Understanding the Reggio Emilia-inspired literacy education: A meta-ethnographic study

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Abstract

The Reggio Emilia pedagogy is compatible with literacy education goals. However, just a few detailed accounts have been published about how literacy instruction is integrated into the Reggio Emilia-inspired preschools. The study adopted qualitative research design and aimed to fill this gap by conducting a meta-ethnographic study by examining and synthesizing various studies done on play-based emergent literacy education in Reggio Emilia inspired-preschools. The study adopted Noblit and Hare's 7 steps meta-ethnography method, including interpretations and syntheses of various studies. Since the meta-ethnography method involves cumulative synthesis through induction, the current research employed synthesis of 24 studies by analysing in-depth, and then synthesizing the studies comparatively and cumulatively, maintaining links among the synthesis and then creating hypotheses and implications for teachers and parents accordingly. The emerged theme was discussed along with the sub-themes, namely philosophy, practices, and evidence. Each sub-theme was scrutinized in detail during the data analysis. It was found that play-based education in Reggio Emilia-inspired preschools successfully accomplished healthy literacy development covering all the links (cognitive, psychological, ecological, social and sociocultural perspectives) between play and literacy. Early childhood educators and parents were advised to take children's interests and needs into consideration to provoke literacy-related plays and to set up the literacy-enriched climate, where children could reach materials easily, had time and space to interact with them, and had adult and peer assistance to enrich their literacy-play activities. By using multiple literacies (100 Languages) and making literacy learning enjoyable and fun, play guarantees young children's early attempts at literacy to be successful. In short, the study illustrated that literacy was reconceptualised in a new and effective way in Reggio-inspired preschools compared to traditional literacy education in other preschools and it was found that what makes the Reggio Emilia-inspired experiences special was the whole approach to literacy instruction.

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1. Introduction

1.1. Introduction to the problem

Although children's playful behavior can be observed easily and directly, coming up with an exact definition of play is difficult. It is a fuzzy concept, but, generally play can be defined as an activity that involves intrinsic motivations and the active engagement of players (Garvey, 1990). Garvey indicates, "We can only speak of play when we contrast it with other orientations or states; we can only identify playful behavior when the actor can and does engage in a corresponding but contrasting no playful behavior" (p.5). Accordingly, since the idea of play as a behavior depends on contrast, it can be claimed, activities that are done with extrinsic motivations of children and with the passive engagement of children –such activities that are done not because of that children are interested in but children are forced to do it or activities that are done by others actively while children are passive receivers or observers- should not be considered as play.

Play is one of the fundamental activities of young children throughout the day. Social scientists are intrigued by this activity. One of the reasons that play is intriguing is because of the possible interrelationship of it with various learning and development areas and the well-being of children (Garvey, 1990). Emergent literacy, which is defined as print language awareness before children begin reading and writing conventionally, is accepted as one of the essential skills for supporting formal schooling and inhibiting future literacy-related problems and (Clay, 1966; Davidson, 1996) because many children around the world are facing various literacy problems like children around Reggio Emilia village in Italy (Scortichini et al., 2015; Pizzamiglio et al, 2014; Poletti, 2016). Accordingly, instead of delaying literacy education until young children mature, developmentally appropriate ways of education like play are needed to support the development of literacy skills in young children (Saracho, 2017).

Like many early childhood educators around the world, teachers in Reggio Emilia preschools integrate play into children's projects and aim to support the literacy development of children (Rhoades, 2016). This article is a synthesis of the research on the Reggio Emilia approach to early childhood education as a model for play-based literacy instruction. Loris Malaguzzi (1993), the founder and former director of Reggio Emilia preschools, states that play is pervasive in children's experience and supports social development of intelligence, reciprocity and negotiation skills among children, persistence skills in activity and conversation, and symbol creation.

Accordingly, play is seen as one of the fundamental works of young children in Reggio Emilia preschools where the education philosophy is based on an interpretivist paradigm, mostly the constructivist theory of Piaget and the sociocultural theory of Vygotsky (Inan, Trundle, Kantor, 2010; Inan, 2019; Malaguzzi 1993; Malaguzzi, 1994)

and the idea of that environment is the third teacher (Gandini, 2002). It is essential to look at the links between the play and emergent literacy in depth to be able to understand how play supports emergent literacy development of children.

1.2. Play and emergent literacy links

There is an important debate about literacy mastery. On one hand, some experts claim that emergent literacy is a continuum, and each child learns at his or her own individual pace. Accordingly, a five-year-old is expected to reach mastery faster than a three-year-old. On the other hand, there are some three-year-olds from rich literacy backgrounds that may make faster progress than some five-year-olds from deprived literacy backgrounds (Mountain, 2000). According to Mountain, what makes the literacy background rich or deprived might be literate homes or the strategies used by parents and teachers. Moreover, this perspective might reflect the ecological perspective which is based on the strong link between literacy skills and literacy-enriched play environments (Roskos & Christie, 2000). Parallel to this, Pappas, Kiefer and Levstik (1999) indicate that individual children's literacy knowledge differs according to the manner and extent to which print knowledge has been shared with them.

Play can fulfil an important role in early literacy development and literacy achievement (Christie, 1998) since it creates a context, for example, where children can learn to read (Meek, 2000) and find social interaction opportunities and intrinsic rewards which foster the positive disposition toward early literacy (Sonnenschein, Baker, Serpell, & Schmidt, 2000, p.107). The infusion of literacy into a play context appears to work to the children's advantage as emergent readers and writers (Einarsdottir, 2000). It is clear that there is a considerable connection between play and emergent literacy, but these links need to be specified clearly; in so doing, such connection can be understood in depth. The links below represent psychological, ecological, social, cognitive and sociocultural perspectives, respectively.

