



Article

An Integrative Literature Review of University-Based Early Childhood Education and Care Centres within Early Childhood Teacher Education Settings

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Abstract: This research is an integrative literature review regarding the variety of university-based early childhood education and care (ECEC) centre models. This research focuses on those models that collaborate closely with early childhood (EC) teacher education programmes. The data were gathered from three different databases: ERIC (Ebscohost), Education Research Complete (Ebscohost) and ProQuest Central by using six different search terms. A total of 2766 publications were found. Based on the inclusion criteria, 40 publications were included in a data analysis. These publications consisted of descriptions of 53 different models regarding the collaboration between ECEC centres and universities. Two out of three models ($n = 34$) were university-based ECEC centres that collaborated closely with EC teacher education programmes by implementing various collaborations in education and research in their daily work. Outreach efforts were also implemented. This research invites EC teacher education programmes and ECEC centres for international collaboration and further research on this topic.



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1. Introduction

A variety of philosophical learning theories are usually incorporated in early childhood (EC) teacher education. Practical training with children has been an essential part of teacher education throughout its history, according to many educational theories [1–10]. These theories typically include, features of Piagetian constructivist theory [1,2], Vygotsky's social constructivist theory, Bandura's social learning theory and Dewey's learning by doing approach [3]. Constructivist theory focuses especially on the cognitive aspects of the learning process [1,2], in which new information is assimilated or accommodated by the learner [4]. In social constructivist theory, the importance of social interaction [5] and a zone of proximal development [6] are emphasised. In social learning theory [7], learning is understood to happen when observing others' actions [8]. The practical aspect of learning is also emphasised in Dewey's [9] learning by doing approach, which includes the idea of an active learner who processes and utilises their learned skills and knowledge afterwards [9,10].

The need for this integrative literature review emerged from the establishment of the first university-based early childhood education and care (ECEC) centre in Finland. In Finnish research-based teacher education, practical training integrates educational theory into practical studies and guidance and supports preservice teachers' reflective and pedagogical thinking. Every training period has its own goals and characteristics for supporting preservice teachers' pedagogical identity and engagement. The key elements of a good

training experience are on-campus courses, a “double supervision model” [11] and collaboration with a stable network of community-based and private ECEC centres. The aim of this integrative literature review is to present various forms of collaboration between EC teacher education and university-based ECEC centres and to support the development of the relationships between universities and ECEC centres.

1.1. Conceptual Structuring

Based on the educare model [12], as a part of the Finnish education system, ECEC programmes include both pedagogical and caring perspectives in promoting the growth and development of children [13]. Children attend ECEC programmes during the first seven years of their lives before the start of compulsory basic education [14]. ECEC programmes are conducted in ECEC centres [13]. In addition to conventional ECEC, separate programmes of open ECEC [14], also known as playgroups [15], engage parents in activities with their children. Education following ECEC is performed in schools [16]. In the United States, educational services for young children are offered in two distinct ways: the term preschool refers typically to the educational programme for 3–4-year-olds, before kindergarten, while childcare offers a service [17] for children of all ages [18]. Programmes that emphasise educational aspects are carried out in school settings in the United States [19], which can be noticed in the terminology. In this article, based on the Finnish definition of ECEC [13], the centres offer both educational and caring aspects of ECEC programmes for children under seven years.

In Finland, the requirement of an ECEC teacher is a university degree of Bachelor of Arts [14]. In the United States, the qualification of the ECEC teacher can be accomplished in universities and community colleges [20,21] in several programmes at associate [21], bachelor’s and master’s degree levels [22]. In the United States, the qualification for an ECEC teacher is not necessary when teaching children aged from birth to five years [23,24]. In this article, the term university, in the context of teacher education, refers to all units that offer EC teacher education programmes. The term preservice teacher refers to ECEC teacher students in associate, bachelor’s, master’s and doctoral degree programmes.

The educational collaboration between EC teacher education and ECEC centres have a long history in Finland [25,26] and abroad [27]. In Finland, the Pestalozzi-Froebelian principles regarding teacher education affected both Uno Cygnaeus and Hanna Rothman, who were the founders of Finnish teacher education [25,26]. According to their ideas, in the history of Finnish teacher education, the training schools and training ECEC centres were an essential part of teacher education seminars from the start at the beginning of the 19th century. Later, however, they developed into different directions of primary school teacher education and EC teacher education. In 1974, when primary school teacher education was moved from teacher training seminars to universities, training schools also moved into universities. Instead, EC teacher education was developed even further, and training ECEC centres that operated within seminars were moved into a community-based training system. Despite having moved EC teacher education programmes into universities in 1995, a similar, university-based training school system, as with primary and subject teacher education, does not exist in EC teacher education [28–30].

In the United States, training activities as a part of ECEC have developed from a university-based laboratory school by John Dewey since 1896 [27]. Laboratory schools are also known as training schools, model schools, practice schools [31] and demonstration schools [32]. According to McBride et al. [22], to be called a laboratory school, it should implement at least one academic mission. This can include educational collaboration, research [33] and outreach efforts [15]. Educational collaboration includes many types of training, which should be defined more clearly and implemented more consistently among teacher education programmes, see [34]. In this article, practicum and internship are understood as types of supervised training, e.g., [32,35]. Instead, student teaching (in this article, preservice teaching) is understood as an experience that offers preservice teachers an opportunity to work in the university ECEC centre either under supervision, e.g., [15,31]

or independently, e.g., [24,35]. In this article, outreach efforts are activities that aim to reach out to individuals outside the university ECEC centre. For example, collaborations with a university [15], local [33], national and international [36] partners are forms of outreach efforts. In line with Branscomb and McBride [15] and McBride et al. [22], concepts of academic missions and academic functions are defined hierarchically in this article. Academic missions are implemented through academic functions that consist of more practical, academic activities. In addition to functions, the structures of university ECEC centres also vary due to funding [37] and relationships with universities [38] or external contractors [22]. In this article, the term university-based ECEC centre (later, university ECEC centre) is intended to designate university and college-based ECEC centres (including a variety of models, e.g., laboratory schools) that implement at least one academic function on a daily basis, see [22].

According to Torracco [39], there are two types of integrative literature review approaches based on mature topics and emergent topics. In this research, the mature topic approach of an integrative literature review is implemented, because there is a need for a review of previous research regarding university ECEC centres. Additionally, the mature topic addresses the need for a critical review for a potential reconceptualization of the diversified knowledge of a developing concept or topic [39]. In this case, forms and types of collaboration between EC teacher education and ECEC centres are continually developing. Furthermore, university ECEC centre models need to be conceptualized which can be accomplished by conducting the integrative literature review. Because university ECEC centres vary in their structural and functional bases [22,38] and only a few related papers have been published recently, e.g., [3,33,40], an in-depth literature review, that investigates the relationships between universities and ECEC centres, is needed. Moreover, the academic functions of university ECEC centres need to be investigated more thoroughly. This research is relevant because the Early Childhood and Teacher Education Centre (ECTEC) Rauman pikkunorssi model was developed on the Rauma campus of the Department of Teacher Education at the University of Turku, Finland. Currently, the ECTEC Rauman pikkunorssi is the only operating university ECEC centre in Finland. The purpose of this research is to provide scholarly support not only to the development process of this model, but also to the development processes of other university ECEC centres in general and globally. In Finland, EC teacher education programmes and their collaboration with ECEC centres are developed based on research [28–30], which can enhance the equality in the training school system as a part of the Finnish teacher education.

