7.1. Descriptives

Means and standard deviations of the organization characteristics based on the managers' reports are presented in Table 2. The proportional scores after dichotomization are presented in Table 3, where the rightmost column represents the whole sample of centers.

Most centers were part of larger organizations (11 or more locations) and were not-for-profit foundations. Most centers were – within larger organizations – small to medium-sized (about 9 fte licensed teachers on average). Presence of the manager at the location was roughly equally divided between low presence (one to

Table 3
Organizational configurations of ECEC centers; mean proportions of centers within clusters meeting the included organizational characteristics (total $N = 127$).

Configurations	Engaged non-profit professional organizations $N = 45$	Small-scale client-centered mixed profit organizations $N = 20$	Large mainly for-profit division organizations $N = 31$	Traditional non-profit professional organizations $N = 31$	Average proportion all centers $N = 127$
Size of the wider organization (0 = small, 1 = big)	.81	.59	.67	.90	.76
Size of the center (0 = small, 1 = big)	.28	.29	1.0	.18	.43
Legal form (0 = for profit, 1 = non-profit)	1.0	.50	.24	.96	.73
Presence of manager (0 = low; 1 = high)	.11	.85	.88	.19	.43
Systematic professionalization (0 = low, 1 = high)	1.0	.15	.45	.77	.68
Team-based professionalization (0 = low, 1 = high)	.84	.05	.27	.20	.42
Outreach to difficult-to-reach parents (0 = low, 1 = high)	.64	.25	.03	.37	.36
Flexibility of user contracts (0 = low, 1 = high)	.07	.10	.48	.13	.19
Service to clients profile (0 = low, 1 = high)	.35	.88	.27	.00	.33
Educational profile (0 = low, 1 = high)	.88	.26	.03	.19	.41
Social play profile (0 = low, 1 = high)	.86	.89	.15	.04	.49

two days per week) and high presence (three to five days per week). Most centers did not offer flexible user contracts regarding the take-up of hours and days. The majority implemented staff professionalization systematically instead of incidentally, but most centers focused on individual teachers in this regard instead of on the team of teachers. Active outreach to (disadvantaged, difficult-to-reach) parents was the case in a minority of the centers. About one-third of the centers presented themselves externally (for example to clients) as service-oriented. Less than half of the centers had an educational profile, about half emphasized an orientation on social development and play.

Descriptive statistics for the teacher reported structural characteristics and work appraisal are presented in Tables 4 and 5 (rightmost columns). Most teachers were educated at the intermediate vocational level (in line with statutory requirements in the Netherlands), a few were trained at the bachelor level (higher vocational training) or at a lower level (prevocational education). A small minority of the teachers (12.8%) had an immigrant background. The reported group size was on average 14.3 children (range 7 to 17) with on average 2.4 teachers and an average staff-to-children ratio of .17 (about six children per teacher; also in line with the national quality regulations). The variation in group size indicated that some centers combined groups. The average share of children with a first or second generation non-Western immigrant background was between 30% and 40%, with a range from 0–10% to 90–100%. The vast majority of teachers reported to work with an education program specifically meant for children with a low SES or migration background. Regarding work experiences, the mean score for team-based professionalization indicated an average frequency of once a month for a composite measure of several activities, with large variation between 'almost never' to 'almost every day'. Note that some of the activities included in the scale may actually take place more often, whereas others may be less frequent than the average. Team cohesion was on average evaluated favorably, but also with a large variation in scores. Openness to learning and experimentation was average ('not agree, not disagree'), also with a wide score range. Teachers rated their self-confidence on average as high, while work stress was reported to be low, but the scores of both measures varied widely.

The descriptive results of the classroom observations with the CLASS Toddler are presented in Table 6. The mean scores for the classrooms on the dimensions that are part of the emotional support domain showed on average moderate to good emotional process quality (scores are in the middle to high range according to the conventional benchmarks of the CLASS Toddler), but with considerable variation between classrooms; note that Negative climate is a reversed scale, indicated by the symbol R in the Table: a high score means low negativity). With regard to the educational support domain, the scores indicated low to moderate quality according to conventional benchmarks and again showed considerable variation. This pattern of results is in line with previous findings in the pre-COOL study concerning the 2011 measurement wave of mostly different centers (Slot, Leseman, Verhagen, & Mulder, 2015) and with findings in a recent nationally representative sample of ECEC centers (Slot, Jepma, Muller, Romijn, & Leseman, 2018), but the average scores of 2012 are somewhat lower than the scores found in the recent study.

7.2. Configurations of organizational characteristics

To identify types of organizations, k-means cluster analysis was applied to the binary recoded organization characteristics as reported by the managers, with pairwise deletion in case of missing values. Cluster analysis, in contrast to techniques as Latent Class Analysis, does not provide overall goodness of fit, comparative fit or entropy measures to decide on a particular solution. Recommended is to compare a number of cluster solutions and to weigh parsimony and several other criteria in evaluating these solutions relative to each other. We examined two-, three-, four- and five-clusters solutions, and evaluated the contribution of theoretically relevant organization characteristics to the differentiation in clusters (using ANOVA tests), the average Euclidian distance of the centers within the clusters to the clusters' centroids (with a larger average distance indicating more heterogeneity), the distribution of centers over clusters, and the theoretical interpretability of the clusters.

The two-clusters solution did not reproduce theoretically and policy relevant distinctions between size of the organization, size of the center and legal form of the organizations (no statistically significant differences between the two clusters on these characteristics). The mean distance of centers to cluster centroids, as an indication of cluster heterogeneity, was 1.23 (SD = .32). The three-clusters solution reproduced distinctions in legal form, professional development policy, outreach to parents and external profile but not in size of the organization (no statistically significant difference between the clusters on this characteristic), while the clusters were reasonably equal in size (30, 42 and 55 centers, respectively). The mean distance of centers to cluster centroids was 1.17 (SD = .30), slightly better than with the two-clusters solution. The four-clusters solution reproduced distinctions in size of the wider organization, size of the center, management type, legal form and flexibility, in addition to professional development policy, outreach to parents and profile, and all characteristics contributed significantly to the differentiation in clusters. Regarding centers' external profiling, a further relevant distinction was reproduced between a broad profile (all profiling aspects scored high) and a narrow pro-

Table 4
Teacher reported structural characteristics of the ECEC center by organizational configuration; teachers within centers.