1.2.1. First link: Natural tendency

The first link stresses the inner motivation of young children to naturally incorporate literacy activities into their play (Roskos, 1988). Roskos (1988) indicates that over and over again the children she observed run through literacy routines indigenous to a pretend play topic, whether it is menus for eating out, checks for banking and so on. These routines provide opportunities for children to explore reading and writing activities in a meaningful and natural way instead of an artificial one. Children have fun and enjoy working on literacy while being engaged with play. Sonnenschein, Baker, Serpell and Schmidt (2000) found that an entertainment orientation appeared generally as the predictive of more competent prekindergartners and kindergartners in emergent literacy. They indicate that many enjoyable activities and interactions created by the

linkage between literacy and play were positively related to young children's achievement in literacy. Similarly, Hall (2000) states that it is the enjoyment that keeps learners going when patience and perseverance are required.

1.2.2. Second link: Literacy-enriched environments

An ecological perspective focuses on features of the environment that surround children and indicates that literacy-enriched environments in which children practice, observe, experiment with, and explore literacy (Davidson, 1996) can provoke literacy-play activities (Einarsdottir, 2000; Vukelich, 1991). Roskos and Neuman (1998) state that play environments enriched with literacy resources supports children's literacy skills in a beneficial way. In short, it is seen that literacy props in play areas might enrich young children's play and increase literacy-play activities.

In addition to increased literacy-play activities, the duration of such activities can be extended, too. The research conducted by Dunn, Beach, and Kontos (2000) found that after literacy activities and materials, such as library areas, computers, and letter cards, were added, children spent more time on literacy issues, even up to 20 minutes. Moreover, they indicate that children's conception of themselves was changed; they began to see themselves as readers and writers. For example, before the program they conducted, when they asked children to read and write, children denied and said that they could not read and write. However, in contrast to their behaviour, after the literacy activities were included, most children replied to the same question by saying they could and beginning to read and write immediately.

As indicated by Sonnenschein et al. (2000), literacy-enriched play environments can be embedded not only in classrooms but also in homes. The home perspective indicates that family incomes and parents' attitudes have an important role in the literacy development of young children. According to Sonnenschein et al., it is the middle–income families that mostly encourage their children to interact with literacy activities as a source of entertainment. The primary focus is enjoyment rather than learning to read and write solidly. Accordingly, children who experience playful literacy activities at home might appear to be more competent and interested in literacy activities than children who do not.

Neuman and Roskos (1991) indicate that inclusion of appropriate, functional, and authentic props and writing materials in play centers empowers young children as thinkers and learners. This might make a difference in their literacy behaviours through play, since well-planned literacy-enriched environments can help children conduct exploration and discovery on literacy issues, such as reading and writing. Moreover, D. Fernie (personal communication, February 26, 2003) states that the inclusion of transformable materials and props into literacy-play activities may enhance children's creativity skills, such as story-making, as well.

1.2.3. Third link: Adult or peer assistance

The third link indicates Vygotsky's idea of "Zone of Proximal Development" suggesting that adults and more knowledgeable peers can encourage children to acquire literacy knowledge and contributes to the amount of literacy play (e.g., Christie & Stone, 1999; Vukelich, 1994). Children in the multi-age group benefit from collaborative learning experiences with older classmates and collaboration among classmates can be supported and incorporated into literacy-play contexts (Christie & Stone, 1999). Moreover, through adults' assistance on children's environmental print knowledge (Vukelich, 1994) and enrichment of dramatic play with adult modelling, young children's literate behaviors and the time children spend on play-literacy activities can be increased (Vukelich, 1991). However, Davidson (1996) states that adult intervention may disrupt children's play if it is not done appropriately. While children are engaging in literacy play activities, teachers can play different roles from being a co-player to an observer, but teachers should avoid trying to impose their own thoughts on children's play. Instead, they should see what is important in play according to children and respond to them appropriately (Davidson, 1996).

1.2.4. Forth link: Mental processes

A cognitive perspective on play and literacy refers to the mental processes which both play and literacy shares (Bergen & Mauer, 2000; Pellegrini & Galda, 2000; Roskos & Christie, 2000), such as symbolic representation and narrative thinking. Garvey (1990) states that as children become capable of symbolic representation, symbolic and language play develops rapidly. Pellegrini and Galda (2000) state that both narrative and social symbolic play have, for example, fictional characters and operate in a fictional world, rather than a real one. This kind of parallel development is apparent in mature pretend play (Garvey, 1990). In order to understand this cognitive perspective, symbolic play and, symbolic representation needs to be defined clearly.

In the symbolic play, children use actions or objects to represent other actions or objects (Davidson, 1996) and symbolic representation is "using an action, object, visual symbol, or word to represent something else" (Davidson, 1996, p.292). Both symbolic play and written literacy have symbols that are used to represent other actions or objects. Pellegrini and Galda (1991) found that emergent writing is initially a representational act, and in being competent on this, make-believe play plays an important role. Accordingly, make-believe and symbolic play may enhance literacy skills by pushing young children to use representational thinking which is necessary for literacy development. Moreover, the study conducted by Bergen and Mauer (2000) shows, "early phonological awareness is facilitative of learning to read and confirms that early symbolic play (both literacy related and pretend) is a co-occurring factor" (p.62).

1.2.5. Fifth link: Different contexts

Göncü and Katsarou (2000) state that literacy instruction needs to focus on the meaning and functions of literacy activities for children in addition to actual literacy practices. They state that interpreting children's play depends on context because a problem might occur if play is evaluated according to a specific culture or the values of a specific community. For example, Göncü and Katsarou indicate that pretend play is not occurred in every culture. Accordingly, saying that without having pretend play this culture has deficiency is a wrong statement. Each culture should be examined and interpreted within its own context.

