

Leadership for Quality Early Childhood Education and Care

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Abstract

This literature review examines the research on early childhood education and care (ECEC) leadership and how leaders impact process quality in ECEC settings. Process quality refers to interactions and relationships between and among children and ECEC staff, and is a strong predictor of children's learning, development and well-being. Research suggests that leadership plays a central role in improving and sustaining process quality in ECEC settings. This literature review presents findings about: 1) the functions, roles and structures of leadership in ECEC settings, 2) factors that may support or hinder leadership and its effectiveness, 3) working conditions and professional development for staff, and 4) how these factors might impact process quality. The results suggest that supports for ECEC leadership may be needed to strengthen areas such as leadership recruitment, preparation and professional development, credentialing and compensation, job design and further research.

Résumé

La présente analyse s'intéresse aux travaux de recherche menés sur la direction des services d'éducation et d'accueil des jeunes enfants (EAJE) et à la façon dont les responsables des structures d'EAJE influencent la qualité des processus. On entend par qualité des processus les interactions et les liens entre les enfants d'une part, les membres du personnel d'autre part, mais aussi entre les enfants et le personnel ; elle est un important facteur prédictif de l'apprentissage, du développement et du bien-être des enfants. Il ressort des travaux de recherche que la direction joue un rôle central dans l'amélioration et la préservation de la qualité des processus dans les structures d'EAJE. Cette analyse des travaux antérieurs présente des conclusions concernant : 1) les fonctions, rôles et organisations de la direction des structures d'EAJE, 2) les facteurs susceptibles de favoriser ou d'entraver la direction et son efficacité, 3) les conditions de travail et le développement professionnel des membres du personnel, et 4) l'influence potentielle de ces facteurs sur la qualité des processus. Les résultats indiquent que des mesures de soutien en faveur de la direction des services d'EAJE pourraient être nécessaires afin de renforcer des domaines tels que le recrutement, la formation et le développement professionnel des responsables, la délivrance des diplômes et la rémunération, la définition des tâches et la poursuite des travaux de recherche.

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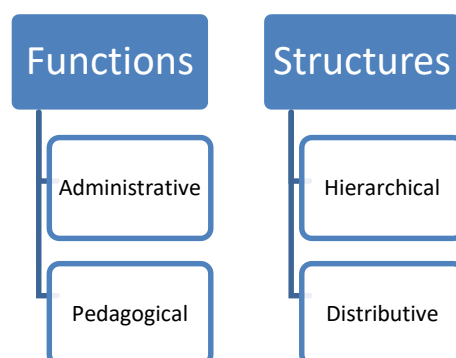
1. Introduction

Research shows that children learn, grow, and thrive in Early Childhood Education and Care (ECEC) settings when those settings are characterised by high quality interactions and relationships. There is growing recognition that the level of quality in ECEC settings influences children's learning, development and well-being. This attention to quality has generated continued interest in how to most effectively achieve and sustain quality. ECEC research has consistently focussed on pedagogy and classroom/playgroup/group quality as key determinants of children's experiences in ECEC settings. Less is known about the role of leadership and its relationship to quality.

Research across sectors finds that leadership is one of the single most important drivers of organisational performance, quality improvement and innovation. This suggests that effective leadership is important and necessary in ECEC settings. While the evidence about ECEC leadership is still limited, there is a growing interest in gaining a better understanding about what ECEC leadership looks like across diverse settings and contexts, and how ECEC leadership can positively impact quality.

Because leadership carries many different meanings, it is important to define it. Leadership involves influencing change or action to achieve a shared purpose or goal for an organisation or a system. Leadership in ECEC encompasses both administrative and pedagogical functions (Figure 1). One individual may be responsible for all leadership functions, or these may be shared among two or more people. Leadership can be structured in various ways too. It can be exercised by a formal leader such as a principal or ECEC centre leader, and it can also be exercised by teachers, staff and/or parents. This is often referred to as distributive, shared, collective, or relational leadership, in contrast to a hierarchical structure (Douglass, 2017^[1]). In distributed leadership structures, ECEC leaders may exercise facilitative leadership that creates the conditions in which ECEC staff have the autonomy and the necessary supports to solve problems and lead improvement efforts. Research on distributed leadership in educational contexts shows that the leadership of administrators and staff may each play an important, distinctive, yet interdependent role when it comes to improving quality (Wenner and Campbell, 2017^[2]).

Figure 1. Early childhood education and care leadership definition: Functions and structures



The review of the research literature was commissioned as part of initial desk-based research for the OECD project “Policy Review: Quality beyond Regulations in Early Childhood Education and Care”¹, focusing in particular on “process quality”, conducted in 2017-20. This review presents what is currently known about ECEC leadership and its relationship to process quality. It is helpful therefore to keep in mind what process quality is and how it is measured.

Process quality is a term that refers to the interactions and relationships children experience in ECEC settings. This definition of process quality includes the interactions among children; between children and staff as well as parents; children’s interactions with materials and space, as well as their interactions with the community (OECD, 2018^[3]). Research shows that in high quality settings, children experience positive relationships and enriching interactions that support them to be active and confident learners (Melhuish et al., 2015^[4]). Researchers have identified factors that may influence process quality, categorising them as either proximal or distal. For example, staff-child interactions are typically viewed as proximal indicators of quality in ECEC, meaning that they have a direct influence on quality. High quality staff-child interactions can have a direct positive impact on children’s learning, development, and well-being. This differs from structural characteristics which are described as more distal or indirect indicators of quality in ECEC (Slot, 2018^[5]). Distal factors influence quality indirectly, often by structuring the environment in which interactions are occurring, for example through regulations for staff credentials, group size and/or adult-child ratios. If ECEC staff have fewer children under their direct care, they may have an increased capacity to interact regularly with every child in ways that promote learning, development, and well-being (Melhuish et al., 2015^[4]). Less is known about how the structural characteristics of ECEC settings may contribute to process quality and children’s learning (Slot, 2018^[5]).

Because process quality is so directly associated with children’s learning, development, and well-being, it is important to understand how to improve process quality. The research reviewed and presented in this paper examines how leadership might directly or indirectly predict or impact process quality. This research also offers evidence about the key factors that support effective leadership and leadership development. Research reveals that in many cases, supports for leadership development are lacking, which can undermine the potential for sustainable and effective leadership. Leadership recruitment, development, and ongoing supports have been a gap in the ECEC field. Research can contribute to greater understanding of how to develop and sustain effective ECEC leadership to improve process quality. This in turn can inform policies to strengthen leadership and promote ECEC quality and children’s learning, development and well-being.

¹ <http://www.oecd.org/education/school/earlychildhoodeducationandcare.htm>

2. Purpose of the literature review

This literature review examines the current research literature to identify how leadership can impact process quality in early childhood education and care (ECEC) settings. Research finds that leadership can occur at multiple levels of an organisation, and may involve formal leaders in hierarchical power structures and/or distributed leadership structures in which teachers or other staff engage in leadership. This review examines leadership structures and roles and the ways they may impact quality in diverse ECEC settings and contexts. It also examines how the contexts in which leaders work may influence their leadership.