Because the data of this review include mainly ECEC centres that operate in the United States, examples of this theoretical framework aimed to clarify the differences in the ECEC field between Finland and the United States.

1.2. Aim and Research Questions

The aim of this article was to investigate global university ECEC centres that collaborate closely with EC teacher education programmes. To meet this aim, an integrative literature review was conducted. An overall picture of these centres was formed by analysing the publications that were published during this century. The process that was followed in the integrative literature review is described in Sections 2.1 and 2.2.

The research questions were:

Research Question 1 (RQ1). *What kind of relationship types between universities and ECEC centres are described in the data?*

Research Question 2 (RQ2). *What kind of structural features exist in the basic operations of university-based ECEC centres that implement daily, academic functions?*

Research Question 3 (RQ3). *What kind of academic activities are performed in university-based ECEC centres that collaborate closely with EC teacher education?*

2. Materials and Methods

2.1. Search Procedure

In this research, the integrative literature review method was chosen over a narrative approach, because it is conducted more systematically, even though both are forms of a descriptive literature review [41]. Furthermore, the integrative approach was chosen over a systematic approach, because it allows us to include many types of scholarly publications in the data [41]. In this research, a checklist formed by Torraco [39] (p. 365) was followed. According to the list, search terms and procedures, databases, inclusion and exclusion criteria, data analysis process and synthesis were reported in this article.

The search procedure was conducted during July and August 2020. Inclusion criteria of publications were peer-reviewed and full-text research articles, dissertations and scholarly book chapters that were published in English between 2000 and 2020. To be included in the analysis, the publication was required to explicitly describe at least one ECEC centre's relationship with the university. It also needed to focus on researching, developing or describing the ECEC centre or its academic mission(s).

Relevant publications were searched by using the following search terms ($n = 6$): "university AND early childhood teacher education AND kindergarten", "university-affiliated AND kindergarten", "university AND early childhood education AND laboratory school", "university AND laboratory preschool", "teacher education AND professional development school AND early childhood education" and "campus AND child care centre" (see Table 1). Overall, 2766 publications were found in the following online databases: ERIC (Ebscohost; $n = 374$), Education Research Complete (Ebscohost; $n = 411$) and ProQuest Central ($n = 1981$). Noteworthy, when operated in ProQuest Central, the search process was conducted in two parts by first focusing on scholarly journals and books, and then on dissertations. Furthermore, "anywhere" was selected from the drop-down menu, and speech marks were used before and after every separate word within the actual search terms. The search procedure was planned and evaluated within a research group of three specialists. The suitability of publications was verified by conducting a staged review [39] by reading bibliographic information and abstracts. If publications seemed to fulfil inclusion criteria, the full texts were evaluated by the first author and double-checked by the research group. Finally, 40 relevant publications were selected for the final review process.

Table 1. The search procedure and sources of included publications ($n = 40$).

Search Term ($n = 6$)	Database			Quantity of Search Results $n = 2766$ ¹ $n = 70$ ² $n = 40$ ³
	ERIC (Ebscohost)	Education Research Complete (Ebscohost)	ProQuest Central	
University AND early childhood teacher education AND kindergarten	42	149	1071	1262
	1	0	4	5
	1	0	0	1
University-affiliated AND kindergarten	3	4	5	12
	1	1	1	3
	1	0	0	1
University AND early childhood education AND laboratory school	93	56	368	517
	20	12	7	39
	20	4	5	29

Table 1. Cont.

Search Term (<i>n</i> = 6)	Database			Quantity of Search Results <i>n</i> = 2766 ¹ <i>n</i> = 70 ² <i>n</i> = 40 ³
	ERIC (Ebscohost)	Education Research Complete (Ebscohost)	ProQuest Central	
University AND laboratory preschool	45	41	84	170
	2	1	3	6
	0	0	0	0
Early childhood education AND teacher education AND professional development school	89	45	417	551
	4	6	3	13
	4	1	1	6
Campus AND child care centre	102	116	36	254
	3	1	0	4
	3	0	0	3
Total	374	411	1981	2766
	31	21	18	70
	29	5	6	40

¹ Quantity of all search results; ² Quantity of search results that met the inclusion criteria; ³ Quantity of search results, that met the inclusion criteria and were included in analysis, are bolded.

2.2. Data Analysis

The critical analysis of this integrative literature review [39] was performed via the process of classification [39,42]. After reading the publications (*n* = 40) and writing the initial notes regarding the information of ECEC centres, the first author considered whether research questions could be answered by the collected data. Thus, the publications were read several times and their contents were classified into the following categories: 1. name of the ECEC centre, 2. organisational and operational information, 3. information regarding the ECEC activities (programme type, children served, educational philosophy or curriculum of ECEC) and 4. information regarding the academic functions. It was observed that not every publication offered the same type of information. For example, some publications reported the ages of children who participated in ECEC activities [3,24], while others did not, e.g., [18,43]. However, it was possible to continue the analysis, because general descriptions of the organizational structures and functions of ECEC centres were available. To ensure the quality of this analysis, it was double-checked by the research group.

In the integrative literature review, the synthetisation of data is necessary [39]. This is defined as a creative activity that results in the summarisation of the data and the generation of new knowledge or perspectives. In this research, the synthesis process was conducted from three different perspectives that were based on the research questions (see Section 1.2). The form of synthesis process followed mainly “taxonomy or other conceptual classification of constructs” [39] (p. 363) because the classification was based on previous research and knowledge for laying the foundation for models of university ECEC centres. First, the organisational and functional information of ECEC centres was investigated by reading publications (*n* = 40) and identifying and coding each ECEC centre’s name and potential organisational connection with the university, collaboration with the university and/or implemented academic functions. After that, each ECEC centre was placed into the four-field model (see Figure 1). Second, the university ECEC centres that were presented in the top right quadrant (see Figure 1), were chosen for in-depth investigation. The remaining publications (*n* = 28) were investigated by seeking, coding and organizing (see Table S1 in the Supplementary Materials) information regarding the affiliation of the university ECEC centre, publicity of host university, structures of ECEC and theoretical framework of the curriculum. The aim of the third perspective was to form a general view of the academic activities that were implemented in the university ECEC centres that collaborated

with EC teacher education. Based on the definition of academic missions [22] three upper categories were formed, and they supported the identification of separate units of analysis (i.e., academic activities) in the publications. After identification, coded units of analysis ($n = 441$) were collected and organised (see Table S2 in the Supplementary Materials). To ensure the quality of this synthesis process, a double-check was performed by the research group.