The research done by Hall (2000) focused on the influences of sociocultural factors on a literacy-play activity of a group of young children. Hall found that sociodramatic play enriched by literacy activities allowed five-year-olds to experience more than procedural activities, such as cooking and cleaning, during play. Moreover, the events experienced by children developed their understanding beyond procedural activities. For example, during a garage activity, children engaged in getting permission to build a garage, and then applying for a job to work in that garage. Throughout all these events, children wrote letters to get permission, defined job requirements, prepared advertisements, and determined which job they wanted and why they wanted it. Hall indicates that this "socially positioned phenomenon" (p.198) provided a large extension of literacy experience not usually encountered by very young children. With the help of the teacher, cultural and social elements were added, and this created a more intense rich literacy- play activity. Moreover, Hall stresses, "this was living rather than learning" (p.203) because all of the writing experiences became meaningful and enjoyable, and reflected these children's beliefs and values about how to use literacy appropriately with the association of sociodramatic play. Hall states that sociodramatic play can create an atmosphere where literacy is not only meaningful but also enjoyable for young children.

As claimed by a sociocultural perspective, play draws meaning from the culture where histories, values, and practices are embedded; accordingly, it is related to the everyday life and concerns of the people in their communities (Hall, 2000). Roopnarine, Shin, Donovan and Suppal (2000) indicate that there has been too much focus in the past on what is missing in young children's play rather than what exists in terms of the different practices and meanings of young children experienced in various culture settings. Accordingly, we should try to understand what exists in the sociocultural system surrounding children, in order to understand their play and literacy activities in depth.

The research done by Korat, Bahar and Snapir (2002) indicates that at the office corner children engaged in play related to written language like letter-like marks. These children showed appropriate emergent literacy behaviors in their play activities, such as writing from right to left, which is the writing direction of their language. If writing from

right to left is not evaluated according to their own sociocultural system, but rather other Western cultures, we would claim that this is not an appropriate emergent literacy behaviour, because they are supposed to write from left to right. This might be a simple example, but this represents one of the important factors of why we need to look from a sociocultural perspective.

The research conducted by Branscombe and Taylor (2000) examines the role of play in transforming children's story making and narrative sense. These authors found that children initially demonstrated their own cultural knowledge of the story. For example, when a child told about death, one of the children who participated in this research would respond that they cry when somebody in their family dies. Another example is about weddings, the child would want to know whether the bride and groom had kissed, because this is one of their cultural practices, and this is what they do at their weddings. Even the length of a story is an important criterion, which represents the cultural differences.

As discussed above, play and literacy need to be examined according to a sociocultural perspective in addition to psychological, ecological, social and cognitive perspectives, to understand meanings of play and literacy in different contexts accurately (Göncü & Katsarou, 2000), Reggio Emilia context in our case, because a much underestimated and understudied topic is young children's emergent literacy skills and its relation to Reggio Emilia, a play-based approach. The role of play in young children's development and the issue of links between play and emergent literacy has been recognized and studied widely. It is stated in the literature that the links between play and emergent literacy are strong and complex phenomena, which are not only based on cognitive factors, but also psychological, ecological, social and sociocultural factors. However, the issue of emergent literacy in Reggio Emilia, which is basically based on play and the sociocultural perspective of Vygotsky, has not been fully addressed. The aim of the current study is to make meaning on how the Reggio Emilia approach reconceptualised literacy education for young children by synthesizing the data from the findings of the research done on play-based emergent literacy education in Reggio Emilia-inspired preschools.

1.3. The aim of the current research

The Reggio Emilia approach is grounded in the interests and inquiries of children. Upon those interests and inquiries, children conduct research hands-on or through sources, work in groups, create hypotheses, construct their own knowledge by working actively, and eventually, produce short or long-term projects. Accordingly, we believe that the Reggio Emilia pedagogy is compatible with literacy education goals. However, just a few detailed accounts have been published about how literacy instruction is integrated into the Reggio Emilia-inspired preschools. Since the meta-ethnography method involves

the cumulative synthesis of various research through induction (Campbell et al., 2011; Noblit and Hare, 1988; Noyes, 2006), the current research aims to address this gap by examining various studies done on literacy education in Reggio Emilia inspired preschools. This meta-ethnographic study addresses the following question:

How are literacy experiences socially constructed and integrated into a Reggio Emilia-inspired curriculum according to the relevant literature?

2. Methodology

The current meta-ethnographic study aims to understand play-based literacy education in Reggio Emilia preschools, thus it synthesizes the studies (i.e., the qualitative research findings) from various sources which are usually based on an interpretive approach like ethnography. Since the methods adopted by the researcher must be consistent with the theoretical foundations of research (Glesne & Peshkin, 1992), this qualitative study opted to utilize a meta-ethnographic design by Noblit and Hare (1988) and adapted their 7-steps to our study (Figure1). Campbell et al. (2011) state that among a wide range of methods for synthesizing qualitative research, meta-ethnography is the most widely cited method. Noyes (2006) states that meta-ethnography uses qualitative data analysis methods to synthesize the studies. In other words, meta-ethnography involves induction and interpretation of the research findings of various qualitative studies.
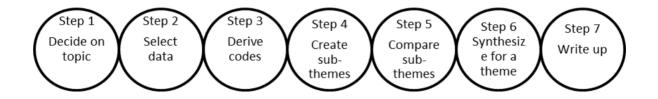

Figure 1. Synthesis of the studies according to Noblit and Hare's 7-step meta-ethnography

2.1. Data collection

Meta-ethnography includes interpretations and syntheses of various studies, namely, the qualitative research, professional expertise manuscripts, and gray literature like magazines (Campbell et al., 2011; Elsevier, 2020). Findings from two or more studies would be enough for a meta-ethnographic research (Noyes, 2006). In the current study, 24 studies appeared as relevant to the aim among 212 studies found in the databases, in which the keywords "Reggio Emilia, reading and writing, emergent literacy and literacy" were used alternately. Some of them were removed because of their irrelevancy (i.e.,

visual literacy, emotional literacy, verbal communication, new media literacy) and 24 studies are included in the study (Table 1).