The education research literature suggests that one key way leadership influences quality and children's learning is by facilitating a positive organisational climate that supports ECEC staff and their professional development. This literature review focusses on this pathway of influence and the following two guiding questions:

- How can leaders create a positive organisational climate within ECEC settings to foster process quality?
- What are the supports and barriers for ECEC leaders to developing settings that are conducive to staff well-being and ongoing professional development, in support of process quality?

Centre leaders may play a role in fostering positive workplace relationships, a culture of learning and improvement, shared decision-making, and staff professional development. These workplace supports may enable ECEC staff to excel in their work, translating into high levels of process quality. In this way, leadership may exert an indirect influence on process quality by creating positive and supportive working conditions for staff.

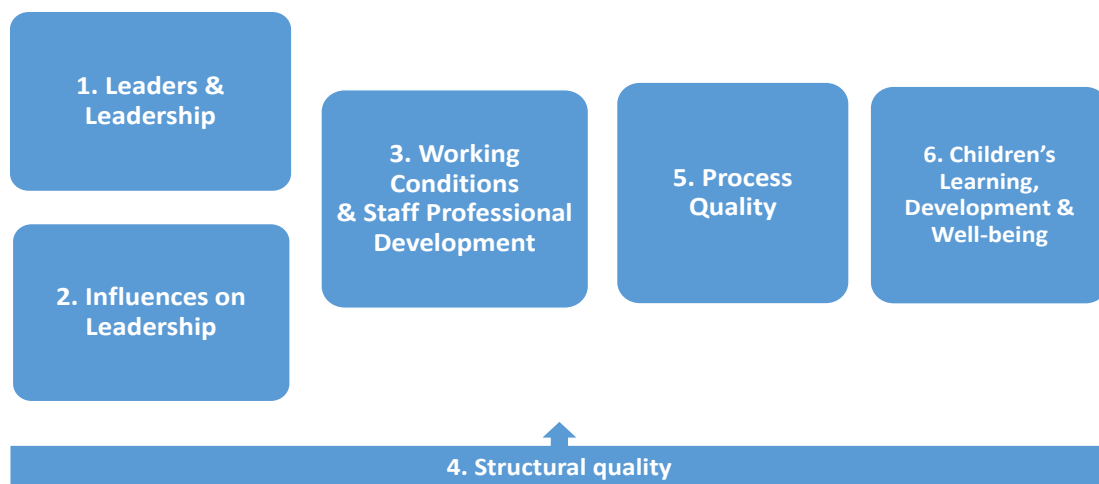
Leadership might also have a direct effect on process quality. For example, teacher leadership is a term that refers to ECEC staff who engage in behaviours and actions that influence change and improvement. Research suggests that teacher leadership may result in higher quality interactions among children and between children and teachers (Sebastian, Allensworth and Huang, 2016^[6]). Leaders may also directly or indirectly support efforts to build partnership with families and with the community, yet little research has tested this and its association with process quality.

The purpose of this literature review, then, is to identify and synthesise relevant research that can deepen the understanding of the possible associations and pathways of influence for ECEC leadership. The following conceptual model (Figure 2) was developed based on this literature review to provide a framework for representing the findings from the review. The conceptual model represents the core topics and constructs that ECEC leadership researchers have examined: the ways leadership is structured and practised in ECEC settings, the barriers and facilitators that influence leadership, how both of these first two constructs may influence (and be influenced by) working conditions and professional development in ECEC settings, and how all of these may influence process quality. The model also includes structural quality at the bottom, which refers to regulable factors such as group size, adult-child ratios, and leader and staff credentials that may influence leadership. Although a thorough examination of structural quality was beyond the scope of this review, several studies included here reported on structural factors that can promote or constrain ECEC leadership. The conceptual model show the desired outcomes for

leadership in the two right-hand boxes: process quality and children's learning, development and well-being. Prior research confirms the association between high process quality and children's learning, development and well-being.

This conceptual model aligns with the Starting Strong Teaching and Learning International Survey (TALIS Starting Strong) conceptual model of ECEC Environments for Children's Development, Well-Being and Learning (Sim et al., 2019^[7]). The TALIS Starting Strong conceptual model presents process quality as embedded within the institutional context of ECEC centres, defined by two components: ECEC centre characteristics, and leader and staff characteristics. Centre characteristics include pedagogical and administrative leadership, structural quality and centre climate. These are found in boxes 1, 2, 3 and 4 below. Leader and staff characteristics include professional preparation and professional development. These characteristics are also part of the conceptual model for this literature review, in boxes 2 and 3.

Figure 2. Literature review conceptual model



3. Methodology for the literature review

This section describes the approach used to conduct the literature review. The first step involved a search of library education databases to identify approximately 50 empirical research studies published in peer reviewed journals on the topic of leadership in early childhood education and care (ECEC). The search focussed on international journals in order to identify studies from a broad range of countries and that reflect the diversity of ECEC regional and national regulatory contexts. In addition, studies and reports on the topic of ECEC leadership were solicited from the OECD Network on ECEC member countries. Several articles on leadership in other sectors such as primary/secondary education were included because they provided evidence from fields with a more synthesised and substantial knowledge base that could contribute to this review's understanding of leadership and the pathways of its influence on quality. The search included studies published since 2000.

Once the articles, chapter and reports were collected, they were reviewed to ensure they were relevant to the literature review. Overall, this process of identifying, collecting and screening the articles yielded a total of 55 publications for inclusion in this literature review, representing studies conducted in over 38 countries.

The final step in the process involved careful review of each publication to document the study context and methods, research questions and findings. This process also included tracking whether each study was an implementation, descriptive, impact or other kind of study to assess the robustness of the evidence. The review is therefore able to identify where research may be conclusive, and where there is a need for more research. Fifty of the 55 studies were ECEC studies published in education journal or books, 4 from primary and/or secondary education, and 1 from a management journal. Of the 55 total publications, 2 were implementation studies, 43 were descriptive studies, 5 were impact studies, and 5 were other such as government reports or literature reviews (Table 1).

Table 1. Summary of research publications reviewed

Characteristics of Publications	Number of Publications
Discipline	
ECEC	50
Primary/Secondary Education	4
Management	1
Study Design	
Descriptive	43
Implementation	2
Impact	5
Other	5

Overall, a large number of the ECEC studies focussed on investigating perceptions of the role of the ECEC leader, such as what leaders do, how they balance their time across key tasks, and leaders' own confidence or identity as a leader. This included a focus on formal leaders such as ECEC centre leaders as well as staff leaders and perceptions of leadership by centre leaders and ECEC staff [eg. Abrey, Godfrey and Harris (2012^[8]), Heikka and Hujala (2013^[9]), Lunneblad and Garvis (2017^[10]), Sims, Waniganayake and Hadley (2017^[11])]. These studies focussed on leadership in the context of ECEC centres or school

settings, and almost none mentioned leadership in the context of home-based ECEC settings.