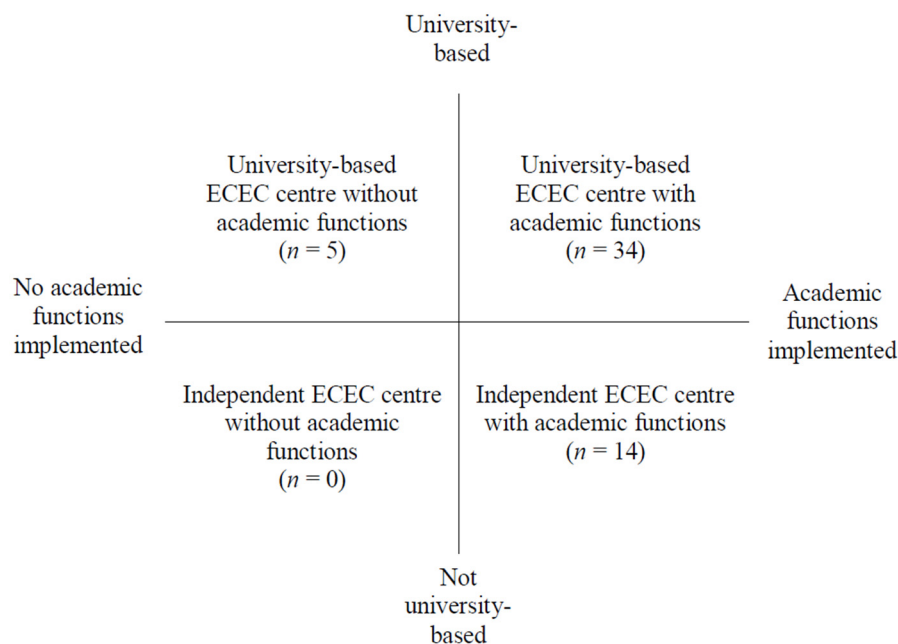


Figure 1. Four types of relationships between universities and early childhood education and care (ECEC) centres ($n = 53$).

3. Results

3.1. Relationship Types between Universities and ECEC Centres

The data consisted of research articles ($n = 27$), dissertations ($n = 6$) and chapters ($n = 7$) of a book. They included quantitative ($n = 3$), qualitative ($n = 13$) and mixed method ($n = 4$) studies, but also descriptive papers ($n = 20$). Publications were published between the years 2000–2010 ($n = 17$) and 2011–2020 ($n = 23$) mainly in the United States ($n = 32$), but publications were also written in Canada ($n = 1$), China ($n = 2$), Cyprus ($n = 1$), Jordan ($n = 1$), Netherlands ($n = 1$) and Turkey ($n = 2$). The search terms and databases used produced several overlapping findings, as depicted in Table 1.

The purpose of the first research question was to explore the types of relationships between universities and ECEC centres ($n = 53$). Almost 75% of the ECEC centres were university-based ($n = 39$) and over 25% of the ECEC centres operated independently ($n = 14$). Almost every ECEC centre ($n = 48$) implemented academic functions as part of their daily activities, while five ECEC centres focused only on the production of the ECEC service. These differences are presented in a four-field model in Figure 1. The four-field model consists of two axes and four quadrants. The horizontal axis illustrates the implemented academic missions, while the vertical axis indicates whether the ECEC centre operates within the university. The four quadrants demonstrate four different types of relationships based on the two variables described above.

In Figure 1, the bottom left quadrant represents ECEC centres that have not implemented academic functions in their activities. No publications regarding this model exist in this research, because the purpose was to focus on relationships between universities and ECEC centres. The quadrant located in the top left includes university ECEC centres ($n = 5$) that focused only on producing ECEC services for the university or local community [44–47]. The bottom right quadrant represents community-based and independent ECEC centres

($n = 14$) that implemented academic functions in their activities. These centres, named professional development schools ($n = 6$) or partnership sites ($n = 1$), are public or private ECEC centres that collaborate with universities [19,48–54]. The bottom right quadrant also includes a privately owned Families First Children’s Center [40] and the Institute of Human Development [43] that are located on campus but operate independently.

The top right quadrant represents approximately 64% ($n = 34$) of the centres. These university ECEC centres implemented academic functions in their daily activities [3,15,18,23,24,31,32,35,36,40,43,55–71] and are reviewed in Section 3.2.

3.2. Structural Features of University-Based ECEC Centres

The aim of the second research question was to investigate the structural features of university ECEC centres that implement academic functions in their activities (see Figure 1). These centres ($n = 34$) were discussed in 28 publications. Data regarding centres’ structural features were distributed in two tables. Table 2 illustrates the affiliations of university ECEC centres, and Table 3 illustrates the structures of university ECEC centres’ programmes. Accurate information regarding the publicity of the host university, type of ECEC programme and ages of participating children was not available in every publication.

Table 2. Affiliations of university ECEC centres that implement academic functions in their daily activities.

Affiliation	Publicity of Host Institution		
	Public ($n = 20$)	Private ($n = 2$)	No Details Were Available ($n = 12$)
Educational or developmental institution that operates within university ($n = 20$)	Merrill-Palmer Institute, laboratory programme [43]; Kent State Child Development Center [56]; Child Development Laboratory [15]; USC/Gateway Child Development and Research Center [18]; Child Study Centre ² [58]; Kent State University Laboratory School [36]; South Dakota State University Laboratory School [36]; Laboratory school ¹ [60]; URI Child Development Center [62]; Dr. Pat Feinstein Child Development Center [62]; Myrna’s Children’s Village [32]; Harriett Laboratory School [67]; Malcolm Price Laboratory School [68]; Child development laboratory school ¹ [69]; Child Development Center for Learning and Research [70]		Hashemite University nursery [55]; Early Childhood Research Laboratory [63]; University laboratory preschool ¹ [3], Laboratory preschool ¹ [64]; The SM Laboratory Preschool [71]
Medical school ($n = 1$)		Yale Child Study Center [43]	
Community college ($n = 3$)			Child development center ¹ [31]; Wytheville Community College Child Development Center [40]; Housatonic Community College Early Childhood Laboratory School [65]

Table 2. Cont.

Affiliation	Publicity of Host Institution		
	Public (<i>n</i> = 20)	Private (<i>n</i> = 2)	No Details Were Available (<i>n</i> = 12)
University but no details were available regarding the affiliation (<i>n</i> = 10)	Karen Slattery Educational Research Center for Child Development [57]; The campus laboratory school child development center ¹ [23]; Harold E. Jones Child Study Center [61]; GMU Child Development Center [40]; Virginia Tech Child Development Lab School [35]	Child development laboratory school ¹ [59]	Botanical Garden Room ¹ [24]; Experimental Greenhouse Room ¹ [24]; Wildflower Valley Room ¹ [24]; Harold E. Jones Child Study Center [66]

¹ Pseudonym or the type of centre, if the name was not mentioned in a publication; ² According to the publication, the centre is not operating anymore.

As Table 2 (see also Table S1 in the Supplementary Materials) shows, university ECEC centres were affiliated with units that focused on educational or developmental perspectives of early childhood (*n* = 20), with the medical school of the university (*n* = 1) or community college (*n* = 3). Moreover, some centres were linked to the university without more specific information provided (*n* = 10). Almost two-thirds of the descriptions indicated whether the host university was public (*n* = 20) or private (*n* = 2). Nearly every university ECEC centre was fully operated by a host university (*n* = 28) and few university ECEC centres (*n* = 6) have utilised non-traditional ways to operate their functions and leadership by creating partnerships with external contractors. First, the GMU Child Development Center [40] is operating within the host university but is a separate, non-profit organisation. It has implemented a public AI's Pal's programme, and it can receive additional funding from the host university. Second, the university-operated Hashemite University nursery [55] is the result of a collaboration between the university and the National Council for Family Affairs. Third, the USC/Gateway Child Development and Research Center [18] was created and is operated in partnership with a for-profit contractor, Gateway Academy. Fourth, Myrna's Children's Village [32] combines various funding sources and partnerships with community programmes and state agencies. It operates several ECEC programmes that have their own curriculum and structural features, such as opening hours, number of children and principles regarding maintaining children's welfare and safety. The host university participates in the funding of this centre. Fifth, the child development laboratory school [69] is operated and partly sponsored by the affiliated university. However, it also collaborates with community programmes that have offered additional funding. Sixth, Wytheville Community College Child Development Center [40] is a university-operated, non-profit organisation that was developed in partnership with the city.