Table 1. Selected studies and assigned study numbers*

Numbers	Selected Studies
Study 1	Desouza & Jereb (2000).
Study 2	Acevedo (2019).
Study 3	Clyde, Miller, & Sauer (2006).
Study 4	Bjartveit (2008).
Study 5	Gillespie & Beisser (2001).
Study 6	Lantz-Helm & Parnella (2010).
Study 7	Meacham & Atwood-Blaine (2018).
Study 8	Rogers & Whittaker (2010).
Study 9	Cook (2009).
Study 10	Wien & Dudley-Marling (1998).
Study 11	McCormick Smith & Chao (2018).
Study 12	Hesterman (2017).
Study 13	Delgado, Kozak, & Charette (2018).
Study 14	McWilliams, Brailsford-Vaughns, O'Hara, Novotny, & Kyle (2014).
Study 15	Edwards & Willis (2000).
Study 16	Burns & Lewis (2016).
Study 17	Beltchenko (2016).
Study 18	Verwys (2007).
Study 19	Hughes & Wineman (2009).
Study 20	Henningsen (2013).
Study 21	Ede & Ros-Voseles (2010).
Study 22	Rhoades (2016).
Study 23	Logue, Robie, Brown, & Waite (2009).
Study 24	İnan (2009).

*Please check "References" section for the whole information of the selected studies

2.2. Data analysis

Since the meta-ethnography method involves cumulative synthesis through induction, the current research employed analysis of 24 qualitative studies (Table 2). The researcher analyzed them in-depth and then synthesized the studies comparatively and cumulatively, maintaining links among the synthesis. She also created hypotheses and implications for teachers and parents accordingly (Noblit & Hare, 1988). Thus, among the reciprocal translation, refutational translation, and line of argument synthesis, the current research opted to use the reciprocal translation, in which "concepts in one study can incorporate those of another" (France et al., 2015, p.5).

Noblit and Hare (1983) state that ethnographic study must have a theory of social explanation that both preserves the uniqueness of each study and entails a comparison of them with each other. Accordingly, the current research accomplished this by deriving codes from studies, grouping those codes into sub-themes, and then the sub-themes into the theme, and then presenting rich examples from each study. Table 2 reveals the methods of each study.

Table 2. Methods of each study

Studies	Method
Desouza & Jereb (2000).	Qualitative
Acevedo (2019).	Qualitative
Clyde, Miller, & Sauer (2006).	Qualitative
Bjartveit (2008).	Qualitative
Gillespie & Beisser (2001).	Qualitative
Lantz-Helm & Parnella (2010).	Qualitative
Meacham & Atwood-Blaine (2018).	Qualitative
Rogers & Whittaker (2010).	Qualitative
Cook (2009).	Qualitative
Wien & Dudley-Marling (1998).	Qualitative
McCormick Smith & Chao (2018).	Qualitative
Hesterman (2017).	Qualitative
Delgado, Kozak, & Charette (2018).	Qualitative
McWilliams, Brailsford-Vaughns, O'Hara, Novotny, & Kyle (2014).	Qualitative
Edwards & Willis (2000).	Qualitative
Burns & Lewis (2016).	Qualitative
Beltchenko (2016).	Qualitative
Verwys (2007).	Qualitative
Hughes & Wineman (2009).	Qualitative
Henningsen (2013).	Qualitative
Ede & Ros-Voseles (2010).	Qualitative
Rhoades (2016).	Qualitative
Logue, Robie, Brown, & Waite (2009).	Qualitative
Inan (2009).	Qualitative

2.3. Ethical standards

The current meta-ethnography method involved cumulative synthesis of 24 different qualitative studies. It utilized the data from those studies carefully and included direct quotations to support rich-description of the data/studies in accordance with scientific rules. Whole information of the studies that were utilized in the current study is included in the references section.

In order to ensure credibility of the current study, a colleague from the field, who is an expert in early childhood education and qualitative research studies, helped the researcher by collaborating on the codes, sub-themes and the theme and the researcher revealed rich description and data diversification methods among the credibility methods used in qualitative studies (Creswell & Miller, 2000).

3. Findings

In this section, findings from the studies are displayed in Table 3. And then the sub-themes are presented along with emerged codes and relevant excerpts from the studies/data set. The research question "How are literacy experiences socially constructed and integrated into a Reggio Emilia-inspired curriculum according to the relevant literature?" is addressed by the sub-themes, namely, philosophy, practices and evidence.