	Engaged non-profit professional organizations (C1)		Small-scale client-centered mixed-profit organizations (C2)		Large for-profit organizations (C3)		Traditional non-profit professional organizations (C4)		All centers	
	M (*SD*)	N_{teac} (N_{cent})	*M* (*SD*)	N_{teach} (N_{cent})	*M* (*SD*)	N_{teach} (N_{cent})	*M* (*SD*)	N_{teach} (N_{cent})	*M* (*SD*)	N_{teach} (N_{cent})
Teachers' education	2.60 (1.06)	40 (34)	2.33 (.56)	24 (16)	3.23 (1.80)	40 (24)	3.04 (1.95)	26 (22)	2.83 (1.49)	130 (96)
Non-Dutch background	16.7% (37.7)	48 (35)	10.7% (31.5)	28 (17)	6.2% (14.7)	46 (25)	9.1% (29.2)	33 (24)	9.7% (29.7)	155 (101)
Group size	14.5 (1.96)	44 (34)	13.9 (2.11)	25 (16)	13.8 (1.46)	42 (24)	14.5 (1.18)	33 (22)	14.2 (1.72)	144 (96)
Staff-to-children ratio	.16 (.04)	44 (34)	.20 (.06)	23 (17)	.17 (.06)	42 (25)	.17 (.05)	32 (24)	.17 (.05)	141 (100)
Non-Dutch children	5.18 (3.07)	46 (32)	1.81 (1.93)	26 (17)	2.74 (2.30)	46 (24)	5.05 (3.30)	32 (24)	3.82 (3.05)	150 (97)
Education program	83.3% (37.7)	48	75.0% (44.1)	28	65.2% (48.2)	46	97.0% (17.4)	33	79.4% (40.6)	155

Table 5
Teacher reported work appraisals by organizational configuration; teachers within centers.

	Engaged non-profit professional organizations (C1)		Small-scale client-centered mixed-profit organizations (C2)		Large for-profit organizations (C3)		Traditional non-profit professional organizations (C4)		All centers	
	M (*SD*)	N_{teach} (N_{cent})	*M* (*SD*)	N_{teach} (N_{cent})	*M* (*SD*)	N_{teach} (N_{cent})	*M* (*SD*)	N_{teach} (N_{cent})	*M* (*SD*)	N_{teach} (N_{cent})
Team professionalization	3.27 (.78)	46 (34)	2.69 (.99)	26 (16)	2.93 (.93)	46 (24)	3.13 (.88)	33 (22)	3.04 (.90)	151 (96)
Team cohesion	4.11 (.59)	47 (35)	3.85 (.52)	26 (17)	3.80 (.51)	45 (25)	3.84 (.66)	33 (24)	3.91 (.58)	151 (101)
Learning attitude	3.39 (.83)	47 (34)	2.70 (.56)	27 (16)	2.96 (.63)	45 (24)	3.21 (.91)	29 (22)	3.10 (.79)	152 (96)
Self-confidence	4.60 (.44)	47 (34)	4.22 (.41)	26 (17)	4.39 (.44)	45 (25)	4.32 (.52)	33 (24)	4.41 (.47)	151 (100)
Experienced job stress	1.59 (.69)	47 (32)	1.78 (.60)	27 (17)	1.74 (.52)	45 (24)	1.87 (.62)	33 (24)	1.73 (.61)	152 (97)

Table 6
Observed emotional and educational process quality using the CLASS Toddler by organizational configuration; one classroom per center.

	Engaged non-profit professional organizations (C1)		Small-scale client-centered mixed-profit organizations (C2)		Large for-profit organizations (C3)		Traditional non-profit professional organizations (C4)		All centers	
	M (*SD*)	N_{cent}	*M* (*SD*)	N_{cent}	*M* (*SD*)	N_{cent}	*M* (*SD*)	N_{cent}	*M* (*SD*)	N_{cent}
Positive climate	5.21 (.39)	36	5.18 (.67)	20	5.08 (.80)	31	5.13 (.87)	19	5.15 (.66)	106
Negative climate (R)	6.94 (.14)	36	6.82 (.26)	20	6.89 (.22)	31	6.87 (.29)	19	6.89 (.22)	106
Teacher Sensitivity	5.19 (.47)	36	4.40 (.80)	20	4.71 (.80)	31	4.81 (.84)	19	4.83 (.76)	106
Regard child perspective	4.23 (.61)	34	3.89 (.71)	18	4.04 (.58)	31	3.89 (.76)	19	4.05 (.65)	102
Behavior guidance	4.95 (.55)	34	4.55 (.73)	18	4.29 (.76)	31	4.54 (.78)	19	4.60 (.73)	102
Facilitation of learning	4.07 (.63)	36	2.80 (.56)	18	2.96 (.62)	31	3.20 (.54)	19	3.35 (.79)	104
Quality of feedback	3.26 (.63)	34	2.33 (.75)	18	2.17 (.59)	31	2.53 (.77)	19	2.63 (.81)	102
Language modeling	3.62 (.62)	34	3.14 (.72)	18	2.86 (.76)	31	3.02 (.57)	19	3.19 (.74)	102

file (only service orientation or only social development and play were high as external profiles). Centers were reasonably evenly distributed over clusters, with the smallest cluster containing 20 centers and the largest 45. The mean distance of centers to cluster centroids was 1.08 (SD = .31), smaller than found for the two- and three-cluster solutions. Finally, the five-clusters solution resulted in one relatively small cluster (14 centers, with the largest cluster containing 41 centers) and added a further distinction between small-sized not-for-profit and small-sized for-profit organizations, while the other clusters were highly similar to the four-clusters

solution. The mean distance of centers to cluster centroids was 1.03 (SD = .32), not much smaller than found for the four-cluster solution. Weighing parsimony (a smaller number of clusters is to be preferred), interpretability (see also below) and theoretical relevance (all organization characteristics contributed significantly to the cluster differentiation, which was not the case in the two- and three-clusters solutions), evenness of the cluster sizes (range 20–45, compared to 30–55 in the three and 15–41, slightly less favorable, in the five-clusters solution), and mean cluster-distance (1.08, compared to 1.17, less favorable, in the three and 1.03, slightly more favorable, in the five-clusters solution), we chose to work with the four-clusters solution for the subsequent analyses.