While this literature review identified a large number of studies on ECEC leadership, these studies primarily focussed on one dimension of leadership as it relates to process quality: defining and describing leadership, leadership tasks and leadership structures. Many of these studies also explored factors that influenced leadership, such as training or attitudes. The studies were almost exclusively descriptive studies, and included qualitative, quantitative, and mixed methods approaches. Notably, there were few impact studies that used experimental or quasi-experimental research designs to evaluate the impact of leadership on quality indicators and/or on indicators of children's learning, well-being and development. Five of the studies fell into this category; four were ECEC studies (Arbour et al., 2016^[12]; Cheung et al., 2018^[13]; Dennis and O'Connor, 2012^[14]; Whalen et al., 2016^[15]) and one was in primary education (Sebastian, Allensworth and Huang, 2016^[6]).

Most of these impact studies included one or more measures of process quality which are described here to provide background information relevant to understanding these studies. Process quality is typically measured using standardised observation protocols which can be time-intensive and often require specialised training. Process quality measures may also include interviews with staff. Process quality is often defined and measured according to the following dimensions: classroom emotional climate and support, instructional support, classroom management, and parent engagement (OECD, 2018^[3]). The most commonly used measures to assess process quality in ECEC include the Environment Rating Scales (ERS), the Caregiver Interaction Scales (CIS), the Classroom Assessment Scoring System (CLASS), the Observational Record of the Caregiving Environment (ORCE), and the Early Literacy and Language Classroom Observation (ELLCO). The ERS is a group of observational tools designed to evaluate the overall quality and includes subscales in the areas of parents and staff, interaction, and personal care routines. The CIS and ORCE are used to measure staff-child interactions. The CLASS is used to evaluate staff interactions with children, including the emotional, behavioural and instructional aspects of those interactions. Finally, the ELLCO measures staff interactions with children but has an additional focus on emerging literacy (OECD, 2018^[3]).

4. Results

The results of the literature review are presented according to the components of the ECEC Leadership Conceptual Model. First, the results present the research about leadership structures, roles and functions in ECEC contexts, as well as the factors that influence leaders and leadership such as credentials, recruitment, leadership development, workplace supports and contextual factors. Then the results related to working conditions and professional development are described. These results focus on studies that examined how leaders contribute to or improve organisational climate and culture, as well as staff professional development. Then this section concludes with the research that examines the impact of leadership on process quality.

4.1. Leaders and leadership

Much of the ECEC leadership research has focussed on defining and analysing ECEC roles, functions and structures. Interestingly, the studies reviewed did not provide a large-scale profile of who ECEC leaders are with regards to their educational backgrounds or professional preparation. Several studies noted the characteristics of study participants, and most of these were small scale studies, reflecting the lack of large-scale data on ECEC leadership (Turani and Bloem, 2019^[16]). Others noted trends, for example Hard and Jónsdóttir (2013^[17]) reported that many preschool leaders in Iceland have a leadership diploma which is the equivalent of one year of graduate study. Other studies noted that leaders tend to come from the teaching ranks without specific leadership preparation (Eskelinen and Hujala, 2015^[18]; Sims, Waniganayake and Hadley, 2017^[11]). The collection of large-scale data about the characteristics of ECEC leaders is an important next step for ECEC research and policy (Turani and Bloem, 2019^[16]). In 2019, OECD published results of the first international survey to focus on the ECEC workforce, TALIS Starting Strong 2018, which included data on ECEC leaders (OECD, 2019^[19]). Across the countries participating in the survey, the results show that most ECEC leaders are female, and that many possess formal education at the bachelor's degree level or equivalent.

4.1.1. Defining the Leadership Role and Function

In the ECEC research, leadership is often defined according to its core functions. Administrative leadership and pedagogical leadership are the most commonly identified functions of ECEC leadership. Administrative leadership refers to the management of operations including human resources and finance; strategic functions such as planning, goal setting and quality improvement; and may also include collaborating with community partners and systems (Moen and Granrusten, 2013^[20]; Strehmel, 2016^[21]). Pedagogical leadership is the leadership needed to support teaching and learning, and is sometimes referred to as instructional leadership. It includes supporting staff professional development and learning, creating trusting relationships with and among staff, facilitating peer learning, promoting the implementation of curriculum and assessment, and structuring the work environment to support all of these (Cheung et al., 2018^[13]; Eskelinen and Hujala, 2015^[18]; Whalen et al., 2016^[15]). It can also involve establishing positive family and community partnerships. For example, (Ang, 2012^[22]) found that cross-disciplinary collaboration was a key domain of leadership practice in her study of ECEC leaders in England. Leaders reported that establishing community cross-agency collaborations and partnerships were an important and often challenging dimension of their role in supporting

children and their families. These two functions (administrative and pedagogical) encompass a broad range of leadership skills and competencies, from knowledge of teaching and learning to human resources and financial management.

ECEC leaders may engage in both administrative and pedagogical leadership functions, dividing their time across the tasks that fall within these two broad functions. As reported in a study of Swedish preschools, ECEC leaders described their leadership as comprised of three roles: coach, organiser and overall boss, capturing the wide scope of responsibilities reported in much of the ECEC research (Lunneblad and Garvis, 2017^[10]). Alternately, pedagogical leadership may be assigned to certain individuals, and administrative leadership may be assigned to others, thereby dividing these functions across different members of a leadership team or the staff (Eskelinen and Hujala, 2015^[18]; Hujala et al., 2016^[23]; Moen and Granrusten, 2013^[20]; Strehmel, 2016^[21]). Keski-Rauska et al. (2016^[24]) describe a model of joint leadership in a city in Finland in which centre leaders began working in pairs to strengthen both pedagogical and administrative leadership. One leader in the pair worked as the administrative leader and the other as the pedagogical leader. The OECD TALIS Starting Strong survey (OECD, 2019^[19]) found high levels of job satisfaction among ECEC leaders despite low satisfaction with their salaries. Leaders reported that too much administrative work, changing requirements from authorities, and a lack of staff or resources, were key sources of job stress.

Several studies have examined the challenges ECEC leaders face such as tensions around the broad scope of their role and competing demands on their time. Leaders may feel better equipped for some aspects of their complex role than others. In a small study of ECEC leaders in Australia, Rouse and Spradbury (2016^[25]) reported on a newly instituted national requirement to have a pedagogical leader in each ECEC centre. They found that pedagogical leaders described the role as unclear and that they often felt unprepared and unsupported. Because the role was not a dedicated position, these leaders were expected to perform other duties which limited their time to perform the new pedagogical leadership role.

A study of ECEC leaders in Finland, Japan and Singapore found that leaders across these three countries considered pedagogical leadership and human resources management as the two most important tasks for ECEC leaders (Hujala et al., 2016^[23]). Yet leaders in all three countries agreed that finding the time to adequately engage in both of these core tasks was difficult due to multiple other demands they faced in their work, although the nature of these competing demands varied somewhat across the three countries. Sims, Waniganayake, and Hadley (2017^[11]) surveyed 164 ECEC leaders in Australia and found that many valued the relational dimensions of their role such as mentoring and supporting staff. They also found that these leaders may experience challenges in their role between these relational tasks and their role ensuring compliance with policy and regulatory standards. Centre leaders in their study reported spending about one-third of their time on monitoring and compliance tasks. Managing, balancing and prioritising time are challenges many ECEC leaders face, according to these studies.