As shown in Table 3, full-day (*n* = 32) and half-day (*n* = 16) ECEC services were offered for infants (*n* = 10), toddlers (*n* = 13), preschool-aged children (*n* = 15) and kindergarteners (*n* = 9). Open ECEC activities (*n* = 2) were offered for infants and their parents. Furthermore, programmes were offered for ECEC aged children (*n* = 29) and primary school aged children (*n* = 3) without more specific details provided regarding programme types. As a part of their ECEC programmes, some university ECEC centres also implemented a variety of specific programmes such as AI's Pals, Bank Street, British Infant School, Head Start, High/Scope, School for Young Children or programmes for children with special needs. Additional programmes included Saturday programmes for toddlers (*n* = 1) and summer programmes or workshops (*n* = 7) for preschool-aged children, kindergarten-aged children and primary school aged children. Applied learning theories and approaches were Reggio Emilia (*n* = 7), constructivist theory (*n* = 4), social constructivist theory (*n* = 5), social learning theory (*n* = 2), socio-cultural theory (*n* = 1), psychosocial development theory (*n* = 1), Montessori (*n* = 1) and learning by doing (*n* = 2), exploring (*n* = 1) or playing (*n* = 2).

Educational activities were research- or inquiry-based ($n = 4$), child-centred ($n = 2$), child focused ($n = 1$), play-based ($n = 1$) and developmentally appropriate ($n = 4$).

Table 3. Structures of ECEC programmes in university ECEC centres.

Ages of Children	Types of ECEC Programmes				
	Full-Day ECEC	Half-day ECEC	Open ECEC	Additional Programmes	No Details Were Available
Infant ($n = 15$)	6	4	2	-	3
Toddler ($n = 21$)	9	4	-	1	7
Preschool-aged ($n = 29$)	10	5	-	3	11
Kindergarten-aged ($n = 20$)	6	3	-	3	8
Primary school aged ($n = 4$)	-	-	-	1	3
No details were available ($n = 5$)	1	-	-	-	4
Total ($n = 94$)	32	16	2	8	36

3.3. Academic Activities of University-Based ECEC Centres

The goal of the third research question was to investigate academic activities that were implemented in university ECEC centres that collaborated closely with EC teacher education. The Yale Child Study Center was excluded from the analysis because it was operating within the Medical School [43]. The remaining centres ($n = 33$) appeared in 28 publications. In this section, an overall picture of the academic activities of university ECEC centres is formed, but they are not compared. The units of analysis ($n = 441$; see Table S2 in the Supplementary Materials) of the data were organised hierarchically in the coding frame [42], which includes three types of categories. Subcategories consist of academic activities, such as educational collaboration, research activities and outreach activities ($n = 30$). These separate academic activities were combined into the following categories: a set of educational collaboration activities ($n = 3$), a set of research activities ($n = 3$) and a set of outreach activities ($n = 5$). These categories formed the upper categories that represent academic missions ($n = 3$). Similar descriptions regarding academic activities were found within several model descriptions. When the frequencies of these descriptions were added together, similar activities within one centre were combined in one unit of analysis. Therefore, the frequencies of academic activities in sub-categories do not exceed the total number of centres ($n = 33$).

University ECEC centres offered their services for preservice teachers at many levels, including in associate, bachelor's, master's and doctoral degree programmes. Table 4 illustrates this educational collaboration. Observation ($n = 25$), as a part of preservice teachers' coursework and research projects, was one of the most commonly implemented forms of educational collaboration. Observations were conducted in ECEC classrooms (group rooms), observation booths or observation rooms that were located above the group room. In addition, various course assignments ($n = 18$) and research projects ($n = 23$) were implemented by preservice teachers. In this action, preservice teachers received support from ECEC teachers who were working in university ECEC centres (later, ECEC teachers). Research activities took many forms, including various course projects, theses and voluntary or obligatory collaborative research projects. ECEC teachers were described as pedagogical consultants who guide preservice teachers and organise time for reflective discussions, and demonstrators who model reflective and high-quality ECEC practices and utilise modern equipment and materials in their work.

The training of preservice teachers ($n = 48$) took many shapes. Preservice teaching ($n = 17$) was often connected with later studies [70]; see also [24,35,56,59–61,66,67,71], and an earlier teaching experience in the (university) ECEC centre [59,62] might be required before the start of preservice teaching. It was a common type of training in the bachelor's degree programme ($n = 12$) and it focused on offering a working experience under supervision or mentoring. It might include observation, coursework, planning pedagogical activities, evaluating programme plans, working as a teacher assistant, doing work shifts and substi-

tuting ECEC teachers. Preservice teaching was also a commonly implemented training type in the master's degree programme ($n = 10$) and it offered working experience in the roles of teacher assistant, ECEC teacher and supervisor or mentor of younger preservice teachers. The duration of preservice teaching typically varied from eight weeks to a year. Moreover, internships ($n = 11$) might be placed at the end of the studies [3,15,64,69] and might have required earlier experience in the university ECEC centre [59]. Internships were supervised or mentored teaching experiences at bachelor's ($n = 8$) and master's degree programmes ($n = 2$), but they were also an essential part of the qualification process after bachelor's studies ($n = 2$). In internships, preservice teachers applied research-based knowledge into practice, planned and conducted learning situations. Preservice teachers also assessed curriculums and helped ECEC teachers in research efforts. Lengths of internships varied from eight weeks to a year. Practicums or practical experiences ($n = 12$) were part of associate ($n = 1$), bachelor's ($n = 9$) and master's ($n = 1$) degree programmes. Practicums could take place before other forms of training [62] and they were completed simultaneously with other courses in a timeframe of 16 weeks. Other types of training ($n = 8$) that were described that could not be categorised in the aforementioned categories, because the descriptions of the concepts were unclear ($n = 7$), were hands-on experience, supervised field experience, practical (field) training and training in a monitored setting [40,55,57–59,64,68]. Furthermore, apprenticeship arrangements were provided to preservice teachers in the bachelor's degree programme [36]. ECEC teachers were described as mentors and supervisors who model, improve and explain ECEC practices, give feedback and work together with preservice teachers.

Table 4. Forms of educational collaboration with early childhood (EC) teacher education ($n = 134$).

Academic Mission	Set of Educational Collaboration Activities ($n = 3$)	Educational Collaboration Activities ($n = 10$)
Educational collaboration with the EC teacher education ($n = 134$)	Supporting preservice teachers to accomplish variety of course requirements ($n = 66$)	Observation ($n = 25$) Research ¹ ($n = 23$) Course assignments or projects ($n = 18$)
	Training collaboration ($n = 48$)	Preservice teaching ($n = 17$) Practicum ($n = 12$) Internship ($n = 11$) Other types of training ($n = 8$)
	Other forms of educational collaboration ($n = 20$)	Giving lectures and presentations ($n = 10$) Participating in reportage and evaluation ($n = 7$) Organising events ($n = 3$)

¹ Research ($n = 23$) is also included in research collaboration (see Table 5).