Table 3 shows the clusters with the cluster structure parameters. Cluster 1 centers are in majority part of large not-for-profit organizations, providing education and care mostly in small centers. Most centers are characterized by hierarchical line management (indicated by limited presence on a weekly basis of a manager at the middle-management level), systematic attention for staff professionalization and low flexibility regarding bringing and picking-up times or changing days, characteristics that fit the Mintzberg type of the professional bureaucracy. Cluster 1 centers resemble in this regard cluster 4 centers, which show the same characteristics. Other characteristics, however, differentiate between clusters 1 and 4 centers. Cluster 1 centers have a comparatively strong team orientation, report in majority to reach out to difficult-to-reach disadvantaged parents, more often than the centers of the other clusters do. The vast majority of cluster 1 centers have an educational external profile, concerning in particular the development and learning of children with disadvantaged backgrounds, and they also emphasize social-emotional development of children through play as a distinguishing profile. These characteristics are compatible with Mintzberg's missionary organization type, where a mission related to social issues is shared by the team of staff. Cluster 4 centers, in contrast, lack especially these missionary characteristics. Part of the cluster 1 centers also present themselves as relatively high service-oriented, a characteristic of commercial market-driven organizations. In cluster 4 none of the centers mention a high service-orientation. Based on these contrasts, we named cluster 1 centers ($N = 45$) *socially engaged not-for-profit professional organizations*, showing organizational hybridity by combining aspects of professional organizations with the client-centeredness of market-driven organizations and the social engagement of missionary organizations.

Clusters 2 and 3 centers represent a mix of non-profit but mainly for-profit organizations, with decentralized center management (high presence of an all-round location manager with multiple managerial tasks: in cluster 2 frequently the owner of the small-sized center, in cluster 3 managers of relatively large semi-autonomous divisions), low emphasis on professional development and team functioning, low outreach to difficult-to-reach parents, and as external profile a moderate to strong service orientation, indicating client-centeredness. The distinction between cluster 2 and 3 is in particular the size of the organization. Cluster 2 centers fit the Mintzberg type of simple structure organizations (small, often stand-alone firms, with direct supervision by one boss, often the owner of the firm). Cluster 3 centers resemble the Mintzberg type of large commercial division organizations with large centers and a big staff and strong middle-management. A further distinction between cluster 2 and 3 centers concerns the systematic attention for professional development of staff. Centers of cluster 3 more often indicated to provide systematic professionalization than centers of cluster 2, which could be due to the advantage of a larger scale of cluster 3 centers. Cluster 3 centers, in this regard, show hybridity by incorporating systematic professionalization as a key characteristics of the Mintzberg type of professional bureaucratic organizations. We named cluster 2 ($N = 20$) *small mixed for-profit/non-profit simple structure organizations* and cluster 3 ($N = 31$) *large for-profit division organizations*.

Finally, cluster 4 centers resemble cluster 1 centers in the structural aspects of the professional bureaucracy, such as being in majority small centers within larger non-profit organizations, characterized by hierarchical line-management, high attention for professional development, and low flexibility. The differences with cluster 1 centers concern in particular the absence of a team-orientation and a social mission to reach out to disadvantaged parents and to support (disadvantaged) children's holistic development and learning. Therefore, we named cluster 4 centers ($N = 31$) *traditional not-for-profit professional-bureaucratic organizations*.

Not included in the cluster analysis and therefore not presented in Table 3, also the type of program differed between clusters. Cluster 1 and 4 centers reported to offer mainly half day programs (88.6% and 72.2%, respectively), cluster 2 and 3 centers offered both half and full day programs and combinations of these programs (especially in cluster 3), but more often a full day care program only (74.2% in cluster 2 and 55.0% in cluster 3, respectively).

7.3. Structural characteristics by cluster

A Multivariate Analysis of Variance (MANOVA) was conducted with cluster membership as independent variable and training level and ethnic background of the teachers, group size, staff-to-children ratio, ethnic-cultural classroom composition and the use of an education program as dependent variables (see Table 4). The multivariate effect of cluster on structural characteristics was statistically significant ($F_{(18,\ 339)} = 2.861$, $p < .000$). Univariate tests and pairwise comparisons revealed a strong significant difference for ethnic diversity of classroom composition ($F_{(3,\ 119)} = 12.034$, $p < .000$, *partial* $\eta^2 = .237$; C1, C4 > C2, C3). The other univariate tests were not significant. Pairwise comparisons, however, showed a significantly higher teacher education level in cluster 3 compared to cluster 2 centers. Group size was bigger and the teacher-to-children ratio smaller in cluster 1 compared to cluster 3. The use of an education program was higher in cluster 4 compared to cluster 3 centers. There was no significant difference between the clusters regarding the share of teachers with an immigrant background, although this share was biggest in cluster 1 and smallest in cluster 3. Overall, there were no clear advantages regarding structural quality characteristics (teacher education, group size, staff-to-children ration, use of an education program) for cluster 1 and 4 centers compared to cluster 2 and 3 centers. Cluster 1 and Cluster 4 centers served significantly more children with a non-Western immigration background.