As part of both their administrative and pedagogical leadership functions, ECEC leaders are also responsible for managing change and quality improvement. Mikailova and Ratsky (2013^[26]) conducted a study of organisational change efforts in two Azerbaijani ECEC centres. They highlighted the importance of the leader's skills in transformational leadership in combination with knowledge about how to support pedagogical change. They found this kind of leadership especially important when the pedagogical changes departed from the cultural norms for educational practices. Strehmel (2016^[21]) reviewed time use

studies of ECEC directors in Germany, and found that directors often have insufficient time to dedicate to quality improvement and organisational development tasks. These studies suggest that managing organisational change is an important function of ECEC leadership, yet one that requires both time and specific kinds of leadership skills.

Several studies explored perceived strengths and weaknesses of ECEC leaders. For example, a Chilean study of ECEC leaders in 20 centres identified strengths such as supporting staff, exercising an ethic of care, and working with families. They also identified the ability to achieve organisational improvement as an area in need of greater attention (Center for Advanced Research in Education (CIAE), 2018^[27]).

Several studies examined gender and how stereotypes about women and leadership may affect ECEC leaders. Clark (2012^[28]) found that ECEC leaders in England very often lacked confidence in their leadership and did not identify with the traditional ideal of a masculine leader. Research has shown that most ECEC leaders are women. Women may not identify as leaders when their notions of leadership reflect traditionally male images and attributes. For example, Hard and Jónsdóttir (2013^[17]) describe these challenges of leadership in a predominantly female profession, reporting that the ECEC field often prefers the traditionally less recognised forms of relational and collaborative leadership.

4.1.2. Leadership structures in ECEC settings

A number of the studies reviewed here examined leadership structures and the distribution of power within ECEC settings. Traditionally, leadership has been conceptualised in the context of a hierarchical power structure in which there is a leader and followers. The leader, in this case, is the person or people at the top of the organisational power structure. However, there are others structures for leadership, such as distributed or collective forms of leadership. Distributed leadership is when multiple people are involved in leadership, and leadership is not defined by one's job title but rather by the actions of those enacting leadership to influence a change or improvement (Heikka and Hujala, 2013^[9]). Sebastian, Allensworth and Huang (2016^[6]) explain that some researchers use the term collective leadership to refer to the combination of all sources of leadership in an organisation, which is also sometimes referred to as distributed leadership. Studies of distributed leadership may also examine leadership from a systems perspective, looking at leadership at different levels of an organisation and how the combined effect of distributed leadership influences the various parts of the organisation and the organisation as a whole (Sebastian, Allensworth and Huang, 2016^[6]).

Distributed leadership has been widely studied in the context of primary and secondary education (Wenner and Campbell, 2017^[2]; York and Duke, 2004^[29]). The ECEC research literature in some countries has also begun to examine this leadership structure. This research often focuses on ECEC staff leadership, which is often referred to in these studies as teacher leadership. Pedagogical and administrative roles may be distributed in many different ways among the administrative and teaching staff in ECEC settings (Halttunen, 2013^[30]; Heikka and Hujala, 2013^[9]; Kangas, Venninen and Ojala, 2015^[31]; Liu, Bellibas and Printy, 2016^[32]; Logie, 2013^[33]). For example, teacher leaders may be engaged in supervising, training and supporting new teachers. They may lead staff professional development activities, select and support curriculum, lead family engagement efforts, and/or be involved in organisational change and improvement teams (Ho and Tikly, 2012^[34]). They may also take on other administrative tasks supporting the administrative leader. Heikka and Hujala (2013^[9]) studied distributed leadership in Finnish ECEC settings, and found that the key responsibilities of leaders were seen as quality improvement and

pedagogical leadership. Research from primary and secondary education, and from other sectors such as healthcare, confirms the potential for distributed leadership to exert a positive influence on organisations' capacity to improve.

One of the key theorised benefits of distributed leadership is the engagement of staff as change agents, and the engagement of administrative leaders as facilitators of staff leadership (Kangas, Venninen and Ojala, 2015^[31]). One ECEC study examined how distributed leadership impacts teacher leaders. Logie's study of teacher leadership in Trinidad and Tobago found that teacher leaders showed higher levels of job satisfaction and commitment (Logie, 2013^[33]). Engaging in leadership may empower teachers and heighten their connection and commitment to organisational goals for improvement.

Several studies described challenges associated with successfully implementing distributed leadership. They point to specific factors that may be important to have in place to support teacher leadership. Heikka (2015^[35]) explored how distributed leadership is influenced by macro factors such as community and municipal contexts in Finland. She describes a culture of teamwork in Finland that includes the idea that "everybody does everything" (p.110), yet in reality the credentialed teacher, rather than the full teaching team, is responsible for pedagogical leadership.

Organisational leaders may play an important role in facilitating distributed leadership and fostering teacher leadership (Sebastian, Allensworth and Huang, 2016^[6]). Kangas, Venninen and Ojala (2015^[31]) studied practices that foster the development of teacher leadership in 21 child care centres in Finland and found that administrators can influence the development of teacher leadership. They conclude that distributed leadership is an administrative practice because administrators create the organisational conditions that enable and support teacher leadership. Eskelinen and Hujala (2015^[18]) summarised research findings on ECEC leadership in Finland, and reported that directors may foster distributed leadership by empowering staff, creating trusting relationships with staff, supporting their professional development, and creating structures to support peer learning. They also structure the work environment to support teacher leadership through guidelines and policies that define roles and responsibilities, and work schedules that include time for leadership activities. Sebastian, Allensworth and Huang (2016^[6]) described similar ways leaders can foster teacher leadership. However Heikka and Hujala (2013^[9]) report that these more developed and supported forms of distributed leadership were rare in the ECEC settings they studied.

A study of distributed leadership in schools examined how the school context and other factors predicted distributed leadership (Liu, Bellibas and Printy, 2016^[32]). Analysing data from 32 countries from the Teaching and Learning International Survey (TALIS), the study found significant variation across countries in patterns of distributed leadership. They found that the distribution of leadership was associated with factors such as staff mutual respect, the level of autonomy schools had for staffing, and the funding resources of the school. Like the ECEC research on distributed leadership, the organisational context and administrative leadership can influence to what extent and how leadership is distributed and the engagement of teachers as leaders.

Research suggests that distributed leadership may exist on a developmental continuum, from less developed to more developed, often centred around the degree of supports for teacher leadership and role clarity. Heikka (2015^[35]) notes that distributed leadership research has often focussed on how leadership is distributed, and needs to include more focus on the different developmental stages of distributed leadership. She argues that more developed stages of distributed leadership may reflect the use of planning, structures and

policies to support this kind of leadership. Eskelinen and Hujala (2015^[18]) explain that teacher leaders may not feel they have the power to lead, may lack access to leadership training, and these factors can interfere with teachers' capacity to lead. A lack of appropriate structures and supports may limit the potential impact of distributed leadership.