According to Table 5, the most commonly presented form of research collaboration was the facilitation of the research ($n = 55$) for preservice teachers ($n = 23$), faculty members ($n = 21$) and researchers from other academic units ($n = 11$). The research included observational, interventional, implementation, applied, qualitative, evaluative, pilots, surveys and experimental approaches. Multidisciplinary research collaboration included many fields, including anthropology, (educational) psychology, English as a second language, family studies, home economics, kinesiology, marketing, medicine, nursing, nutrition, political science, sociology, special education and speech and hearing. ECEC teachers were described as collaborators who assisted researchers, preservice teachers and students from other faculties in various research efforts, shared new research ideas and produced the research data (e.g., collecting data, answering questionnaires and making evaluations). Almost half of the centres involved their directors ($n = 14$) in research as actual researchers. According to the information sections, a third of the analysed publications in this research question ($n = 11$) were written by ECEC directors. Moreover, almost a third of the centres involved

their ECEC teachers ($n = 10$) in conducting research as a part of their daily work. Its purpose was to promote educational activities systematically, develop teachers' own reflective thinking and strengthen the research aspect of teaching. Research conducted by teachers was mainly collaborative ($n = 8$), involving colleagues, faculty members, preservice teachers, children or parents and members of other university ECEC centres in the process. The research mentioned in the publications represented a qualitative approach. Research methods were mostly action research and systematic evaluations, and they might include questioning and planning, studying literature, observing, collecting, organising and analysing data, documenting, interpreting, reflecting, speculating, forming theory, evaluating, writing, publishing and giving presentations of results.

Table 5. Forms of research collaboration with university ($n = 98$).

Academic Mission	Set of Research Activities ($n = 3$)	Research Activities ($n = 5$)
Research collaboration with university ($n = 98$)	University ECEC centre as research facility ($n = 55$)	Facilitate research conducted by preservice teachers ($n = 23$) ¹ Facilitate research conducted by faculty members ($n = 21$) Facilitate multidisciplinary research ($n = 11$)
	University ECEC centre as knowledge generator ($n = 24$)	Directors as researchers ($n = 14$) ECEC teachers as researchers ($n = 10$)
	University ECEC centre as applicator of research results ($n = 19$)	

¹ Research ($n = 23$) is also included in educational collaboration (see Table 4).

Table 6 demonstrates outreach activities that involved ECEC teachers as well as directors in action. Most often outreach activities were based on the dissemination of the information ($n = 56$) by writing scholarly papers ($n = 20$), giving presentations at local, state, national and international conferences ($n = 13$) and offering information regarding university ECEC centres ($n = 23$) through writing for newsletters, newspapers and websites, producing audio-visual material, sharing brochures, schedules, handbooks, reports, conversing and giving presentations. Furthermore, networking and communication activities ($n = 55$) were common. Nearly three out of every four university ECEC centres ($n = 24$) hosted local, state, national or international visitors, e.g., for members of the host university and other universities, ECEC professionals, policy or decision-makers, (former) parents or students from other schools. ECEC teachers and directors were involved in various collaborative meetings ($n = 21$) with faculty members, representatives from other universities, parents and other partners, e.g., local agencies and organisations.

Moreover, educational outreach activities ($n = 52$) took many forms. Parent training and education ($n = 17$) were implemented either in a formal manner, e.g., organising events, classes and courses, or in informal ways, e.g., instructing, assisting, offering help and giving instructive material, such as literature, statements and information. In-service training of national or international ECEC professionals ($n = 14$) included professional development classes and courses, organising professional development events, offering courses and field experiences or producing educational material. Multidisciplinary educational collaborations ($n = 12$) were developed with fields of anthropology, dance, (educational) psychology, English as a second language, family studies, home economics, kinesiology, marketing, medicine, nursing, social work, sociology and special education.

Professional services included participating in various committees and boards ($n = 14$) at university, local, state and national levels, but also consulting, accomplishing leadership activities and sharing knowledge and expertise within the ECEC field ($n = 10$), specifically for staff in community-based and university ECEC centres and decision-makers who work at the state and national levels. Collaborative projects ($n = 7$) with faculty members, parents, local agencies, committees and international collaborators included aspects of charity, marketing, family events, international exchange and well-being of

the environment. Fundraising efforts ($n = 9$) were aimed at supporting the continuity of university ECEC centres by searching private and public funding opportunities, contacts with potential funders, submitting grant proposals, conducting evaluations, organising sales and fundraising events and producing marketing material.

Table 6. Forms of outreach activities ($n = 209$).

Academic Mission	Set of Outreach Activities ($n = 5$)	Outreach Activities ($n = 15$)
Outreach efforts ($n = 209$)	Dissemination of information ($n = 56$)	Sharing information about university ECEC centre ($n = 23$) Writing scholarly publications ($n = 20$) Giving conference presentations ($n = 13$)
	Networking and communication ($n = 55$)	Hosting visits ($n = 24$) Participating in collaborative meetings ($n = 21$) Networking and visiting in other centres ($n = 10$)
	Educational outreach activities ($n = 52$)	Training and educational activities for parents ($n = 17$) In-service training for ECEC community ($n = 15$) Multidisciplinary educational collaboration with other university departments ($n = 12$) Supporting professional development of university faculty members ($n = 8$)
	Professional services ($n = 37$)	Representing in variety of committees or boards ($n = 14$) Consulting ECEC community ($n = 10$) Conducting collaborative projects with partners ($n = 7$) Contributions to the organisation of conferences ($n = 6$)
	Other outreach activities ($n = 9$)	Carrying out fundraising efforts ($n = 9$)

4. Discussion

4.1. Conclusions

The main purpose of this integrative literature review was to form a comprehensive picture of university ECEC centres that collaborate closely with EC teacher education programmes and have implemented academic missions in their daily functions. According to McBride and colleagues [22], the definition of laboratory schools (in this article, university ECEC centres) is academic collaboration and connection to the universities. The main result of this literature review was the identification of four different relationship types of ECEC centres and universities. As illustrated in Figure 1, ECEC centres, that operated within universities ($n = 39$) and/or collaborated closely with universities ($n = 48$), were studied in this research. Most of the university ECEC centres ($n = 28$) operated and were owned by universities, and some of them ($n = 6$) were developed in cooperation with external contractors. Almost every university ECEC centre with academic functions ($n = 33$) collaborated closely with the EC teacher education programme. As illustrated in Table 4, the educational collaboration was implemented especially by serving as a facility for preservice teachers to observe ($n = 25$), research ($n = 23$), complete their course assignments, projects ($n = 18$) and preservice teaching periods ($n = 17$). Almost every university ECEC centre ($n = 27$; see Table S2 in the Supplementary Materials) served as a research facility for researchers from host faculty ($n = 21$) and/or from other faculties ($n = 11$), see Table 5. Nearly half of university ECEC centres ($n = 16$; see Table S2 in the Supplementary Materials) implemented research activities by their directors ($n = 14$) and/or teachers ($n = 10$), see Table 5. As depicted in Table 6, the most commonly implemented outreach activities were hosting visits ($n = 24$), sharing information regarding the centre ($n = 23$), participating in collaborative meetings ($n = 21$) and writing scholarly publications ($n = 20$).