7.4. Teachers' work appraisal by cluster

A MANOVA was conducted with cluster membership as independent and teachers' experiences with team-professionalization, their appraisal of team cohesion, learning attitude, self-confidence and work stress as dependent variables (see Table 5). The multivariate effect was statistically significant ($F_{(15,\ 429)} = 2.358$, $p < .003$). Univariate tests and pairwise comparisons revealed (borderline) significant differences between clusters regarding team-based professionalization ($F_{(3,\ 148)} = 2.607$, $p < .051$, *partial* $\eta^2 = .052$; C1 > C2), team cohesion ($F_{(3,\ 148)} = 3.075$, $p < .030$, *partial* $\eta^2 = .060$; C1 > C2, C3, C4), open learning attitude ($F_{(3,\ 148)} = 5.285$, $p < .002$, *partial* $\eta^2 = .099$; C1 > C2, C3; C4 > C2), and self-confidence ($F_{(3,\ 148)} = 4.525$, $p < .005$, *partial* $\eta^2 = .086$; C1 > C2, C3, C4). There were no significant differences between clusters regarding job stress. Teachers in cluster 1 centers, and to some extent in cluster 4 centers, reported an overall more favorable job appraisal than teachers in the other clusters.

7.5. Observed classroom quality by cluster

A MANOVA was conducted with cluster as independent and observed emotional and educational process quality characteristics as dependent variables (see Table 6). The multivariate effect was statistically significant ($F_{(24,\ 282)} = 4.328$, $p < .000$). Univariate tests and pairwise comparisons revealed significant effects for teacher sensitivity ($F_{(3,\ 102)} = 4.759$, $p < .004$, *partial* $\eta^2 = .126$; C1 > C2, C3; C4 > C2) and behavior guidance ($F_{(3,\ 102)} = 6.694$, $p < .000$, *partial* $\eta^2 = .169$; C1 > C2, C3, C4) in the emotional support domain and for facilitation of learning ($F_{(3,\ 102)} = 27.444$, $p < .000$, *partial* $\eta^2 = .454$; C1 > C2, C3, C4; C4 > C2, C3), quality of feedback ($F_{(3,\ 102)} = 14.898$, $p < .000$, *partial* $\eta^2 = .311$; C1 > C2, C3, C4; C4 > C3) and language modeling ($F_{(3,\ 102)} = 8.937$, $p < .000$, *partial* $\eta^2 = .213$; C1 > C2, C3, C4) in the educational support domain. Classrooms of cluster 1 centers showed much higher process quality than classrooms in all other clusters in the educational domain, and classrooms of clusters 1 and 4 centers showed higher process quality than classrooms in the other clusters in part of the emotional domain as well.

8. Discussion

The context of ECEC in many countries is characterized by divergent policy trends with different demands and incentives working as 'pull factors' for ECEC organizations. On the one hand ECEC systems face increasing state withdrawal from the supply-side, thus privatization, and a shift from supply- to demand-driven provision in a competitive commercial market, thus marketization (Brennan, 2016; Ernst et al., 2014; Irvine & Farell, 2013; Naumann, 2011). On the other hand, as a response to persistent educational inequalities and increasing cultural diversification, countries' ECEC systems are increasingly implicated in public policies to prevent early education gaps and to support the integration of immigrants and cultural minorities at risk of social exclusion (OECD, 2015). This combination of privatization and marketization with an increased emphasis on public tasks, such as serving equity policy, creates *system-hybridity* (Brandsen et al., 2006; Provan & Kenis, 2008), raising the question how ECEC organizations adapt to this hybridity. Focusing on the Dutch ECEC system as a case in point, the present study addressed two questions: (1) Is the co-existence of diverging pull factors in the hybrid Dutch ECEC system, especially after significant changes in legislation in 2005 and 2010, associated with a differentiation between types of ECEC organizations? (2) If so, how does this differentiation between types of ECEC organizations relate to the performance of ECEC organizations in terms of the structural quality, work climate experienced by the staff, and the quality of care and education provided to the children?

With regard to the first question, cluster analysis revealed the existence of four clusters, or *types*, of organizations matching the Mintzberg typology of organizational configurations rather accurately (Mintzberg, 1983; Mintzberg et al., 2005; Quinn et al., 1988), but also revealing organizational hybridity. Distinguishing structural and cultural organization characteristics were working for profit or not, the size of the wider organization of which the center was part, the size of the center itself, the type of leadership, the flexibility regarding client contracts, the organization's investment in staff professionalization and team work. Particularly distinguishing was, what we termed, the organization's social mission, which included active outreach to disadvantaged, 'hard-to-reach' parents and the endorsement of an educational-emancipatory external profile.

Type 1 organizations, the *engaged not-for-profit professional organizations* (C1 in Section 7), showed organizational hybridity in Mintzberg's terms, by combining characteristics of the Mintzberg type of the professional bureaucracy with characteristics of the missionary organization and client-centered commercial organizations. Also type 3 organizations, the *large for-profit division organizations* (C3 in Section 7), showed hybridity by incorporating systematic professionalization as an aspect of the professional bureaucracy.

The present analysis did not include a direct comparison over time of organizations in the Dutch ECEC system. Yet, interesting patterns of change can be inferred. Two of the organization types that were found, the engaged and the traditional not-for-profit professional organizations (C1 and C4, respectively), emerged from the previously public preschool and daycare sector after successive liberalization and harmonization reforms of the Dutch ECEC system. Both types showed characteristics of the professional bureaucratic organization, as identified by Mintzberg (1983), Mintzberg et al. (2005), Quinn et al. (1988), with an emphasis on hierarchical line management, continuous (in-service) professional development, and low client flexibility. Moreover, centers within both types were predominantly not-for-profit foundations that served comparatively large proportions of children with a non-Western immigration background, which also reflects the common origin in the former public ECEC system. The major distinction between the two types concerned the social mission, the emphasis on collaborative teamwork, and the orientation on education and emancipation of the children served, reflecting key characteristics of the socially engaged missionary organization type (Mintzberg et al., 2005).