4.2. Influences on leadership

The ECEC research literature points to several factors that may increase the effectiveness of leaders and their capacity to lead. These include: a) leadership preparation and credentials, b) recruitment of leaders, c) leadership development and quality improvement, d) workplace supports for leaders, and e) political, economic, cultural and social contexts for leadership. Many of these are structural and regulatory factors. These findings are important for policy makers and others who want to consider ways to design policies that may strengthen ECEC leadership.

4.2.1. Leadership preparation and credentials

The preparation and credentialing of teachers/staff is a widely recognised component of ECEC systems and policies. The preparation and credentialing of ECEC leaders is less widely recognised. Policies and practices vary across regional and national, and public and private sector contexts. The ECEC research reveals a gap between the training and credentials leaders have and the training and credentials they need to be effective (Carroll-Meehan, Bolshaw and Hadfield, 2017^[36]). Eskelinen and Hujala (2015^[18]) summarised the research on Finnish ECEC leaders and report that many find themselves in that role "by accident" and often have not had any leadership training or preparation. ECEC leaders are often reported to be teachers who stepped into an administrative role with a teaching degree or credential yet little to no administrative training.

Studies have examined efforts to develop and implement training and credentialing for ECEC leaders. For example, an English study examined the impact of the National Professional Qualification in Integrated Centre Leadership (NPQICL) training on leadership in ECEC (Ang, 2012^[22]). The study found that training helped support centre leaders' use of reflective practice to improve many dimensions of their work as leaders. Reflective practice is a process of reflecting on one's action, learning from this, and then taking steps to improve oneself based on that learning. This kind of reflective practice was part of the NPQICL training program. Participating leaders also reported increased use of a distributed leadership approach, and greater clarity about their role as a leader, as a result of the training. Hognestad and Boe (2019^[37]) describe shadowing as a model for leadership preparation in practicum experience in the Norwegian context. They describe how this method can develop practical knowledge, connect theory with practice, and support learning in the context of leadership development.

A study in Chinese Taipei conducted a survey and focus groups with over 900 ECEC professionals to identify the content focus for a new training program for centre leaders (Hsue, 2013^[38]). They identified seven areas of focus: legal aspects of ECEC, financial management, program administration, curriculum, health and safety, personnel management and school-community communications. In their recommendations, they call for a 180 hour training course delivered over a six month period with applied learning opportunities as a minimum requirement for teachers preparing to move into a first year ECEC leader position.

4.2.2. *Recruitment of leaders*

Leadership recruitment is a focus of educational research in primary and secondary education, yet just one study in this review examined recruitment of ECEC leaders. It focussed on innovative ways to recruit new talent and cultivate sustainable leadership for the ECEC sector such as developing a new leadership career pathway to recruit and prepare leaders for careers in ECEC. Carroll-Meehan et al. (2017^[36]) studied a leadership development model in England called New Leaders in Early Years (NLEY). They explored to what extent sustainable leadership for the field might be created through such a model, which focussed on four areas: specialist knowledge, recognition, professionalism and qualifications. The model recruited college graduates who might be interested in leading in ECEC, but were not necessarily pursuing an ECEC career at the time of their participation. They report a positive impact of the model in regards to the recruitment of potential leaders, job placement of graduates in a range of ECEC positions, and the importance of the model's four areas of focus in preparing leaders for ECEC settings. They also note challenges, such as the low status and low compensation for graduates completing an advanced qualification. The authors call for continued research and leadership development focussed on recruitment for sustainable ECEC leadership.

Several studies of ECEC in aboriginal communities in Canada also point to the importance of leadership recruitment. The development of aboriginal ECEC programs and pedagogy can support the positive cultural identity, learning, development and well-being of young children (Preston et al., 2012^[39]). These studies highlight the need to create access to leadership development in aboriginal communities so that community members have the resources to develop, teach and lead their own ECEC programs (Ball, 2010^[40]; Ball, 2012^[41]).

4.2.3. *Leadership development and quality improvement*

Another important factor in ECEC leadership development is programs and supports designed to strengthen the existing leadership workforce. For example, leadership professional development and mentoring programs are a strategy that may be used to improve the effectiveness of leaders and increase their capacity to improve quality. A study of 155 leaders and teachers in Singapore found that mentoring can be a professional and leadership development strategy, and that professionals working in centres with a formal mentoring program were more likely to participate in mentoring than those who worked in programs without a formal program (Wong, 2015^[42]). This suggests that formal mentoring programs may serve an important role in making mentoring accessible to ECEC leaders.

A Canadian study of a leader training program, called Mentoring Pairs for Child Care, surveyed 340 program graduates and found that the mentoring program improved centre leaders' practices and attitudes (Ressler et al., 2015^[43]). With a small subgroup of participants, the study examined the program's impact on quality, with ECEC quality measured by the Program Administration Scale (PAS) and the Early Childhood Education Rating Scale (ECERS-R). They found an increase in quality after program completion compared to quality at the start of the program. John (2008^[44]) studied a mentoring model piloted in England that was designed to reduce leaders' isolation and increase peer supports. The study examined how the model influenced participants, finding that it increased confidence and participants' clarity about their leadership, and that participants valued the mentoring approach.

4.2.4. Workplace supports for leaders

Characteristics of the workplace may also positively or negatively affect leadership. As noted above in the discussion of distributed leadership, factors such as trust among staff can positively influence staff leadership. When ECEC staff feel respected and are confident about speaking up with ideas or concerns, they may be more likely to engage in leadership to improve quality where they work (Sebastian, Allensworth and Huang, 2016^[6]; Kangas, Venninen and Ojala, 2015^[31]). Heikka (2013^[45]) found that teachers were only seen as leaders when they had a formal position as a leader. A formal leadership role may signal to staff that a teacher has a set of specific and defined leadership responsibilities. Establishing formal positions for teacher or staff leaders is something an administrator can put into place to support distributed leadership. Other workplace supports include time for planning, organising, and assessing quality improvement work (Heikka, 2013^[45]; Hognestad and Boe, 2015^[46]). Even when ECEC centres value organisational learning and improvement, Hognestad and Boe (2015^[46]) show that the workplace context can limit staff leadership if it fails to ensure staff can dedicate time and attention to these roles. The research suggests that not only is leaders' support for staff important, but staff support for leaders may contribute to more successful leaders. For example, a study of 100 ECEC leaders in Finland, Japan and Singapore found that staff support of centre leadership, among other things, was important for helping leaders to succeed (Hujala et al., 2016^[23]).

4.2.5. Political, economic, cultural and social contexts for leadership

The broader context in which ECEC leadership operates may also have an impact on leaders and their capacity to lead. ECEC settings and regulatory contexts vary immensely across regions and countries. Several studies have focussed on governmental policies and regulations as a contextual factor that may influence ECEC leadership (Lunneblad and Garvis, 2017^[10]). For example, countries or jurisdictions may establish requirements about the number of administrative hours centre leaders must dedicate to their leadership role outside of any classroom teaching responsibilities. While these policies may result in additional financial obligations to ensure specified staffing patterns, they may also serve to protect the administrative time of leaders. Countries may also set requirements about leader credentials and training that can influence the supply and quality of leaders. For example, increased requirements for credentials might increase qualifications and also might reduce the supply of qualified leaders, but few studies have examined this or efforts to create leadership pipelines in ECEC.

