



Working paper number 28 -

<https://www.monash.edu/education/research/projects/conceptual-playlab/publications>

This is a preprint of an article published (online) in *International Journal of Early Years Education*. The final authenticated version is available online at:
<https://doi.org/10.1080/09669760.2022.2041406>.

We encourage you to use this preprint for educational purposes. It is intended to further scholarship for policy and practice, not for commercial gain. To cite this work, please refer to the published journal article:

Marilyn Fleer, Prabhat Rai & Glykeria Fragkiadaki (2022): The dialectical relation of real and digital Conceptual PlayWorlds in Family Day Care. *International Journal of Early Years Education*, <https://doi.org/10.1080/09669760.2022.2041406>

This work was supported by the Australian Research Council [FL180100161].

IJEYE Invited: Special Issue on Cultural-Historical Conception of Play
A dialectically related digital and real-world Conceptual PlayWorld: New developmental play conditions in Family Day Care

Marilyn Fleer *, Prabhat Rai, Glykeria Fragkiadaki

Conceptual PlayLab, School of Educational Psychology and Counselling, Monash University, Melbourne, Australia

Marilyn Fleer*:

ORCID: <https://orcid.org/0000-0002-1224-5510>, e-mail: Marilyn.fleer@monash.edu

Prabhat Rai :

ORCID: <https://orcid.org/0000-0001-9344-2614>, e-mail: Prabhat.Rai@monash.edu

Glykeria Fragkiadaki:

ORCID: <https://orcid.org/0000-0001-7280-783X>, e-mail: Glykeria.Fragkiadaki@monash.edu

A dialectically related digital and real-world Conceptual PlayWorld: New developmental play conditions in Family Day Care

Play acts as the source of children's development in the preschool period. Yet, the global pandemic has changed children's play conditions in ways that are not yet fully understood. With movement restrictions, families have struggled to find ways of bringing children together for play. We studied how family day care educators across a remote region of Australia used a digital platform to collectively play in a Conceptual PlayWorld. The central question was: How does the dialectical digital and real world conditions of play create developmental opportunities for children? To answer this, we researched how family day care educators, their leaders (n=7), and the children (n=38) from their respective FDC homes, simultaneously played at home and remotely using a zoom platform with a storyteller-player. 797.46 mins of digital data were generated and analysed using the Vygotskian conception of real and mature forms of play. In drawing on previous cultural-historical theorisations of digital play, this paper discusses the new developmental conditions created in this real world and virtual context of FDC. We introduce new concepts for explaining the developmental processes and outcomes for these children.

Keywords: play, digital, playworld, family day care, Conceptual PlayWorld, Cultural-historical, STEM

Introduction

Play in Family Day Care (FDC) appears to be one of the least studied areas in education (Bromer and Korfmacher 2017), with just a few studies on play written in English from a small pool of articles found globally (Pihlainen, Montero, and Karna 2018). This gap in understanding is heightened by the fact that there are no other early education services that are run, staffed, or professionally trained in the same way as FDC (Hooper, Hallam, and Skrobot 2021).

Unique to FDC are how geographically distributed the educational services are (Porter et al. 2010), the educator is both the manager and the teacher (Trawick-Smith and Lambert 1995),

they run the program on their own (Gerstenblatt et al. 2014), they have a range of cultural age periods within the program, typically 6 weeks to 6 years (Rusby et al. 2017), and access to PD and upgrading of qualifications from technical certificates to a degree is difficult to achieve (Bromer and Korfmacher 2017). Additionally, the setting is both a family home and an educational program, with boundaries that are fused, hours that are easily expanded into the family time of the educator, and when the educator has their own children in the program, complications over toys and family versus FDC rules of practice emerge (Trawick-Smith and Lambert 1995).

It was in this unique FDC context (Hooper, Hallam, and Skrobot 2021) that we undertook an educational experiment (Hedegaard 2008) into how educators and researchers collectively create developmental opportunities for children through an intervention of a Conceptual PlayWorld (CPW) (author 2018) by zoom across homes. We studied in unity the home-based play practices and the virtual CPW of 38 children and their FDC educators. We were interested to know how children played when engaged in this new form of play activity that was distributed geographically and was virtually enabled.