The other two types found in the cluster analysis represented small entrepreneurs (C2), matching the simple structure organization type identified by Mintzberg, on the one hand, and predominantly large for-profit division organizations with large centers (C3), in line with the Mintzberg market-oriented division organization type, on the other hand. The simple structure type of organizations had sometimes the legal form of a firm, but quite some organizations in this type identified themselves as not-for-profit, possibly because they were (for-profit) single-owner firms with strong local embedding and not a strong drive to commercial expansion. Both types had predominantly decentralized all-round leadership (center managers, sometimes being the owners, being responsible for a range of administrative, commercial, and human-resources management tasks). They emphasized a client-centered service profile or high client contract flexibility, and centers within both types did overwhelmingly *not* endorse a social-emancipatory mission. Typically, the proportions of children with a non-Western immigration background were smaller than in the other two types. Distinguishing characteristics were in particular the size of the wider organization, the size of the center itself, and the reported attention for staff professional development, which was higher in the larger centers and suggests a degree of organizational hybridity here too (professionalization as characteristic of professional bureaucratic organizations).

Direct comparative data are not available, but other sources indicate that, while the liberalization of the Dutch ECEC market initially resulted in a rise of small-scale firms and local enterprises, the market share of large scale commercial providers has been increasing due to take-overs and mergers (Brancheorganisatie-Kinderopvang, 2015; Noailly & Visser, 2009; Veen et al., 2014). Overall, the results regarding the first research question are in line with the theory of Mintzberg. The presence of heterogeneous pull factors in a hybrid system is associated with differentiation between ECEC organizations and also with the emergence of hybrid organizations.

With regard to the second research question, clear differences between the organization types were found for both the staff-reported work climate, including 'soft' quality characteristics as perceived opportunities for in-service professional development and inter-collegial team-cohesion, thought to be conducive for process quality (Dennis & O'Connor, 2013; Eurofound, 2015; OECD,

2012; Pope & Stremmel, 1992; Tsigilis et al., 2006), and for the independently observed process quality. The engaged, or *missionary*, professional (mostly) not-for profit type of organizations (C1) provided in virtually all respects the best quality, whereas both the small-scale client-centered daycare centers (C2) and the larger centers that were mostly part of large for-profit division organizations (C3) had overall the lowest scores on virtually all indicators of quality. The standard effect sizes of the differences between the best and worst performing types of organizations were, overall, medium to large.

Structural quality aspects at the group and teacher level did not show clear differences between the four types. This was expected, as these aspects are typically strongly regulated by the national government (Irvine & Farell, 2013; Slot, Lerkkanen, & Leseman, 2015), in contrast to 'soft' quality aspects (Dennis & O'Connor, 2013). Regulating structural quality on 'hard' indicators is the predominant type of regulation in privatized ECEC markets to level the playing field on costs-related characteristics, also in the Netherlands, but, according to our results, does not guarantee an equally positive work climate nor equal access to high process quality throughout the system, as was also demonstrated for Australia (Brennan, 2016), the UK (Penn, 2011) and other countries (Slot, Lerkkanen, & Leseman, 2015).

The organizations matching the Mintzberg type of the professional bureaucratic organization most closely (C1 and C4) showed, overall, better performance on the measured quality aspects, which was expected as according to Mintzberg's theory professional organizations respond in particular to the pull of delivering a high quality complex product, such as education and care for young children. Both types served larger proportions of culturally diverse children than the other types. However, the *hybrid* engaged professional organizations of type one outperformed the traditional professional bureaucratic organizations of type four (C4) on most quality indicators, suggesting that system hybridity also creates opportunities for organizations to improve performance. Possibly, the shared commitment of staff to the social-emancipatory goals of the organization and the collegial-professional climate of engaged organizations can explain the higher observed process quality.

With regard to the two types of (mainly) for-profit organizations providing full day care or a mix of full and half day care (C2 and C3), no clear differences in quality were found. There were, however, trending effects for the structural characteristic pre-service training level of the staff, the work climate aspects team-focused in-service professionalization and openness to learning, and the observed emotional process quality, all favoring type three (the large multi-location commercial organizations) over type two (the small-scale, often single location commercial organizations). A possible explanation is that the centers of type three, on average, invested more in staff professionalization compared to the centers of type two, possibly facilitated by the larger scale of type 3 organizations. In this regard, type three centers, although predominantly market organizations, showed hybridity by incorporating aspects of professional organizations.

With regard to the outreach to children with a non-Western immigration background, teachers' appreciation of the work climate and the provided quality of education and care, a decisive feature seems to be the center's value-based social-emancipatory mission in combination with a professional orientation. In the Dutch case the emergence of engaged not-for-profit professional organizations can be hypothesized to be an adaptive response to particularly the demands and incentives of the educational equity policy that stimulates reaching out to disadvantaged groups and promotes a social equity mission. This finding aligns with the findings of Naumann (2011; see also Hobson et al., 2015) that giving prominence to value-based principles can counter-act market forces. It suggests that including an explicit value-based social-emancipatory mission in national quality regulation frameworks, such as exemplified by educational equity policy, could increase the effectiveness of the system by facilitating engaged, missionary professional organizations. The finding is also in agreement with Mintzberg's (2015) suggestion that missionary organizations can mitigate the drawbacks of a liberalized market.