Table 3. Synthesis of the selected studies (see Table 1 for assigned numbers to studies)

Theme	Sub-themes	Emerged Codes
Reconceptualization of Literacy through the Reggio Emilia Approach	Philosophy	*Integrated curriculum/project work and integrated visual and verbal literacies (Study 15, Study 16, Study 20, Study 22, Study 23)
		*Interest/motivation of children (Study 18, Study 19, Study 20)
		*Collaborative writing (Study 19)
		*Reconceptualization of literacy through Reggio (Study 12)
		*Multiple representations –hundred languages- (Study 21) and multiliteracies versus traditional literacy (Study 22)
		*Citing relevant literature and making suggestions (Study 8, Study 10, Study 11, Study 12, Study 13, Study 15)
	Practices	*Storytelling (Study 2)
		*Reading books to learn global language, new vocabulary, new information (Study 2, Study 3)
		*Teacher reading a story book (Study 4, Study 17, Study 22)
		*Writing/drawing to express ideas (Study 2, Study 3, Study 6, Study 19)
		*Dictating someone to write (Study 3)
		*Using computer programming (Study 5)
		*Tracing (Study 7) and Coding with robotics (Study 7)
		*Setting up a literacy enriched environment that promote reading and writing (Study 2, Study 6, Study 19, Study 24)
		*Writing a play (Study 9) or made up songs (Study 6)
		*Stressing importance of family engagement and art play (Study 14)
	Evidence	*Having a relevant photo (Study 1, Study 3, Study 6, Study 7, Study 12, Study 15, Study 17, Study 19)
		*Using standards to check literacy activities (Study 7)
		*Hundred languages exhibit (Study 21)

When the sub-themes are synthesized, the theme appears as *Reconceptualization of Literacy through the Reggio Emilia Approach,* because the findings show that literacy is reconceptualised in a new way in Reggio-inspired schools compared to the traditional way of literacy education in preschools. Each sub-theme, namely philosophy, practices, and evidence, is presented as follows.

3.1. Philosophy

Some of the studies present their empirical study and elaborate literacy education in Reggio Emilia-inspired preschools by focusing on various points of the *philosophy* behind the approach.

The first point is the idea of *project work*, which is child-initiated, interest-based (18, 19, 20, 23) and supports integrated education (15, 16, 20, 22, 23). The studies indicate that interests and ideas of children determine where a project goes and claims that interest in drawing leads to writing. The studies also show that literacy is integrated into projects with other disciplines, like mathematics. The following excerpts from the studies exemplify this:

> In the spirit of helping children become insiders to the writing process, we undertook the Dance Project, which is inspired by the Project Approach. (Study 23, Logue, Robie, Brown & Waite, 2009, p.217)

> As children research project questions in books, on-line, and through other media, they are challenged to expand their technical vocabulary... Writing and speaking about exciting discoveries made during project work is abundant, and gives children practice with the written and spoken word with a variety of audiences including classmates, teachers, parents, experts, and community members." (Study 16, Burns & Lewis, 2016, p.143) (... means that words are skipped)

> The idea that numeracy and literacy skills can be developed in the context of inquiry might not seem like a new idea. However, when we introduce the notion that such activity can and should be built from the interests and ideas of the children, rather than determined a priori by adults or textbooks, the idea becomes more challenging" (Study 20, Henningsen, 2013, p.52-53)

> Drawing in prior-to-school contexts is often open-ended and child initiated, but interpreted in terms of a fine-motor activity that is an important precursor to writing. (Study 18, Verwys, 2007, p.219)

The second point is collaborative work, which refers to the *relationships* principle in the Reggio Emilia approach and stresses the importance of interaction among teachers and preschoolers (14, 18) and collaborative writing (19). The following excerpts from the studies exemplify this:

The presence of the preschool teachers could well have prompted the children's willingness to draw." (Study 18, Verwys, 2007, p.225)

Initial assumptions were that the children were capable of communicating in meaningful ways, and that they all wanted to interact with each other. (Study 19, Hughes & Wineman, 2009, p.7)

"Teachers' playful interactions with children promote symbolic play, which is linked to proficiencies in literacy learning". (Study 14, McWilliams, Brailsford-Vaughns, O'Hara, Novotny & Kyle, 2014, p.35)

The third point stressed in the studies is that literacy in Reggio-inspired schools is far more than traditional literacy –namely, just reading and writing. In other words, literacy in Reggio-inspired schools stresses multiple ways of representations of ideas through *hundred languages* of children. Literacy in Reggio-inspired schools shows that *multiliteracies* engagement with texts enriches traditional way of literacy learning. Thus, the studies invite educators to *reconceptualize* literacy through the Reggio Emilia approach (12, 21, 22). The following excerpts from the studies exemplify this:

Prior to providing preservice teachers in our courses with the specific literacy oriented prompt, they noted various forms of communication (i.e., "conversations," "questioning," "storytelling," "discussion," "dialogue"). When the second prompt, "Given the current emphasis on literacy development how do children represent their literacy using the hundred languages of children?", asked that teacher candidates specifically turn their focus to the various ways children represent their literacy, the responses overwhelmingly were "verbal communication" and "the use of writing." These responses could be expected because written and verbal language dominates what occurs in classroom settings. Some picked up on the unconventional ways children used letter symbols, as seen by the following comment, "One thing I saw that children would use letters in their names to create new words." Another student noted, "Language was re-invented by children." (Study 21, Ede & Ros-Voseles, 2010, p.228)

For the animation, the teachers and atelierista drafted a plan to maximize student participation and learning. For example, all students would be included in the voiceover. Sam, the lead teacher, divided the text into lines and distributed them to students. The individual line sets became the center of much literacy-focused learning. Students used their lines to identify letters, trace them with fingers and transpose them onto longer strips of lined paper, practicing the many parts of writing: motor skills, letter recognition, recall, sounding out letters, syllables, and words while learning to "read" their lines. (Study 22, Rhoades, 2016, p.598)