To achieve the goal of this paper, we begin with a theoretical discussion of play that brings into focus the limited empirical studies of play in FDC in a context of digital technology. This is followed by details of the educational experiment, the cultural-historical concepts used for the analysis, and the study findings in a context of new concepts needed to explain the new developmental conditions of the play activity (van Oers 2013). We conclude this paper by bringing back into the FDC literature, how the new concepts add to a cultural-historical conception of play for FDC and how geography and technology act in unity as enablers and amplifiers of play.

Cultural-historical conception of play in the digital play context of Family Day Care

In examining papers in ERIC, Proquest, and A+ Education from 1981 up to 2021 we were unable to find an educational experiment oriented to play in FDC. But we did identify some papers that were broadly focused on FDC that resonated with cultural-historical conception of play, and which we thought could have bearing on the outcomes of the research presented later in this paper.

A cultural-historical conception of play was first introduced by Vygotsky (1967). He theorised play as the creation of an imaginary situation, in which the sense field is changed to give it new meaning, and new actions are afforded. Play development is evidenced when objects take on new meaning, initially acting as placeholders or pivots to support play activity. Later action, and then words dominate. When children spend longer talking about the rules of play, than engaged in play action, a developed form of play is evident between children. This conception of play underpins the focus of this paper and is keeping with the special issue. But only a few studies of play in FDC settings could be found.

Most of the FDC research is from US home-based settings, is oriented to studying quality practices and comparing the results with what is known from centre based settings, even though the characteristics of the practices are different in FDC. There is a small but growing body of intervention research, where professional development is provided to educators and the impact compared with educators who have not received the intervention. Many of these studies have shown a qualitative change in FDC practice (Bromer and Korfmacher 2017). There are a few studies that have looked at child outcomes, also showing positive outcomes (Hooper, Hallam, and Skrobot 2021). This research is contrasted with the literature that has consistently shown poorer quality practices, environments, and lower cognitive, social and

behavioural outcomes in FDC (Rusby et al. 2017). Differences are explained by the qualifications between centre based and FDC educators, lower salaries and professional isolation. PD and the difficulties with access are also suggested as the reasons for the disparity in outcomes for children. Some criticisms regarding the measures used are also reported, showing outcomes mostly for US contexts, and how it is measured. Studies do report on play practices, but usually indirectly and in the context of other measures associated with quality resources and environments or routines. These studies are limited in what they report on play. What is known can be summarised as follows.

First, it was found that similar to centre based practices, FDC educators provided instructional sessions, free-choice time, and transitional moments as part of their practice (Hooper, Hallam, and Skrobot 2021). Additionally, it was found by Tonyan and Nuttall (2014, 125) that educators set up “common ‘core’ activities: arrival, breakfast/snack, activity, lunch, nap, activity and departure”.

Second, FDC programming shows that 30% of time is teacher led structured activities, 51% in free-choice activities, 10% in routine activities, 1% Screen viewing and 7% transitions, with Rusby et al. (2017) identifying that children spend more time during free choice time in prosocial behaviours. However, longer periods in free-choice time were identified when higher educator to child ratios was evident.

Third, learning is supported through play with FDC educators identifying, “flexibility and plenty of time for free play in the schedule, but that there should also be some structure” (Hooper, Hallam, and Skrobot 2021, 87).

Fourth, higher levels of qualifications by FDC educators correlate with a limited number of social-emotional outcomes, but no differences in cognitive outcomes of children were

reported (Schaack, Nhuan Le, and Messan Setoldji 2017).

Fifth, multi-age groupings in FDC is the norm and this sets up challenges for play, where one study showed that the category of being the baby is “‘limiting’ in terms of how an infant is ‘understood’ and its ‘potentiality’ to belong in multi-age” settings (Stratigos 2015, 227).