9. Limitations

There are several limitations to the present study. The data used were collected in the year 2012. Given the dynamic nature of liberalized and harmonized ECEC markets, it is an open question whether the same types of organizational configurations will be found when more recent data are used. Nonetheless, the present study can be taken as demonstrating general mechanisms of liberalized and harmonized ECEC markets which can be considered to be largely time and context independent, as was confirmed by the similarities found with research on Australia, Germany, Sweden, and the United Kingdom (Brennan, 2016; Naumann, 2011), and other countries (Slot, Lerkkanen, & Leseman, 2015). However, new research with recent data is warranted to corroborate the current findings. Another limitation is that the present study was not specifically designed to test the organizational configurations theory of Mintzberg. Measured organization characteristics were post hoc related to Mintzberg's framework. It is an open question whether systematic operationalization of Mintzberg's theory would have yielded the same organization types as found in the current study. In addition, the use of k-means cluster analysis to detect organizational configurations, though easy to use with small samples, lacks clear criteria to evaluate cluster solutions. However, the identified clusters were theoretically meaningful and found to differ strongly regarding teacher reported work climate and observed process quality, attesting to the validity of the chosen solution. Furthermore, the current study focused only on the quality of the work environment and of the provided care and education as indicators of performance, which likely favors organization types that emphasize professionalization. If, alternatively, cost-effectiveness would have been chosen as indicator of performance, the conclusions regarding what constitutes effective organizations might have been different. Nonetheless, we believe that the current focus on quality (and indirectly on outcomes for children) is relevant given the importance of providing high quality education and care to all children. Finally, the sample of centers studied was rather small and not a random sample of all centers providing care and education to 0- to 4-year-olds in the Netherlands. Although the sample represented relevant variation, was well-distributed over all parts of the country and covered both urban and rural areas, future research should involve nationally representative samples of a larger size to strengthen the conclusion validity of the research.

10. Conclusion

Despite these limitations, the present study, taking the ECEC system in the Netherlands as a case in point, contributes to the international debate on the governance of ECEC systems in view of the multiple public tasks and prevailing liberalization policies. Divergent demands and incentives, acting as pull factors to organizations providing ECEC, lead to hybrid systems. System hybridity as observed in the Netherlands has advantages and disadvantages. Advantages pertain to the incentives provided to former public professional organizations to become more entrepreneurial and client-centered, and to innovate practice to reach higher quality for the children served. Stimulating client-centeredness to some extent in former public professional-bureaucratic organizations is associated with higher quality on

almost all indicators, but only when accompanied by a clear value-based social-emancipatory mission. The disadvantages are also clear. Without a social-emancipatory mission, or with a predominantly commercial mission, system hybridity does not lead to better quality ECEC, nor to increased access to high quality for children in disadvantaged situations, such as children with a non-Western immigration background.

Author contributions

Willeke van der Werf: Conceptualization, Writing – Original draft, Formal analysis

Pauline Slot: Investigation, Resources, Writing – Review & Editing, Supervision

Patrick Kenis: Conceptualization, Writing – Review & Editing, Supervision

Paul Leseman: Conceptualization, Methodology, Formal analysis, Resources, Writing – Review & Editing, Supervision

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Appendix A

Matching the main coordination mechanisms of the four relevant organization types according to Mintzberg's organizational configuration theory to the measured organization characteristics in the pre-COOL study (Mintzberg, 1983: 9–44; Quinn et al., 1988: 296–304; Mintzberg et al., 2005: 282–284).

Main coordination mechanisms in organizations	Ideal-type of the organization	Matching organizational characteristics from the Pre-Cool questionnaire
Ideology Pull to 'evangelize'. Ideology in standardization of norms.	Missionary organization	• Educational profile (high, with a focus on disadvantaged children's development). • Outreach to parents (high, with a focus on reaching out to hard-to-reach parents). • Social-emotional development and play profile (high, indicating holistic child development as an aim). • Team-orientation (high, indicating shared values and an inclusive work climate). • Legal form (non-profit).
Centralization Pull to centralize through direct supervision by strategic apex.	Simple structure organization	• Location manager presence (high, indicates all-round management). • Size of the wider organization in number of locations (small, often stand-alone). • Size of the center (small in fte's staff). • Legal form (for-profit). • Flexibility (high, indicating organic client-centeredness). • Service-orientation (high, indicating client-centeredness in terms of flexibility and costs).
Fragmatization Pull to fragmentize into divisions in order to regulate the span of control in large, expanding organizations.	Division organization	• Size of the wider organization in number of locations (large). • Location manager presence (high, indicates all-round management). • Size of the center (large in fte's staff, indicating an independent division). • Legal form (for-profit). • Flexibility (high, indicating client-centeredness). • Service-orientation (high, indicating client-centeredness in terms of flexibility and costs).
Professionalization Pull to professionalize by standardization of skills for quality and specialization at operational level.	Professional bureaucracy	• Systematic professionalization (high, indicating a focus on the quality of professional performance). • Location manager presence (low, indicates hierarchical line-management with a focus on safeguarding the quality of professional performance). • Legal form (non-profit). • Flexibility (low, indicating priority to the quality of internal operations). • Client-centeredness (low, indicating priority to internal processes and quality of performance).

References

Akgündüz, Y. E., Jongen, E., Leseman, P. P. M., & Plantenga, J. (2013). Cutting from the future? Impact of a subsidy reduction on child care quality in the Netherlands. In *Tjalling C. Koopmans Institute Working Papers 13(18)*. pp. 1–23. Utrecht: Utrecht School of Economics. https://www.uu.nl/sites/default/files/rebo_use_dp_2013_13-18.pdf

Brancheorganisatie-Kinderopvang. (2015). Brancherapport 2015. *Sector Kinderopvang 2015: Feiten, cijfers en ontwikkelingen*, https://www.ruimte-ok.nl/sites/default/files/bestanden/actueel/Brancherapport Benchmark 2015 def.pdf

Brandsen, T., Van de Donk, W., & Kenis, P. (2006). *Meervoudig bestuur: publieke dienstverlening door hybride organisaties, Multiple governance: Public services by hybrid organizations*. Den Haag: Lemma.

Brennan, D. (2016). The business of care: Australia's experiment with the marketization of childcare. In C. Miller, & L. Orchard (Eds.), *Australian public policy progressive ideas in the neoliberal ascendency* (pp. 151–167). Bristol: Policy Press.