When ECEC systems are partially or fully funded as public institutions, government funding allocations may support or constrain ECEC leaders in their role ensuring quality. Lunnenblad and Garvis (2017^[10]) conducted a small study of Swedish ECEC leaders who reported that their budgets constrained their efforts to ensure program quality because they had to increase group size and hire less qualified staff than they felt appropriate.

Another challenge may come when policies shift over time, placing new or changing demands on the expectations, tasks and responsibilities of leaders. For example, a study of ECEC administrators in Germany found that policy changes resulted in increased administrative and bureaucratic demands on the time of administrators (Schneider, 2018^[47]). Fonsén (2013^[48]) described a policy shift in Finland that moved the municipal administration of ECEC from the social service agency to the education agency, requiring greater emphasis on the pedagogical function of ECEC centres. Shifts such as this may influence leadership. Policy shifts can also serve to structure the relationship between ECEC leaders and the families they serve. A study of Swedish preschools found that a

government policy required centre leaders to survey parents annually (Lunneblad and Garvis, 2017^[10]), Leaders reported that they felt they needed to be responsive to what parents wanted based on these surveys, but often did not have the budget to fund parental priorities such as more staff and smaller group sizes.

The cultural context may also influence leadership and the distribution of leadership. Ho and Tikly (2012^[34]) describe a policy shift toward the promotion of teacher leadership in many Asian countries that have traditionally relied upon hierarchical leadership models in which power is held by a single leaders in the context of collectivist cultures. They focus on policy reforms in Hong Kong, China over the last two decades that introduced teacher leadership, and distributed leadership, as a means to improve preschool quality. They argue that cultural factors such as power, authority and leadership structures might mediate teacher leadership at the school or centre level, and suggest the need for greater attention to the cultural dimensions of educational leadership in research and policy.

4.3. Working conditions and professional development

As shown in the conceptual model above (Figure 2) one way that leadership might improve process quality is through its influence on working conditions. When leaders establish positive working conditions and support the professional learning of staff, they build organisational capacity for improvement which can result in higher quality ECEC.

This section presents the findings about how leaders contribute to positive working conditions, and how those working conditions might impact process quality. Working conditions is a broad term that encompasses a range of factors in the work environment. It includes the organisational climate, the workplace culture, and supports for professional development. Organisational climate refers to staff perceptions of the quality of the work environment. In contrast, organisational culture is a broader term that refers to the norms, beliefs, assumptions and values that shape how people interact and behave in an organisation. Professional development refers to how leaders support the ongoing learning and development of staff. Research suggests that leaders can promote a positive and safe workplace climate, foster a culture of continuous learning, and support staff professional development and collaboration. Theories about organisational culture and climate suggest how these factors may result in quality improvement and other organisational performance outcomes.

4.3.1. Organisational climate

Organisational climate is the collective perceptions of staff about the quality of work life in that organisation. Research suggests that a positive organisational climate may be associated with higher levels of process quality. The Early Childhood Work Environment Survey (ECWES) is one measure of work climate developed specifically for ECEC settings (Bloom, 2010^[49]). The ECWES defines and measures ten dimensions of organisational climate: collegiality, professional growth, supervisor support, clarity of policies and procedures, reward systems, decision-making processes, goal consensus, task orientation with regards to organisational effectiveness and efficiency, the physical setting and innovativeness. Organisational climate appears to influence the behaviour and the attitudes of employees. When adults interact in positive and respectful ways in the workplace, this can facilitate positive and respectful interactions and relationships between adults and children, through what is referred to as parallel process. The theory of parallel process explains how interactions among one set of individuals in an organisation mirror, or parallel, interactions among another set of individuals (Douglass, 2011^[50]). When adults

experience positive and respectful interactions with one another in the workplace, they may be more likely to interact in positive ways with children.

In her review of existing theory and research, Strehmel (2016^[21]) presents a model for understanding leadership's influence on children's learning outcomes. She proposes that leaders can support professional and leadership development of staff, create positive work conditions, establish a shared vision, and that these steps will foster greater staff professionalism, empathic teaching, staff motivation, competency and autonomy, and reflection and learning. These changes can increase staff satisfaction and well-being, and translate into greater capacity of teaching staff to create positive learning environments for children that promote positive child outcomes.

This model is supported by a robust and growing evidence base in the management literature for a construct called relational coordination. Relational coordination is a measure of the extent to which shared goals, shared knowledge and mutual respect are present across an organisation. High levels of relational coordination are associated with positive organisational outcomes, including staff retention and well-being, higher quality of service delivery, and greater capacity for organisational improvement (Douglass, 2011^[50]; Gittell, 2016^[51]; Gittell, Seidner and Wimbush, 2010^[52]; Gittell et al., 2008^[53]). In a qualitative multiple case study based in the United States, Douglass (2011^[50]) compared dimensions of relational coordination with the quality of parent-teacher partnerships, and found that ECEC centres with higher levels of relational coordination had higher quality parent-teacher partnerships.

Several studies examined how ECEC leaders influenced one or more dimensions of organisational climate. For example, a study of sixteen Danish ECEC centres tested a theory that staff who shared a common understanding about ECEC quality would be more likely to achieve higher quality at their centre (Andersen et al., 2017^[54]). Through a shared vision, a leader engages organisational members in working collaboratively toward a set of shared goals. They did find a higher level of quality in centres where all staff shared a common understanding of quality. They also found that centre size may influence the extent to which leaders can effectively bring about a shared understanding of quality. In small centres, the leader role was often spread across teaching and administration, and the leadership role may have been more informal. In larger centres, leaders may have a harder time reaching and influencing all staff. Therefore, they suggest that leaders may be most able to influence a shared vision for quality in medium-sized organisations where the leader's role is both formalised and contains a manageable scope of influence.

Thornton and Cherrington (2014^[55]) conducted a qualitative case study in Australia that explored how leaders influenced the work environment and fostered staff leadership and collaborative professional practices. They found that teachers were more likely to share ideas, challenge current practices, and collaborate for improvement when they experienced trusting relationships in the work environment. They also found that teachers who worked in a supportive environment benefited more from their participation in a professional learning community. The authors concluded that leaders can play an important role facilitating the effectiveness of professional learning communities.

A descriptive study of 37 ECEC centres in the United States examined the relationship between the work environment and classroom quality, with a focus on workplace climate and relationships (Dennis and O'Connor, 2012^[14]). This study found that classrooms in centres with a more positive work climate and more positive workplace relationships had higher classroom quality ratings, controlling for other factors (as measured by ECERS-R; (Dennis and O'Connor, 2012^[14]). This study also examined how centre leadership might

influence the work environment. They compared survey results from one classroom at each extreme of the classroom quality scores. The researchers found that the teacher with the highest classroom quality score described the centre leader as respectful of staff and responsive to their input, and reported a culture of mutual respect among the staff. The teacher in the classroom with the lowest quality score described the opposite: centre leaders who was disrespectful and not responsive to staff input.