Taken together, very little is known about the imaginary play practices of children and educators, and even less about if or how educators bring children from different FDC homes together using digital platform to support playing remotely together. Therefore, to fill this gap we set up a study to investigate how the dialectical digital and real world conditions of play created developmental opportunities for children in FDC.

Educational experiment

In order to answer the question that drove our study, we designed an educational experiment. One of the key theoretical points of an educational experiment discussed by both Hedegaard (2008) and Lindqvist (1995), is that educators and researchers work together on a theoretical problem, and not just a problem of practice. Grounded in the original cultural-historical methodological writings of Davydov (2008), an educational experiment enables the researcher to study the process of development where core insights into the theoretical problem can be determined.

In line with this theorisation, we introduced FDC educators to an intervention called a CPW. A CPW intervention follows that of Lindqvist (1995) who introduced a story which formed the basis of the playworld, where adults and children are in character, going on adventures and dramatizing the play plot. Different to Lindqvist (1995) is that in a CPW the educators introduce problems that need to be solved, and this is where curriculum content is introduced so that the concept acts in service of the children’s play. In this study, the first intervention

introduced via zoom platform through a storyteller, was the CPW of Rosie's Walk by Pat Hutchins. A fox follows Rosie as she walks around the farm with the view to catching and eating her. The follow up CPW that was planned was the story of Rainbow Fish by Marcus Pfister.

Context of the study

All of the FDC educators were living across six remote rural regions within Australia, where distances of more than 100km between settings was the norm. The researchers resided in a different state. Zoom platform was used for all the sessions.

Participants in the educational experiment

A total of 38 children participated in the study. Of these, 26 identified as Australian, 4 Indian heritage, 3 Italian heritage, 1 English, 1 swiss German, and 3 did not disclose. The children were aged 0.71 to 4.37 (mean age of 2.62 years; 2 years 7 month).

Seven FDC Educators participated in the study (one of Indian heritage and 6 of European heritage). Two FDC leaders joined all the sessions, one of whom visited the FDC settings.

Procedure

As part of our procedure (Table 1), we brought educators together for PD on what is a CPW, introduced the storyteller into the FDC settings via zoom (Figure 1) over four 30 minute periods each morning over one week. A reflection session with the educators via zoom, where the researchers, educators and FDC leaders discussed the play practices in the family homes took place. Finally, the educators planned and implemented their own CPW, which was then the focus of a further reflection session. A total of 797.46 minutes of digitally recorded zoom was generated.

[Figure 1 near here]

[Table 1 near here]

Analysis

The analysis was inspired by a common sense, situated practice, and theoretical interpretation as described by Hedegaard (2008). As the data were digitally gathered, the interpretation process was adjusted for the iterative nature of data analysis enabled by digital data. The dialectical relations between the ideal and real form of development (Vygotsky 1994) guided the iterative process.

Ideal and real form of development was conceptualised by Vygotsky (1994) to show the dynamic relations between the child and the child's environment. Vygotsky theorised that the mature form of development of the child, should be available in the child's environment from the very beginning. Development is dynamic, and it is the child's real form of development that interacts with this mature form of development in the child's environment. But it must be accessible, and this is shown through the child's actions in imitating with understanding, that which is in the next developmental period. It is the relations between the mature form of development in the environment and the real form of the child's development that creates developmental conditions for development.

To achieve this analysis, all zoom recordings were transcribed, digital files were organised in relation to phases (Table 1) into digital folders, and then the content of each digital file was tagged in relation to the moments where the mature form of a CPW was showcased. Data were viewed and read across time periods (Table 1) and this constituted a common sense interpretation (Hedegaard 2008).

At the situated practice level (Hedegaard 2008), the coding involved noting mature forms of play presented by the storyteller, but also the educators as they engaged in a CPW with their children. Also points of digital interest (e.g., Björk-Willén and Aronsson 2014) across homes were also tagged and later examined more closely.

The real form of play was also tagged in relation to person, context and a mature form of the CPW.