4-year-old Jaime sits next to Sam, his teacher, in the studio in front of a laptop holding a line of text copied in his choppy handwriting. The atelierista starts audio recording. "The wolf… The wolf… Came knocking… Door…" he stammers. Recording stops. "Try it like this," Sam coaches. "The Big Bad Wolf came knockin' on the straw house door." She taps on the table, accenting the rhythm of the line. She repeats. The atelierista joins her. Then Jaime joins. He is doing it, saying it with the rhythm. Recording resumes. "The Big Bad Wolf came knocking…on the … on the … door." Recording stops again; there is more tapping and chanting. (Study 22, Rhoades, 2016, p.597-598)

"A Reggio-inspired approach can facilitate the reconceptualisation of literacy and literacy practices; the metaphor The Hundred Languages of Children (and hundreds more) has the potential to transform the uniformity, homogenisation, and regimentation of WA ECE to focus on equitable and culturally relevant educational processes. As illustrated in the case study vignette Time Flies in California a pedagogy of multiliteracies is integrally entwined with The Hundred Languages of Children." (Study 12, Hesterman, 2017, p.360)

Lastly, some of the studies *review literature* (8, 10, 11, 12, 13, 15) and provide *suggestions* according to literacy education in Reggio Emilia preschools. The following excerpt from the studies exemplifies this:

From communications theory comes a new understanding of how modern technologies demand that children learn to "read" and "write" messages involving complex combinations and integrations of visual and verbal formats. From psychology come insights about intelligence being multiple not unitary, as well as ecological perception theory offering a well-accepted framework for analyzing the affordances and expressive possibilities of different media. From education come fresh approaches to integrated curriculum, including a philosophy and pedagogy from Reggio Emilia, Italy, that combines well with current thinking by North Americans. (Study 15, Edwards & Willis, 2000, p.264)

3.2. Practices

Some of the studies elaborate literacy education in Reggio Emilia-inspired preschools through focusing on the literacy practices, namely storytelling (2); reading books to learn the global language, new vocabulary and new information (2, 3); teacher reading storybooks (4, 17, 22); writing/drawing to express ideas (2, 3, 6, 19); dictating someone to write (3); using computer programming (5); tracing and coding with robotics (7); setting up a literacy enriched environment that promotes reading and writing (2, 6, 19, 24); writing a play (9) or creating made-up songs (6); stressing the importance of family engagement and art play (14).

The following excerpt from the studies exemplifies *storytelling and reading books to learn the global language, new vocabulary and new information*:

> I introduced and shared books and artefacts during meeting time, followed by curricular invitations integrated into "the Casita" (dramatic play area) and "the circle table" (a space to experiment with art and writing materials)." (Study 2, Acevedo, 2019, p.381)

While children express their intercultural understanding in their play, they engage with global enquiry-based projects in a Reggio Emilia-inspired preschool.

> The following excerpt from the studies exemplifies *dictating someone to write*:

> Ben suggested that his grandfather come to talk about mushrooms; Lauren proposed that they write a note to invite him. They dictated: Dear Gramps, We have some mushrooms and we need your help finding out what kind they are… (Study 3, Clyde, Miller, Sauer, 2006, p.220) (… means that words are skipped)

> The following excerpt from the studies exemplifies *teacher reading a story book*:

> A focus will be on the use of picture books in the Italian school culture and how the artistic genre of these books plays an important role in the transference of ideas and subliminal but important messages of literacy. (Study 17, Beltchenko, 2016, p.145)

The following excerpt from the studies exemplifies *writing/drawing practices of children to express their ideas*:

> The interest in spelling and writing that was apparent in the classroom extended smoothly into the Re-Use Center and translated easily to the materials available there. During week three Anna age four, discovered a container of blank cards with pictures of mountains and beaches on them. She immediately decided to write a card to her mom. She is recorded as saying "Teacher, how do you spell love?" (Study 6, Lantz-Helm & Parnella, 2010, p.5)

The following excerpts from the studies exemplify *using computer programming* (5) and *tracing and coding with robotics* (7):

> Clearly, the skills and abilities involved in LOGO time include reading, writing, spelling, small motor development, math, and engineering. (Study 5, Gillespie & Beisser, 2001)

> Our project helped us realize that children can be motivated to try out various strategies to communicate their thoughts and ideas, which can develop multimodal communication skills. Not only just one mode of communication such as written language but also other artistic forms such as drawing, painting, music, and dance can comprise multimodal communication. There were many drawings that the children in the club created, although writing or drawing were

not necessarily suggested or taught by the adults. (Study 7, Meacham & Atwood-Blaine, 2018, 60-61)

Some of the studies discuss how teachers set up *a literacy enriched environment* to reflect the importance of emergent literacy and to provoke children's interest and inquiry in literacy (2, 6, 19, 24) because the environment is accepted as the 3rd teacher in the classroom in Reggio Emilia preschools. The following excerpts from the studies exemplify this:

The university students observed how the classroom environment was structured to reflect the importance of early literacy. • A variety of paper and writing tools were available. • Books and print materials were displayed in many play areas. • Ms. Kathi often used sticky notes to write down children's words as they described their drawings or paintings. (Study 19, Hughes & Wineman, 2009, p.4)

Typically play-based classrooms are broken up into sections or centers, such as a block area, water table, light table, reading nook, spaces for dramatic play, and other everyday materials or toys. (Study 11, McCormick Smith & Chao, 2018, p.5)

Study 24 also stresses the importance of Reggio Emilia-inspired environments, which are rich and amiable satisfying children's interests and triggering their inquiries, in supporting their learning and development in relation to literacy (Inan, 2009).