4.3.2. Organisational culture and professional development

Organisational culture is another key dimension of the workplace environment. Organisational culture refers to the norms, values and beliefs held by organisational members. Research on quality improvement in education, ECEC, and in other sectors has identified a culture of continuous quality improvement as an important dimension of organisation culture that may predict levels of quality (Daily et al., 2018^[56]; Douglass, 2011^[50]). A culture of learning and improvement is one in which staff feel comfortable voicing their ideas, asking questions, and challenging the status quo; and have regular opportunities to collaborate and plan for improvement with their peers (Douglass, 2017^[1]).

Several studies investigated how leaders promote an organisational culture of learning and improvement to support professional development, and how that in turn might improve process quality. These studies examined how the organisational culture and supports for professional learning ultimately impacted classroom quality and children's learning. The studies that tested the relationship between leadership and process quality and identified significant factors in this pathway of influence, are described in the following section.

4.4. How leadership influences process quality

This section synthesises and adds to the research presented above to describe what is known about the pathways of influence from leadership to process quality. Five studies investigated leadership, its influence on working conditions and/or professional development, and how it influenced process quality and, in some studies, children's learning.

Collectively, these studies suggest the following pathway from leadership to process quality: leadership development for centre leaders can increase the effectiveness of leaders, especially when it comes to pedagogical leadership. These effective leaders have greater knowledge and skills to develop staff leadership, a positive workplace climate, and an organisational culture of learning and improvement. They possess the skills to support curriculum development, implementation and pedagogy. Effective leaders may also establish alignment and coherence in the centre's educational program across curriculum, teaching and assessment. Together, these can result in high levels of process quality. In addition, when staff leadership is supported, staff can positively impact process quality, and can also contribute to a positive organisational climate that supports positive staff-child interactions. A positive workplace climate and culture of continuous improvement, as well as educational program coherence, are associated with process quality.

Table 2 provides a visual summary of the factors investigated in this set of impact studies and found to influence process quality. The table shows which leadership and organisational factors were studied, as well as which of two key outcomes (classroom quality and children's learning) were included.

Table 2. Summary of leadership impact studies

	Leadership development of centre leaders	Staff leadership	Staff professional development	Culture of collaborative learning and improvement	Positive climate	Alignment and coherence: curriculum, pedagogy, assessment	Outcomes: Classroom Quality	Outcomes: Children's Learning
Sebastian et al., 2016		x	x	x	x	x	x	x
Arbour et al., 2016		x	x	x	x		x	x
Whalen et al., 2016	x	x	x	x	x	x	x	x
Cheung et al., 2018	x		x	x	x	x		x
Dennis and O'Connor, 2013				x	x		x	

For example, in a study of primary schools in the United States, Sebastian, Allensworth, and Huang (2016^[6]) explored the theory that principal leadership can promote teacher leadership that fosters positive school climate and participatory decision-making that, in turn, enhance student learning. They rigorously tested a conceptual model to understand how principal leadership influences instructional quality and student learning. They theorised that principal leadership exerts influence through multiple mediating factors such as school climate, professional development of staff, and the coherence among the various core components of their instructional model. Their study also examined the role of teacher leadership.

The results showed that a primary pathway for principal leadership's influence on student achievement is through its influence on teacher leadership and school climate. In this study, teacher leadership was defined as teacher influence in decision-making on school policies such as those related to hiring, finance, professional development and curriculum. School climate was defined as the school's learning environment for children, and was measured with a survey of student perceptions of being respected and feeling safe at school. School climate was the most important predictor of classroom quality and children's learning, which was measured by school student assessment test data. Teacher leadership appeared to exert a strong influence on school climate, and was enabled by principals who supported teacher leadership through professional development programs, assigned responsibilities to teachers, delegated authority, and fostered collaborations across roles and focussed on specific goals for improvement. A second pathway of influence of principals was their direct influence on the coherence, alignment and oversight of core educational components such as professional development, curriculum and instruction. While these two pathways of influence appeared to be the most influential in this study, the authors note that there may be other pathways as well that were not tested in their study.

In an experimental study of preschool quality improvement in Chile, Arbour et al. (2016^[12]) found that shifting from an organisational culture of judgement and strict accountability to a culture of continuous quality improvement led to larger increases in classroom quality as measured by the CLASS. A quality improvement and professional development intervention prompted this shift, and resulted in greater teacher leadership and teacher autonomy in leading changes and implementing improvements in teaching practices.

The study also found that children in the participating teachers' classrooms showed higher language skills than children in classrooms whose teachers did not participate.

Whalen et al. (2016^[15]) tested a professional development model aimed at improving quality and positively impacting children's learning. Their model focussed on building centre leaders' capacity to establish organisational supports to enable teachers to effectively lead improvements in their classrooms. These organisational supports were defined by the Early Education Essentials research (Ounce of Prevention Fund, 2019^[57]) that shows that staff who are supported by strong instructional leaders and a supportive work environment, and who have regular opportunities to collaborate and learn with peers, implement "ambitious instruction" (engaging, rigorous, developmentally appropriate curriculum), and effectively engage families, are more likely to deliver high quality ECEC that results in positive learning outcomes for children.

Their study investigated the impact of this professional learning model on classroom quality and children's learning and developmental progress in four ECEC Head Start centres serving low-income children in the United States (Whalen et al., 2016^[15]). The study compared treatment and comparison classrooms using a quasi-experimental design, and found treatment classrooms showed greater quality improvement as measured by CLASS scores. The authors conclude that the intervention model to promote ambitious instruction, engage centre leaders and staff in problem-solving and decision-making to achieve improvement goals, and leaders' increased capacity to provide consistent support and guidance to staff about their instructional practices increased staff knowledge and skills for implementing high quality teaching interactions with children. Children in treatment classrooms for two full years of the intervention showed statistically significant effects on social and emotional development. The study did not find evidence of effects on other domains of children's learning, such as mathematics, cognition, or literacy.

Cheung et al. (2018^[13]) conducted a quasi-experimental study of leadership and its influence on children's learning and development in 50 pre-primary schools in Hong Kong, China. The study included 25 experimental schools and 25 control schools. The study first identified a set of core leadership practices in ECEC: setting the direction for curriculum design and development, developing staff, building a school culture of collaboration and reflection, and improving the effectiveness of teaching. Then it tested how the implementation of these leadership practices influenced children's learning and development. They found that the treatment schools showed improved leadership, and that this improved leadership had a positive influence on children's learning.