A dynamic mapping of the relations between the mature and real form of a CPW was made across time and geography by creating a diagram of interlinking arrows and a timeline. Patterns were identified from the tagged moments that were in the digital folders and then digitally extracted as text (but referenced back to the digital folders).

A further theoretical analysis was undertaken where the patterns noted were studied in relation to the literature on FDC. The reviewed literature supported the analytical process by helping explain the practices of the FDC environment and the digital zoom technology being used to bring the educators and the children together in a CPW with the storyteller. Taken together, these interpretations and understandings of the literature informed the process of answering the research question guiding the study.

Findings

Five interrelated themes were identified in this study of how children played when engaged in this new form of play activity that was distributed across geography and was virtually enabled. The relationship between themes is illustrated in Figure 2 below, and the data from which this model was developed, is discussed below under five themes.

[Figure 2 near here]

Theme 1: Adults and children create collective imaginary situations

The storyteller creates an imaginary situation through zoom that brings the educators and the children into the same story and imaginary situation (Figure 1). But to jump into the imaginary playworld of Rosie's Walk and to role-play the narrative (Figure 3), the educators designed and assemble their own imaginary playworld in their home, which the digital technology captured on screen (Figure 4). This broadened the imaginary play situation from a single household to a distributed playworld as a *zoom based collective imaginary situation*.

To understand this distributed play activity, the educators were asked, *if they thought the children were interested in seeing the other children or just the storyteller*.

Educator M: I think they like to see that there are other children there as well. I said, it's not just you there, there's lots of other children there.

Educator C: I love watching. I think M it was your children who are showing their map (Figure 6) and mine were practically glued to the screen.

Educators' commonly referenced the zoom generated imaginary situations on screen, as this exchange illustrates. However, the storyteller or the educators also invited the children to contribute to the collective narrative, as was found when the children role-played going around their imagined Rosie's farmyard (Figure 3), flying over the models of their farmyard (Figure 4), but also when building the farmyard prior to re-joining zoom on a subsequent day. What is new is how the children and educators simultaneously brought into their activities across FDC homes and within their own family home, the imaginary situation as a *distributed collective imagining*. The story, then the actions, and then the props to assemble a model of the farmyard, with a map to take them to Rosie's party, became progressively more abstract. The story with its narrative appeared to hold the collective imaginary situation together and gives the foundation for imagining with more complexity as a mature form of imaginary play.

In the following extract from the reflection sessions, the educators bring forward how they

created the imaginary situation of the farmyard of Rosie's Walk, but also how they changed the meaning of the objects in relation to the narrative of the story and expanded it to a chicken dance.

So now they're starting to work with that [model] and use their own imagination to place things where they think it should be. So many, many areas of thought. ... I've got a chicken and I've had it for many years and my grandchildren have had it and it actually talks and walks and it plays the tune of the chicken dance. So now they're learning the chicken dance. So it just is going on and on and on. And they have just loved it. And if they never remember another story in their life, they'll remember Rosie's Walk from this because it just keeps continuing (Education M).

This example is illustrative of how educators emotionally charged props and play activity in relation to their own personal history, but also how children had agency for bringing in new play themes, such as a chicken dance. Props acted as placeholders in this example, and this supports imagination developing as a key psychological function from the play activity of the children. A cultural-historical interpretation of play as first introduced by Vygotsky (1967) was evident in the data of our educational experiment. However, *what is different is how the zoom created a collective imaginary situation across homes, where mature forms of changing the meaning of objects and actions in the imaginary situation were shown virtually and in real form.*

Theme 2: Real relations and play relations

Contrary to the dominant literature into children's play, in our educational experiment we determined that "cultural activities as intergenerational ... positions adults as (virtual or actual) members of any cultural activity", including play (van Oers 2013, 194). In a pedagogical context of FDC, this means that "adult engagement in children's play should primarily enhance the play format of children's activity and answer the children's need for

help to improve their participation in the current role play” (van Oers 2013, 194). In email exchange, adult participation in the children’s play is suggested as the ideal form in the CPW, as this extract from the storyteller shows:

Then I’ll be playing and encouraging you to play along at your day care setting being the story characters - Rosie or the fox! You might want to walk like a hen for example. (15th Feb)

[Figure 3 near here]

By the educators being play partners in the CPW the real relation of educator to children changed into a play relation. Figure 3 shows the educator being a chicken on Rosie’s farm, mimicking the actions of a chicken. The following extract from the reflection session suggest through the play actions of the adults, and the response by the children, that they had a very different instructional position in the CPW. Educators and children as play partners gave agency and space for the children to become the instructors of how to be a convincing chicken.