Centraal Planbureau/CPB. (2011). *Kinderopvang in Kaart*. https://www.cpb.nl/sites/default/files/publicaties/download/cpb-notitie-27okt2011-kinderopvang-kaart.pdf

Crul, M., Schneider, J., & Lelie, F. (2013). *Superdiversiteit, Superdiversity*. Amsterdam: VU University Press.

Dennis, S. E., & O'Connor, E. (2013). Re-examining quality in early childhood education: Exploring the relationship between the organizational climate and the classroom. *Journal of Research in Childhood Education*, *27*, 74–92. http://dx.doi.org/10.1080/02568543.2012.739589

Ernst, T., Mader, M., & Mierendorff, J. (2014). Gewerbliche Anbieter von Kindertagsbetreuung – eine Systematisierung der Trägerlandschaft [Private daycare – A systematization of the types of commercial childcare providers in Germany]. *Zeitschrift für Soziologie der Erziehung und Sozialisation*, *34*(4), 373–388. http://dx.doi.org/10.3262/ZSE1404373

Eurofound. (2015). *Working conditions, training of early childhood care workers and quality of services – A systematic review*. http://dx.doi.org/10.2806/69399

Gallagher, A. (2017). The business of care: Marketization and the new geographies of childcare. *Progress in Human Geography*, *42*(5), 706–722. http://dx.doi.org/10.1177/0309132517702970

Goddard, R. D. (2001). Collective efficacy: A neglected construct in the study of schools and student achievement. *Journal of Educational Psychology*, *93*(3), 467–476. http://dx.doi.org/10.1037//0022-0663.93.3.467

Gudicha, D. W., Tekle, F. B., & Vermunt, J. K. (2016). Power and sample size computation for Wald Tests in latent class models. *Journal of Classification*, *33*, 30–51. http://dx.doi.org/10.1007/s00357-016-9199-I

Hobson, B., Hellgren, Z., & Bede, L. (2015). How institutional contexts matter: Migration and domestic care services and the capabilities of migrants in Spain and Sweden. *Families and Societies, Working Paper Series (EU)*, 46. http://www.familiesandsocieties.eu/wp-content/uploads/2015/11/WP46HobsonEtAl2015.pdf

Howes, C., Burchinal, M., Pianta, R., Bryant, D., Early, D., Clifford, R., & Barbarin, O. (2008). Ready to learn? Children's pre-academic achievement in pre-Kindergarten programs. *Early Childhood Research Quarterly*, *23*, 27–50. http://dx.doi.org/10.1016/j.ecresq.2007.05.002

Hox, J. J. (2010). *Multilevel analysis. Techniques and applications* (2nd Edition). New York: Routledge.

Irvine, S., & Farell, A. (2013). The rise of government in early childhood education and care following the Child Care Act 1972: The lasting legacy of the 1990s in setting the reform agenda for ECEC in Australia. *Australasian Journal of Early Childhood*, *38*(4), 99–106.

Jenkins, J. M., & Duncan, G. J. (2017). Do pre-kindergarten curricula matter? *The Current State of Scientific Knowledge on Pre-Kindergarten Effects*, 37–44.

La Paro, K. M., Hamre, B. K., & Pianta, R. C. (2011). *Classroom assesment scoring system toddler manual*. Charlotsville, VA: Teachstone.

Leseman, P., Mulder, H., Verhagen, J., Broekhuizen, M., Van Schaik, S., & Slot, P. (2017). Effectiveness of Dutch targeted preschool education policy for disadvantaged children: Evidence from the pre-COOL study. In H. P. Blossfeld, N. Kulic, J. Skopek, & M. Triventi (Eds.), *Childcare, early education, and social inequality – An international perspective* (pp. 173–193). Cheltenham, UK: Edward Elgar.

Leseman, P. P. M. (2009). Integrated early childhood education and care: Combating educational disadvantages of children from low income and immigrant families. In *EAC/Eurydice, Early childhood education and care in Europe: Tackling social and educational inequalities*. pp. 17–49. Brussels: European Commission Directorate for Education and Culture/Eurydice.

Lloyd, E., & Penn, H. (2012). *Childcare markets, can they deliver an equitable service?* Bristol: Policy Press.

Mierendorff, J., Ernst, T., Mader, M., et al. (2018). Embedded internationalisation and privilege in german early years provision. In C. Maxwell (Ed.), *Elite education and internationalisation* (pp. 121–137). http://dx.doi.org/10.1007/978-3-319-59966-3_8

Mintzberg, H. (1981). Organization design: Fashion or fit? *Harvard Business Review*, *59*(1), 103–116.

Mintzberg, H. (1983). *Structure in fives: Designing effective organizations*. Englewood Cliffs, New Jersey: Prentice-Hall International Editions.

Mintzberg, H. (2015). *Rebalancing society: Radical renewal beyond left, right, and center*. Oakland, CA: Berrett-Koehler Publishers.

Mintzberg, H., Ahlstrand, B., & Lampel, J. (2005). *Op strategie-safari. Een rondleiding door de wildernis van strategisch management (4e druk), On strategy safari. A tour through the bush of strategic management (4th Edition)*. Schiedam: Scriptum Management.

Morgan, G. (1992). *Beelden van organisatie, Images of organizations*. Schiedam: Scriptum Management Sage Publications.

Mulder, H., Hoofs, H., Verhagen, J., Van der Veen, I., & Leseman, P. P. M. (2014). Psychometric properties and convergent and predictive validity of an executive function test battery for two-year-olds. *Frontiers in Psychology*, *5*(733), 1–17. http://dx.doi.org/10.3389/fpsyg.2014.00733

Naumann, I. (2011). Towards the marketization of early childhood education and care? Recent developments in Sweden and the United Kingdom. *Nordic Journal of Social Research*, 37–53.