The following excerpts from the studies exemplify *writing a play* (9) or *creating made-up songs* (6):

One day while conversing with the children, "wild animals" became the topic of our conversation. It was decided by the children to all take part in writing a play and then perform it, as well. Each child began sharing different parts to the play until it was finished. It was then decided by each child to choose an animal character to act out. (Study 9, Cook, 2009, p.11-12)

Threads of language and literacy development also emerged through playful words in madeup songs. These songs made sense, followed a pattern, told a story, and were connected to the children's play and learning in the reuse center. During week four, Michael, age 4, spontaneously began to create and sing a song that had clear rhythm and a pattern. The verse went: "Fudge it in the potion, the potion, the potion. Fudge it in the potion, 'cause that's what we do." Michael skipped around the ReUse Center as he sang loudly. Maggie joined in singing. As an attempt to calm them, Lauren asked Michael if she could write down the words to his song. (Study 6, Lantz-Helm & Parnella, 2010, p.6)

The following excerpt from the studies exemplifies the importance of *family engagement and art play* by conducting a project in which families and children have participated together:

The project focused on literacy, with the theme of play's strong presence in art creation running through the workshops. One result was that participating educators gained a newfound respect for playful art explorations as a strategy for developing literacy learning. Overall, the surprise discovery was that the artwork itself was not the most important outcome of the events. Instead, the true value of the experience was in the interactions and stories that flowed from the playful exploration of materials and process of creating. (Study 14, McWilliams, Brailsford-Vaughns, O'Hara, Novotny & Kyle, 2014, p.33)

Participants interacted and responded to collage materials, causing language and literacy development to flow in all three settings and making for a richer experience than in past OFLP author/ illustrator projects, which predominantly centered on guest speakers' presentations. (Study 14, McWilliams, Brailsford-Vaughns, O'Hara, Novotny & Kyle, 2014, p.38)

3.3. Evidence

Most of the studies present *evidence* for evaluation of literacy in Reggio-inspired preschools through documentation, which is the assessment principle in the Reggio Emilia approach. All of the excerpts that display the story of literacy education practices under the sub-theme of *practices* exemplify evidence as documentation because every documentation in Reggio Emilia contains a story.

Some of the studies exemplify evidence by having visuals like a photo which depicts a child spelling and writing letters (6, 15) or writing and drawing symbols to express their ideas (1, 3, 7, 15, 17, 19) or a photo of symbols written by a child (12). Furthermore, Reggio teachers take documentation panels as evidence to various countries around the world to make teaching and learning in Reggio schools visible to everyone. In the current study, one data focused solely on the visit of a professor and his students to a Hundred Languages Exhibit, which is the exhibit of a documentation panel, to show how documentation communicates with visitors about literacy education in Reggio preschools (21). The professor asked his students to tell the ways young children represent their knowledge and stated,

"Responses to the first prompt were generally brief and often comprised of one word lists that focused on specific products created by children. These products included "artwork," "drawing," "building," "art," "painting," "picture," and "sculpture." … The visual beauty of the products resulting from long-term investigations captures first-time visitors' attention and admiration." (Study 21, Ede & Ros-Voseles, 2010, p.227) (… means that some words are skipped)

On the other hand, although the Reggio Emilia approach does not focus on formal testing or standards for assessment and evaluation, there is one study that focuses on state standards as follows:

> Add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (Study 7, Meacham & Atwood-Blaine, 2018, p.62)

4. Discussion and Conclusion

Play can create a safe and fun atmosphere where children conduct experiments with emergent forms of literacy and a relevant context where young children's early attempts at reading and writing are meaningful and significant (Christie, 1998). The current study helps us understand the findings from various research on how Reggio supports healthy literacy development. It also shows that play-based education in Reggio Emilia-inspired preschools successfully accomplished healthy literacy development covering all the links (cognitive, psychological, ecological, social and sociocultural perspectives) between play and literacy including the ones below but not limited to:

1- Children's interests and needs are taken into consideration when planning the curriculum at Reggio Emilia-inspired preschools. (psychological link)
2- Environment is planned thoughtfully to provoke children's interests and fulfil needs in literacy. (ecological link)
3- The ideas of "community of learning" and "relationships" are strongly emphasized by interactive activities like collaborative writing and family participation. (social link)
4- The image of the child is powerful, capable and intelligent, Piaget's idea of cognitive dissonance is taken into consideration in education to provoke children's thinking; project work supports children's experiment with literacy (i.e., children storytelling, reading books, writing/drawing to express ideas, dictating someone to write, using computer programs, tracing, coding with robotics, writing a play/made-up songs and teacher reading books); there is a strong emphasis on the usage of symbolic representations for children to express themselves, like drawing and drama. (cognitive link)
5- Each child is evaluated within his/her own context through the documentation principle, which focuses on the uniqueness of each child, and project works emerge from their own school culture, not from another culture. (sociocultural link)

The current research provided various views to understand play-literacy links and the meaning of them specifically in Reggio Emilia-inspired contexts. As a result, play seems to support the healthy literacy development of children as a non-threatening and fun activity. Accordingly, early childhood educators and parents are advised to create an

environment where children can reach materials easily, have time and space to interact with them, and have adult and peer assistance to enrich their literacy-play activities. By using multiple literacies and making literacy learning enjoyable and fun, play guarantees young children's early attempts at literacy to be successful. Furthermore, sociocultural influences including the needs and interests of children need to be examined carefully to understand and support young children's literacy-play activities.

4.1. Implications for teachers and parents

Teachers should be cognizant of the children's cultural and linguistic knowledge and how to set up an environment to cultivate competent and literate young children before introducing them to formal reading instruction (Saracho, 2017). They should create a climate in which young children can construct their own literacy knowledge by creating literacy-enriched environments, storybook reading times, and teacher modeling (Christie, 1998; Gillet et al., 2000). In order to create literacy-enriched environments, teachers can use simple props and materials related to literacy, such as pencils, bank checks, magazines, and wall signs (Christie, 1998). Moreover, Christie (1998) stresses the importance of giving children enough time to create their play episodes and conduct their play activities.