This research confirmed previous research, e.g., [22,31,33,38] concerning the structural and functional variety in university ECEC centres by claiming that each university ECEC centre is unique, and they are organised in many different ways. Moreover, this and the

earlier research, e.g., [15,22,33,69] claim that, in addition to ECEC, educational collaboration, research collaboration and outreach activities are essential functions of university ECEC centres. According to Torracco [39], the integrative literature review plays an important role in stimulating further research for the generation of new ideas on the topic. Further research is needed to analyse the pedagogical approaches concerning collaboration between university ECEC centres and EC teacher education. According to the results, several educational learning approaches were implemented in the pedagogies of university ECEC centres. Especially the constructivist arts pedagogy, Reggio Emilia, was applied most often. In this research, different types of university ECEC centres and their functions were reviewed. It is important to notice that academic activities of non-university-based ECEC centres have not been included in this research. Therefore, it cannot be claimed that the implementation of academic actions only concerns university ECEC centres. Due to this, comparative research of the similarities and differences regarding the operational cultures and possible academic actions between four types of ECEC centre models' (see Figure 1) is needed in the future.

4.2. Limitations

According to Torracco [39], the critical discussion of the reviewed publications is necessary. In spite of the fact that the findings of this research succeeded to address to research questions, several limitations were found. First, almost every analysed publication was written in the United States ($n = 32$), while every fifth publication ($n = 8$) was written in other countries. This limitation is critical if this geographical division in the publications is due to the chosen search terms (see Section 2.1). Additionally, it is also possible that the influential development work of Dewey [27] might have promoted certain publications in particular. Second, the historical perspective of analysed data needs to be considered. The analysed publications were published during the first two decades of the 21st century and provided certain information that was current at the time of publishing. Changes may have occurred after publishing. It would be interesting to study how these contexts have developed since then, and especially lately, due to the COVID-19 pandemic, particularly from a technological point of view. Third, it is important to pay attention to the fact that this research does not illustrate the reality of university ECEC centres unambiguously. The data consisted of content that researchers chose to include in their publications. This affected how and how often certain content appeared in the data, analysis, and finally, in the results. For example, few publications of university ECEC centres [40,43] did not offer specific descriptions of research conducted in university ECEC centres, but it cannot be inferred that research activities are not conducted in those centres. Instead of comparing academic actions, the aim of the third research question was to form a general view of the different academic activities that were implemented in university ECEC centres. Furthermore, the classification of the data concerning the training collaboration should be viewed critically, because of the incomplete information of the analysed publications. Due to this, seven descriptions of those publications were classified into the "other types of training", but they might belong to other categories, e.g., practicums or internships (see Table 4).

4.3. Concluding Thoughts

The purpose of this research was to find different kinds of university ECEC centre models for the future reflection regarding the development of the Finnish university ECEC centre model, ECTEC Rauman pikkunorssi, which started operating at the University of Turku in Finland in January 2021. According to the results of this research, ECTEC Rauman pikkunorssi belongs to the group of university-based ECEC centres with academic functions, as most of the analysed models (see Figure 1). This shows that the developed model in Finland is part of the trend, which is also internationally a common collaborative model between EC teacher education and ECEC centres. This invites EC teacher education programmes and ECEC centres for international collaboration.

In Finland, ECEC pedagogy is continuously developed and researched in collaboration between EC teacher education and ECEC centres [72], and ECTEC Rauman pikkunorssi collaborates closely with its host institution, the Department of Teacher Education, Rauma campus. In the future, the ECTEC model will need more research to reflect how Finnish EC teacher education should be developed equally with other Finnish teacher education programmes that already have their university-based training school systems. This literature review has given international examples of these kinds of models whose collaborations have been successful with EC teacher education. This article provides ideas and perspectives not only for the developers of the ECTEC Rauman pikkunorssi model, but also for others who are interested in developing ECEC centres in university-based teacher education contexts globally. The results of this research can inspire and support development work in all similar contexts.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/educsci12020141/s1>, Table S1: Supplementary material concerning results of the research question 2 (see Tables 2 and 3); Table S2: Supplementary material concerning results of the research question 3 (see Tables 4–6).

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References

- Piaget, J. *The Psychology of Intelligence*; Routledge & Kegan Paul: London, UK, 1971.
- Richardson, V. Constructivist Teaching and Teacher Education: Theory and Practice. In *Constructivist Teacher Education: Building a World of New Understandings*; Richardson, V., Ed.; Falmer Press: London, UK, 1997; pp. 3–14.
- Monroe, L.A.L. Evaluation of a Laboratory Preschool: Utilizing a Theory Approach Logic Model. Ph.D. Thesis, University of Oklahoma, Norman, OK, USA, January 2009.
- Von Glasersfeld, E. *Radical Constructivism. A Way of Knowing and Learning*; Taylor and Francis: Hoboken, NJ, USA, 2013.
- Bodrova, E. Vygotsky and Montessori: One dream, two visions. *Montessori Life* **2003**, *15*, 30–33.
- Vygotsky, L.S.; Cole, M.; John-Steiner, V.; Scribner, S.; Souberman, E. *Mind in Society: Development of Higher Psychological Processes*; Harvard University Press: Cambridge, MA, USA, 1978.
- Bandura, A. Self-referent mechanisms in social learning theory. *Am. Psychol.* **1979**, *34*, 439–441. [[CrossRef](#)]
- Grusec, J. Social Learning Theory and Developmental Psychology: The Legacies of Robert Sears and Albert Bandura. *Dev. Psychol.* **1992**, *28*, 776–786. [[CrossRef](#)]
- Dewey, J. *Democracy and Education: An Introduction to the Philosophy of Education*; The Free Press: New York, NY, USA, 1916.
- Smart, K.L.; Csapo, N. Learning by Doing: Engaging Students Through Learner-Centered Activities. *Bus. Commun. Q.* **2007**, *70*, 451–457. [[CrossRef](#)]
- Onnismaa, E.-L.; Tahkokallio, L.; Kalliala, M. From university to working life: An analysis of field-based studies in early childhood teacher education and recently graduated kindergarten teachers' transition to work. *Early Years* **2015**, *35*, 197–210. [[CrossRef](#)]
- Hännikäinen, M. Varhaiskasvatus pienten lasten päiväkotiryhmissä: Hoitoa, kasvatusta vai opetusta? In *Varhaiskasvatuksen Pedagogiikka*; Karila, K., Lipponen, L., Eds.; Vastapaino: Tampere, Finland, 2013; pp. 30–52.
- Finnish National Agency for Education. *National Core Curriculum for Early Childhood Education and Care*; Finnish National Agency for Education: Helsinki, Finland, 2018.
- Act on Early Childhood Education and Care, 13.7.2018/540. 2018. Available online: www.finlex.fi/fi/laki/ajantasa/2018/20180540?search%5Btype%5D=pika&search%5Bpika%5D=varhaiskasvatuslaki (accessed on 25 August 2020).