Newberrry, S., & Brennan, D. (2013). The marketization of early childhood education and care (ECEC) in Autralia: A structured response. *Financial Accountability & Management*, *29*(3), 0267–4424. http://dx.doi.org/10.1111/faam.12018

Noailly, J., & Visser, S. (2009). The impact of market forces on child care provision: Insights from the 2005 Child Care Act in the Netherlands. *Journal of Social Policy*, *38*(03), 477–498. http://dx.doi.org/10.1017/S0047279409003109

OECD. (2012). *Starting Strong III – A quality toolbox for early childhood education and care*. http://www.oecd.org/education/school/startingstrongiii-aqualitytoolboxforearlychildhoodeducationandcare.htm

OECD. (2015). *Starting Strong IV – Monitoring quality in early childhood education and care*. https://www.oecd.org/publications/starting-strong-iv-9789264233515-en.htm

Penn, H. (2011). Gambling on the market: The role of for-profit provision in early childhood education and care. *Journal of Early Childhood Research*, *9*(2), 150–161. http://dx.doi.org/10.1177/1476718X10387999

Pope, S., & Stremmel, J. (1992). Organizational climate and job satisfaction among child care teachers. *Child & Youth Forum*, *21*(1), 39–52.

Portegijs, W., Boelens, A., & Keuzenkamp, S. (2002). *Emancipatiemonitor 2002*. https://www.narcis.nl/publication/RecordID/oai:scp.nl:c322a971-4d7c-4986-9299-1e0078a30ede

PreCool-Consortium. (2012). *Pre-COOL Technisch rapport tweejarigencohort tweede meting 2011-2012*. ISBN 978-90-6813-984-6.

Press, F., Woodrow, C., et al. (2018). Marketisation, elite education and internationalisation in Australian early childhood education and care. In C. Maxwell (Ed.), *Elite education and internationalisation* (pp. 139–159). http://dx.doi.org/10.1007/978-3-319-59966-3_9

Provan, K. G., & Kenis, P. N. (2008). Modes of network governance. *Journal of Public Administration Research and Theory*, *18*(2), 229–252.

Quinn, J. B., Mintzberg, H., & James, R. M. (1988). *The strategy process, concepts, contexts and cases*. Englewood Cliffs, New Jersey: Prentice-Hall International Editions.

Rijksoverheid/Childcare Act OKE. (2010). *Wet Kinderopvang en Kwaliteitseisen Peuterspeelzalen*. Wetgeving/Childcare Act website: http://wetten.overheid.nl/BWBR0017017/2010-08-01/1 (27.09.19)

Sabol, T. J., Soliday Hong, S. L., Pianta, R. C., & Burchinal, M. R. (2013). Can rating Pre-K programs predict children's learning? *Science*, *341*(6148), 845–846. https://www.jstor.org/stable/23491239

Skaalvik, E. M., & Skaalvik, S. (2011). Teacher job satisfaction and motivation to leave the teaching profession: Relationswith school context, feeling of belonging, and emotional exhaustion. *Teaching and Teacher Education*, *27*, 1029–1038. http://dx.doi.org/10.1016/j.tate.2011.04.001

Slot, P., Jepma, Y., Muller, P., Romijn, B., & Leseman, P. (2018). *Kwaliteit van de Nederlandse kinderdagopvang, peuteropvang, buitenschoolse opvang en gastouderopvang, Gecombineerde metingen 2017-2018*. www.monitorlkk.nl

Slot, P. L., Leseman, P. P. M., Verhagen, J., & Mulder, H. (2015). Associations between structural quality aspects and process quality in Dutch early childhood education and care settings. *Early Childhood Research Quarterly*, *33*, 64–76. http://dx.doi.org/10.1016/j.ecresq.2015.06.001

Slot, P. L., Lerkkanen, M.-J., & Leseman, P. P. M. (2015). The relations between structural quality and process quality in European early childhood education and care provisions: secondary analyses of large scale studies in five countries. In *EU FP7 CARE: Curriculum & Quality Analysis and Impact Review of European Early Childhood Education and Care*. Utrecht University. www.ecec-care.org

Tsigilis, N., Zachopoupou, E., & Grammatikoupoulos, V. (2006). Job satisfaction and burnout among Greek early educatiors: A comparison between public and private sector employees. *Educational Research and Review*, *1*(8), 256–261.

Van der Werf, W., Slot, P., Kenis, P., & Leseman, P. (2019). Gevolgen van Marktdifferentiatie voor diversiteit, inclusie en kansengelijkheid in kindercentra, een vergelijkende casestudy [Market differentiation for diversity, inclusion and equal opportunities in child centers: A comparative case study]. *Sociologie*, *14 (2018*(1), 1–24. http://dx.doi.org/10.5117/SOC2018.1.001.WERF

Van Veldhoven, M., De Jonge, J., Broersen, S., Kompier, M., & Meijman, T. (2002). Specific relationships between psychosocial job conditions and job-related stress: A three-level analytic approach. *Work & Stress An International Journal of Work, Health & Organisations*, *16*(3), 207–228. http://dx.doi.org/10.1080/02678370210166399

Veen, A., Daalen, M. M., & Blok, H. (2014). De Wet OKE. *Beleidsreconstructie en implementatie in twaalf gemeenten*, http://www.kohnstamminstituut.uva.nl/assets/ki918.pdf

Verhagen, J., Boom, J., Mulder, H., De Bree, E., & Leseman, P. (2019). Reciprocal relationships between nonword repetition and vocabulary during the preschool years. *Developmental Psychology*, *55*(6), 1125–1137. http://dx.doi.org/10.1037/dev0000702

Vertovec, S. (2007). Super-diversity and its implications. *Ethnic and Racial Studies*, *30*(6), 1024–1054. http://dx.doi.org/10.1080/01419870701599465

Zaslow, M., Tout, K., Halle, T., Vick Whittaker, J., & Lavelle, B. (2010). Toward the identification of features of effective professional development for early childhood educators. *Literature Review*, http://www.ed.gov/about/offices/list/opepd/ppss/reports.html