In addition to creating literacy-enriched environments, teachers can incorporate literacy activity times, such as a storybook reading time, into the curriculum. However, beyond just listening to during storybook reading time educators should provide more opportunity and relatively simple ways for children to conduct literacy practices in play (Dunn, Beach, & Kontos, 2000; Einarsdottir, 2000). For example, teachers may offer children the opportunity to create their own stories, discuss what is happening in the story, predict what will happen next, and react to the story (Einarsdottir, 2000). Accordingly, active engagement of children into storybook reading time can be sustained in the context of play. Similarly, Roskos (1988) advises teachers to ask children to share their own pretend play stories; also, teachers can record what children share on paper and expose them to print forms of their stories. This may extend children's language experiences.

Moreover, teacher intervention may help children conduct meaningful literacy-play activities. According to Christie (1998), teacher involvement in play might be in various forms; these are the audience, stage manager, co-player, or play leader. For example, through modeling and teachers can informally teach young children about print and show how to use recipes in the context of play. For example, when children are baking, the teacher may model to use recipes with pictures and words (Einarsdottir, 2000). Christie indicates that as a facilitator, teachers can provoke children to incorporate emergent literacy into the dramatizations of their play. The key point is

flexibility, thus teacher involvement can be successful to enhance preschoolers' literacy and play activities (Christie, 1998).

Teachers can construct various play centers equipped with relevant types of literacy materials (Christie, 1998). Roskos (1988) also advises teachers to create play centers where children conduct sustained pretend play activities, not just only housekeeping area but also bank, office, or travel agency play centre. Liang and Johnson (1999) state that computers enhance children's experiences and motivate young children by stimulating and enjoyable pictures, songs, and animations. Davidson (1996) indicates that dramatic play can serve a crucial role in supporting a child's emerging literacy; accordingly, inclusion of literacy-enriched areas may better furnish children's dramatic play episodes. Moreover, in order to maintain interest in such play centres, Klenk (2001) suggests that teachers may introduce something new into literacy-play areas each day.

While adding materials, and creating opportunities for children with literacy-play activities, Roskos and Christie (2001) state that teachers should be careful about the danger of turning playful literacy activities into literacy lessons. They advise teachers to maintain a balance of literacy activities and ensure that activities are playful. Also, early childhood educators should avoid becoming too much directive and having too much control over children's literacy-play activities. They state, "A good guiding principle is that teacher involvement should extend the reach of children's literacy play activities and enrich them while ensuring that they remain within children's grasp" (Roskos & Christie, p.66).

Moreover, Morrow and Rand (1991) indicate that teachers can create a comfortable area where children can sit on throw pillows and/or in rocking chairs. The children who were involved in Morrow and Rand's study said that they enjoyed having a chance to choose the books they want, and not being rushed, but having free time to interact with such materials. Accordingly, teachers should be careful about not only selecting appropriate materials for children's literacy development but also creating an atmosphere where children have time to interact with such materials in a comfortable place.

Roskos (1988) advises parents to provide children with literacy props, space, and opportunity to play. Moreover, Roskos indicates that parents should encourage sustained pretend play activities, and treat stories with positive regard; for example, they may ask children to tell about a story and listen to them intently. In order to create a meaningful atmosphere for children at home, Roskos and Neuman (1998) advise parents to name objects and events at home. For example, parents may model how to order pizza via phone and how to use the Internet to find numbers of pizza restaurants, and then, may ask their children to use the Internet and pretend to order a pizza. Accordingly, the children can name these literacy events, such as using the Internet, and construct their literacy knowledge in a meaningful and playful way.

Lastly, from a sociocultural perspective, Göncü and Katsarou (2000) state that in addition to actual literacy practices, literacy instruction needs to focus on the meaning and functions of literacy in specific cultures. According to Göncü and Katsarou this kind of instruction can be established in three ways; collaboration with peers during play, collaboration with adults for problems-solving issues, and institutional collaborations between home and school. Depending on Vygotsky's sociocultural theory, they stress the importance of collaboration between teacher and children and among children themselves. Moreover, they advise teachers to create an atmosphere where children feel that different practices of their cultures are accepted as legitimate.

In short, the current study provides a concise synopsis of the value of play-based literacy activities such as those found in Reggio Emilia-inspired environments through the sub-themes namely, the philosophy, practices, and the evidence. However, what makes the Reggio Emilia-inspired experiences of children special is not the activities themselves. As seen in the short-cut examples from the projects and experiences of children at Reggio Emilia-inspired preschools from all around the world, these example activities are not really different than the ones that are already known to be used in preschools which are enriched with contemporary emergent literacy philosophy. Accordingly, in terms of the activities, there is not a sufficient argument made that the Reggio Emilia approach is an example of the reconceptualization of literacy. However, what differentiates this approach from non-Reggio Emilia-inspired approaches and what makes the Reggio Emilia-inspired experiences special is the whole approach of Reggio Emilia to literacy instruction including all principles. For example, when each specific activity done by children is examined separately, that specific activity does not appear as different or something new to literacy education. However, what makes it different is the Project principle in which those activities are embedded. Since the Reggio Emilia approach is grounded in the interests and inquiries of children, activities that happened in projects are meaningful parts of a big project created by children. Another example of what makes literacy education in Reggio Emilia-inspired preschools different is the Hundred Languages of children to express themselves instead of the conventional way of reading and writing to express themselves. Accordingly, it is found that there are a hundred ways of expressing ideas and feelings in addition to the letters of the alphabet.

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