15. Branscomb, K.; McBride, B. Academics versus service: Balancing competing missions in laboratory schools offering full-day programming. *J. Early Child. Teach. Educ.* **2005**, *25*, 113–121. [[CrossRef](#)]
16. Finnish National Board of Education. *National Core Curriculum for Basic Education*; Finnish National Board of Education: Helsinki, Finland, 2014.
17. Alverson, R.; Ginn, L.; Gilbert, J. Sustaining collaborative preschool partnerships and the challenges of educating the whole child. *Int. J. Child Care Educ. Policy* **2019**, *13*, 1–15. [[CrossRef](#)]
18. Brown, M.; Freeman, N. The Children's Center's Survival Brinkmanship, Persistence and Creativity. In *Bridging the Gap Between Theory, Research and Practice: The Role of Child Development Laboratory Programs in Early Childhood Education (Advances in Early Education and Day Care)*; McBride, B.A., Ed.; Emerald Group Publishing Limited: Bingley, UK, 2003; Volume 12, pp. 31–49. [[CrossRef](#)]
19. Clark, P.; Huber, L. Enhancing early childhood teacher growth and development through professional development school partnerships. *J. Early Child. Teach. Educ.* **2005**, *26*, 179–186. [[CrossRef](#)]
20. Horm, D.; Hyson, M.; Winton, P. Research on Early Childhood Teacher Education: Evidence From Three Domains and Recommendations for Moving Forward. *J. Early Child. Teach. Educ.* **2013**, *34*, 95–112. [[CrossRef](#)]
21. Whitebook, M.; Bellm, D.; Lee, Y.; Sakai, L. *Time to Revamp and Expand: Early Childhood Teacher Preparation Programs in California's Institutions of Higher Education*; Center for the Study of Child Care Employment: Berkeley, CA, USA, 2005.
22. McBride, B.A.; Groves, M.; Barbour, N.; Horm, D.; Stremmel, A.; Lash, M.; Bersani, C.; Katekin, C.; Moran, J.; Elicker, J.; et al. Child development laboratory schools as generators of knowledge in early childhood education: New models and approaches. *Early Educ. Dev.* **2012**, *23*, 153–164. [[CrossRef](#)]
23. Hall, A.; Peden, J.; Maurer, T. Assessing Birth to Age 5 Teaching Methods at a University Laboratory School. *J. Res. Child. Educ.* **2017**, *31*, 270–280. [[CrossRef](#)]
24. McMullen, M.; Lash, M. Babies on Campus: Service to Infants and Families among Competing Priorities in University Child Care Programs. *Early Child. Res. Pract.* **2012**, *14*, n2.
25. Luukkanen, T.-L. *Cygnaeus, Uno. Suomen Kansallisbiografia, Osa 3*; Suomalaisen Kirjallisuuden Seura: Helsinki, Finland, 2004.
26. Meretniemi, M. Hyvä koti ja henkinen äitiys lastentarhatyön esikuvina: Aate- ja käsitehistoriallinen tutkielma Suomen varhaiskasvatuksen taustasta. Doctoral Thesis, University of Helsinki, Helsinki, Finland, 2015.
27. Knoll, M. John Dewey as administrator: The inglorious end of the Laboratory School in Chicago. *J. Curric. Stud.* **2015**, *47*, 203–252. [[CrossRef](#)]
28. Hytönen, J. The development of modern Finnish teacher education. In *Teacher Education in Finland. Present and Future Trends and Challenges*; Tella, S., Ed.; Vantaa Institute for Continuing Education, University of Helsinki: Helsinki, Finland, 1996; pp. 1–10.
29. Kansanen, P. Teacher education in Finland: Current models and new developments. In *Institutional Approaches to Teacher Education within Higher Education in Europe: Current Models and New Developments. Studies on Higher Education*; Moon, B., Vlasceanu, L., Barrows, L.C., Eds.; UNESCO: Bucharest, Romania, 2003; pp. 85–108.
30. Ruokonen, I. Ebeneser lastentarhanopettajien kouluttajien muistoissa. In *Ebeneser: 100 Vuotta Lasten Hyväksi*; Meretniemi, M., Österberg, I., Eds.; Ebeneser-säätiö: Helsinki, Finland, 2007; pp. 119–137.
31. Calica, C.D.-L. Fulfilling Multiple Missions Concurrently: An Ethnographic Study of a Campus Children's Center's Trials and Triumphs in Serving Six Populations. Ph.D. Thesis, University of California, Berkeley, CA, USA, 2017.
32. Pérez, M.; Kim, K.; Cahill, B. Myrna's Children's Village: Reflections on a dynamic early childhood laboratory school community in southern New Mexico. *Contemp. Issues Early Child.* **2018**, *20*, 294–308. [[CrossRef](#)]
33. McBride, B.; Baumgartner, J. The Changing Profile of Teaching, Research and Outreach Activities in Lab School Programs. In *Bridging the Gap Between Theory, Research and Practice: The Role of Child Development Laboratory Programs in Early Childhood Education (Advances in Early Education and Day Care)*; McBride, B.A., Ed.; Emerald Group Publishing Limited: Bingley, UK, 2003; Volume 12, pp. 181–200. [[CrossRef](#)]
34. National Council for Accreditation of Teacher Education. *Transforming Teacher Education Through Clinical Practice: A national Strategy to Prepare Effective Teachers*; National Council for Accreditation of Teacher Education: Washington, DC, USA, 2010.
35. Stremmel, A.J.; Hill, L.T.; Fu, V.R. An Inside Perspective of Paradigm Shifts in Child Development Laboratory Programs: Bridging Theory and Professional Preparation. In *Bridging the Gap Between Theory, Research and Practice: The Role of Child Development Laboratory Programs in Early Childhood Education (Advances in Early Education and Day Care)*; McBride, B.A., Ed.; Emerald Group Publishing Limited: Bingley, UK, 2003; Volume 12, pp. 89–111. [[CrossRef](#)]
36. Cutler, K.; Bersani, C.; Hutchins, P.; Bowne, M.; Lash, M.; Kroeger, J.; Brokmeier, S.; Venhuizen, L.; Black, F. Laboratory Schools as Places of Inquiry: A Collaborative Journey for Two Laboratory Schools. *Early Educ. Dev.* **2012**, *23*, 242–258. [[CrossRef](#)]
37. Keyes, C.R.; Boulton, P.J. Kids on Campus. *Academe* **2007**, *93*, 41–43.
38. Keyes, C.R.; Boulton, P.J. Campus children's center: Support for children and families. *Child. Today* **1995**, *23*, 18–21.
39. Torracco, R. Writing Integrative Literature Reviews: Guidelines and Examples. *Hum. Resour. Dev. Rev.* **2005**, *4*, 356–367. [[CrossRef](#)]
40. Ludlow, K.A. Campus-based Child Care Needs Assessment: A Study of Campus-based Child Care Business Plans. Ph.D. Thesis, George Mason University, Fairfax County, VA, USA, 2011.
41. Salminen, A. *Mikä Kirjallisuuskatsaus. Johdatus Kirjallisuuskatsauksen Tyyppeihin ja Hallintotieteellisiin Sovelluksiin*; Vaasan Yliopisto: Vaasa, Finland, 2011.