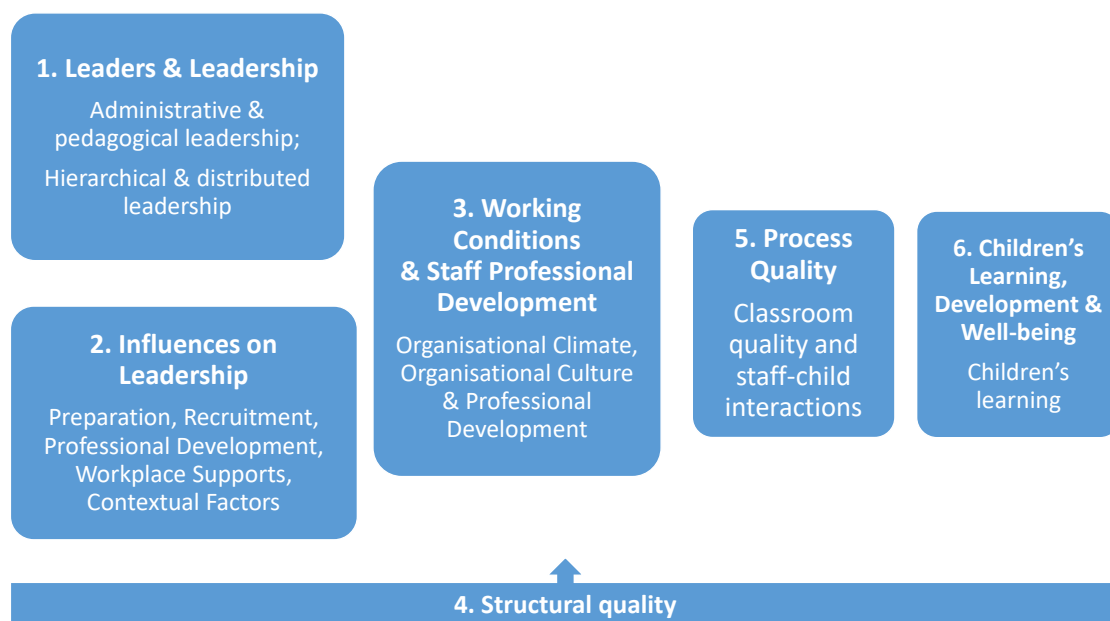
In their study of workplace climate described previously, Dennis and O'Connor (2012^[14]) found that centre leadership had an impact on workplace climate and relationships. They also found that a positive work climate and positive work relationships were associated with higher classroom quality.

These studies suggest that leadership influences a set of practices that may have a positive impact on children's learning, development and well-being. These practices include supporting staff professional development and learning, engaging staff in decision-making and leading change, and creating structures to enable teachers to collaborate and plan for improvement. They also include establishing a positive work climate, collegial relationships, and providing a range of supports for teacher leadership. This bundle of practices reflects the promising interventions evaluated in the Whalen et al. (2016^[15]) and Arbour et al. (2016^[12]) studies that examined the connection between these practices, process quality and children's learning.

5. Conclusion

Leadership plays a central role in supporting and sustaining quality in ECEC settings. This review of the ECEC leadership literature suggests that effective leadership establishes a set of organisational conditions that have a positive impact on process quality, and thereby fosters children's learning, development and well-being. The studies included in this review examined three broad dimensions of leadership: 1) the functions, roles and structures of leadership in ECEC settings, 2) factors that may support or hinder leadership and its effectiveness, and 3) the working conditions and professional development experiences for staff in ECEC settings. The conceptual model in Figure 3 adds detail to the original conceptual model. It identifies the topics the research examined for each of the three focus areas of this review, as well as for the two outcomes examined: process quality and children's learning, development and well-being. The summary of key findings is below.

Figure 3. Conceptual model with detail



In summary, the research defines ECEC leadership as encompassing two broad functions: administrative and pedagogical. These leadership functions may be exercised by a formal centre leader alone or may be shared among a leadership team or with ECEC staff. Pedagogical and administrative roles appear to be distributed in many different ways in ECEC settings. Because there have not been large-scale studies of the characteristics of ECEC leaders and leadership structures, it is difficult to accurately portray the strengths and needs of ECEC leaders. There is a clear need to collect and disseminate large-scale data about who ECEC leaders are, what they do, and what they need.

This review also explored what the existing research shows about supports and barriers to leadership in ECEC settings. Supports for effective leadership include professional preparation and credentials, recruitment of new leaders (both centre leaders and

teacher/staff leaders), professional development for leaders, and contextual supports such as policies and regulations that enable effective leadership.

The findings suggest ways that policy makers, professionals, and other decision-makers might strengthen ECEC leadership. For example, several studies examined the challenges ECEC leaders face in their role such as low status, the broad scope of their role, and competing demands on their time. Policies can establish guidance or identify resources intended to protect and support the administrative and pedagogical time leaders need. However, changes in policies may also place new or different demands on the expectations, tasks, and responsibilities of leaders. This suggests the need to pair policy shifts with leadership development supports and adequate funding. In addition, it suggests that ECEC leaders may play an important role informing new policy development and the establishment of strategies for effective implementation.

Developing recruitment pipelines, mentoring programs, and other supports for new leaders may also contribute to strengthening ECEC leadership. Policies can establish requirements about leader credentials and training that can influence the supply and quality of leaders. The absence of adequate leadership standards and credentialing may undermine the quality and sustainability of effective ECEC leadership. On the other hand, very stringent requirements for credentials, without sufficient access to professional preparation to meet those requirements, may constrain the supply of qualified leaders. Therefore, setting credentials may need to be implemented in conjunction with increased access to professional preparation for ECEC leaders.

Research suggests that managing organisational change is an important function of ECEC leadership, yet one that requires both time and specific kinds of leadership skills. Centre leader(s) play an important role in cultivating staff leadership, by creating an organisational infrastructure to develop and support staff leadership. The bidirectional arrows in Figure 3 reflect the interactions between leadership roles and structures and the supports that enable leaders to be effective across their varied responsibilities and that support new and emerging leadership.

When it comes to staff or teacher leadership, research suggests that more must be done to provide the necessary infrastructure to support distributed leadership. One of the key theorised benefits of distributed leadership is the engagement of staff as change agents. Engaging in leadership may empower staff and heighten their connection and commitment to organisational goals for improvement. ECEC leaders may influence to what extent and how leadership is distributed, the design of leadership roles and responsibilities, and the engagement of staff as leaders. For example, centre leaders can play a facilitative role in putting structures into place to support staff leadership pathways, positions and role clarity. Professional development and dedicated planning time appear to be essential supports for staff leadership.

Only a few studies have rigorously evaluated the impact of leadership on ECEC quality and/or outcomes for children. These studies suggest that leadership influences a set of practices that may have a positive impact on children's learning, development and well-being. These practices include supporting staff professional development and learning, engaging staff in decision-making and leading change, and creating structures to enable teachers to collaborate and plan for improvement. They also include establishing a positive work climate, collegial relationships, and providing a range of supports for staff leadership. It is through these actions that leaders may have an impact on process quality. This research points to the importance as well as the complexity of ECEC leadership and the need for

leadership preparation and development policies and systems to recruit, train, support and sustain effective leadership.

As noted above, the number of research studies on ECEC leadership is small, and only a handful of studies employed rigorous methods to assess the impact of leadership and leadership practices on process quality. This review presented what is known, and while limited, many of the key findings parallel what has been found in the much more robust research literature in primary and secondary education leadership and other similar disciplines. Further ECEC research is needed to establish a stronger evidence base about how to recruit and develop effective leadership for diverse ECEC settings and contexts, and identify which leadership practices and structures are most strongly associated with process quality.

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