42. Schreier, M. Qualitative content analysis. In *The SAGE Handbook of Qualitative Data Analysis*; Flick, U., Ed.; SAGE Publications Ltd.: London, UK, 2014; pp. 170–183. [\[CrossRef\]](#)
43. Barbour, N. The Early History of Child Development Laboratory Programs. In *Bridging the Gap Between Theory, Research and Practice: The Role of Child Development Laboratory Programs in Early Childhood Education (Advances in Early Education and Day Care)*; McBride, B.A., Ed.; Emerald Group Publishing Limited: Bingley, UK, 2003; Volume 12, pp. 9–29. [\[CrossRef\]](#)
44. Dagli, Ü.Y. University Childcare Teachers Perceptions, Beliefs, and Thoughts About Their Profession and Jobs: A Turkish Case. *Eur. J. Educ. Res.* **2012**, *1*, 225–240. [\[CrossRef\]](#)
45. Edwards, M.M.; Thornton, E. Library Outreach: Introducing Campus Childcare Providers to the Academic Library. *Educ. Libr.* **2013**, *36*, 4–16. [\[CrossRef\]](#)
46. Fees, B.S.; Hoover, L.; Zheng, F. Chinese Kindergarten Teachers' Perceived Changes in Their Teaching Philosophies and Practices: A Case Study in a University-Affiliated Program. *Int. J. Early Child.* **2014**, *46*, 231–252. [\[CrossRef\]](#)
47. Williams-Smith, L. Effective Comprehensive Campus-based Child Care services upon the academic success of student-parents: A case study at a higher learning institution. Ph.D. Thesis, Capella University, Minneapolis, MN, USA, 2008.
48. Curcio, R.; Ascetta, K. A Bridge Between Teacher Education and School. *Learn. Prof.* **2019**, *40*, 30–34.
49. De Roos, S.A.; van der Heijden, M.H.R.M.A.; Gorter, R.J. Professional development schools and early childhood education: Interactive skills of students, playgroup and kindergarten teachers. *Eur. Early Child. Educ. Res. J.* **2010**, *18*, 15–28. [\[CrossRef\]](#)
50. Epstein, A.; Willhite, G.L. Teacher efficacy in an early childhood professional development school. *Int. Electron. J. Elem. Educ.* **2015**, *7*, 189–198.
51. Field, B.; Van Scoy, I. The Challenges Never Stop! Two Decades of Reaching for the Best in Clinical Practice. *PJE* **2014**, *89*, 436–452. [\[CrossRef\]](#)
52. Harris, M.; van Tassell, F. The professional development school as learning organization. *Eur. J. Teach. Educ.* **2005**, *28*, 179–194. [\[CrossRef\]](#)
53. Tirrell-Corbin, C.; Cooper, D.H. Deweyan inquiry as a means of transforming the culture of family involvement in a Title I Professional Development School. *Teach. Educ. Q.* **2014**, *41*, 25–45.
54. Yuen, L. Early Childhood Teacher Learning Through a Professional Development School Program in Hong Kong. *J. Early Child. Teach. Educ.* **2011**, *32*, 72–83. [\[CrossRef\]](#)
55. Al-Hassan, O.M.; Bani-Hani, K.E. A Pioneering Model Nursery Program in Jordan: A story of success. *Child. Educ.* **2019**, *95*, 49–53. [\[CrossRef\]](#)
56. Bersani, C.; Hutchins, P. Reconceptualizing the Child Development Laboratory School. In *Bridging the Gap Between Theory, Research and Practice: The Role of Child Development Laboratory Programs in Early Childhood Education (Advances in Early Education and Day Care)*; McBride, B.A., Ed.; Emerald Group Publishing Limited: Bingley, UK, 2003; Volume 12, pp. 113–139. [\[CrossRef\]](#)
57. Brown, N.; Bartram, L. New Interdisciplinary Possibilities: Learning together in an early childhood lab school. *Child. Educ.* **2018**, *94*, 64–71. [\[CrossRef\]](#)
58. Clark, P.; Gleason, M.; Petrina, S. Preschools for Science: The Child Study Centre at the University of British Columbia, 1960–1997. *Hist. Educ. Q.* **2012**, *52*, 29–61. [\[CrossRef\]](#)
59. Clawson, M. The Dilemma of Linking Theory and Research with Practice and Innovation in Child Development Laboratory Programs. In *Bridging the Gap Between Theory, Research and Practice: The Role of Child Development Laboratory Programs in Early Childhood Education (Advances in Early Education and Day Care)*; McBride, B.A., Ed.; Emerald Group Publishing Limited: Bingley, UK, 2003; Volume 12, pp. 51–87. [\[CrossRef\]](#)
60. Cutler, K.; Gilkerson, D.; Bowne, M.; Stremmel, A. Change Within a Teacher Education Program and Laboratory: A Reflective Commentary. *J. Early Child. Teach. Educ.* **2009**, *30*, 404–417. [\[CrossRef\]](#)
61. Harms, T.; Tracy, R. Linking Research to Best Practice: University Laboratory Schools in Early Childhood Education. *YC Young Child.* **2006**, *61*, 89–93.
62. Horm, D.M.; Warford, S.D.G. Bridging the Gap Through Community Collaboration: An Evolving Role for Child Development Laboratory Programs. In *Bridging the Gap Between Theory, Research and Practice: The Role of Child Development Laboratory Programs in Early Childhood Education (Advances in Early Education and Day Care)*; McBride, B.A., Ed.; Emerald Group Publishing Limited: Bingley, UK, 2003; Volume 12, pp. 141–163. [\[CrossRef\]](#)
63. Loizou, E. An early childhood research laboratory framework: Necessity the mother of invention. *Eur. Early Child. Educ. Res. J.* **2013**, *21*, 581–595. [\[CrossRef\]](#)
64. Monroe, L.; Horm, D.M. Using a Logic Model to Evaluate Undergraduate Instruction in a Laboratory Preschool. *Early Educ. Dev.* **2012**, *23*, 227–241. [\[CrossRef\]](#)
65. Noe, L.R. Internationalizing your early childhood college program. *YC Young Child.* **2014**, *69*, 58–65.
66. Scales, B.; Perry, J.; Tracy, R. Creating a Classroom of Inquiry at the University of California at Berkeley: The Harold, E. Jones Child Study Center. *Early Educ. Dev.* **2012**, *23*, 165–180. [\[CrossRef\]](#)
67. Seipel, S.H. Stakeholder Perceptions: The Impact of a University-based Laboratory School on a Campus-based University Educator Preparation Program. Ph.D. Thesis, University of Missouri, Columbia, MO, USA, 2018.
68. Weber, L. The Teacher Institute: A Blend of Teaching, Research, and Service. *NALSJ* **2007**, *31*, 14–18.

69. Wright, C.A. Funding Dilemmas: Toward Sustainable and Creative Financing in Child Development Laboratory Programs. In *Bridging the Gap Between Theory, Research and Practice: The Role of Child Development Laboratory Programs in Early Childhood Education (Advances in Early Education and Day Care)*; McBride, B.A., Ed.; Emerald Group Publishing Limited: Bingley, UK, 2003; Volume 12, pp. 165–180. [[CrossRef](#)]
70. Zehrt, J.E.R. Journeying to Make Reggio Emilia “Our Own” in a University Lab School and Teacher Education Program. Ph.D. Thesis, University of Virginia, Charlottesville, VA, USA, 2009.
71. Özge, M.A. From an Academician’s Preschool Diary: Emergent Curriculum and Its Practices in a Qualified Example of Laboratory Preschool. *J. Curric. Teach.* **2018**, *7*, 97–110. [[CrossRef](#)]
72. Kangas, J.; Ukkonen-Mikkola, T.; Harju-Luukkainen, H.; Ranta, S.; Chydenius, H.; Lahdenperä, J.; Neitola, M.; Kinos, J.; Sajaniemi, N.; Ruokonen, I. Understanding Different Approaches to ECE Pedagogy through Tensions. *Educ. Sci.* **2021**, *11*, 790. [[CrossRef](#)]