I was being a chicken, but I was moving my hands like this, and then one child came and he told me like, D, instead of like, you need to do this. This is a duck (movement), this is a chicken (movement). He was helping me actually. It was learning for me as well (Educator D).

The play practice is in keeping with the adult having an active role in children’s play (Lindqvist 1995), and through this, the adult’s role changes and the relationship between children and the adults also change. In the imaginary play situation, the educator changes from ‘teacher’ to ‘player’ (Hakkarainen et al. 2013) and the child from ‘student’ to ‘teacher’. On zoom this change becomes a public transformation in roles, as children see educators in role being a character in the story.

Theme 3: Dramatic and emotionally charged play virtually across FDC settings

An emotional involvement by children is characteristic of a CPW and in keeping with the zones of development outlined by Hakkarainen et al. (2013). The original narrative of Rosie's Walk that is brought forward into the imaginary situation was full of drama, but realised in different ways by the children. For instance, the children focused on the fox because it was naughty (Educator M) or viewed as a bad guy (Educator S) as is captured in the examples below:

The fox was naughty from the first moment. And then all they connected to was that the fox was naughty. They were obsessed with the naughty Fox, even though it didn't come into the story or the problem at all (Educator M).

...the fox was the bad guy. And they wanted to be the fox because he was a baddie (Educator S).

The drama was made more exciting through the storyteller introducing through zoom the idea of Rosie setting up a birthday party. This was not only personally meaningful, but distributed across the FDC homes a level of emotionally charged excitement as a collective imaginary situation of a birthday party – but as the next extract shows, was linked with children's real world experiences.

... we actually had one of those kids had a birthday the week after Rosie had a birthday. So this birthday was in his head. But they did a very elaborate birthday party for Rosie and she was very well fed. Her friends come, the cousins were there. It was huge (Educator S)...

In Figure 4 the children and educators are shown attending the party, and also showing each other on screen their party food. In this way, children are bringing real world experience back into the imaginary situation developed in the FDC setting.

[Figure 4 near here]

The public performance of a party, as a celebration and as elaboration of the original story, creates a mature form of collective play that children were supported to join and contribute to. The educators and the storyteller put into the environment a mature form of play and play action are at a more advanced level than would be possible if the adult was not sensitively present. According to Vygotsky (1994), the form of development that one expects of children at the end of the developmental-instructional period, must already be available in their environment. It is through the drama of the story, and the emotionally charged narrative, that the children are propelled into higher forms of play that are collectively and publically performed across FDC settings through the zoom platform. As noted by Hakkarainen et al. (2013, 216), “professionals working with young children not only have to support the development of ongoing play, but also have to present and model higher forms of play” and this was shown in this study to be achieved through the emotional amplification of the story narrative linked to children’s motives and personal life experiences. The emotional dimensions of the play script supported access to the imaginary situation by the younger children, and this in turn developed the collective imagining on zoom across the FDC settings for all the children.

Theme 4: Imaginary play narrative is distributed across time and place

One of the key findings consistently brought out by all the educators, was how the shared play narrative was distributed across time and place. For example Educator S shares how the imaginary space of Rainbow Fish in the follow up CPW was brought into the daily interactions in the FDC setting.

I always stayed in the role of the messenger, which was the octopus. The octopus was the wise person who knew everything. Even when we were not in playworld, and the children wanted to know something, they would say, “Shall we go under the stairs and ask the

wise old octopus?”. They were bringing parts of the playworld into normal everyday life (Educator S)...

This example illustrates how the narrative of the story and the imaginary space inhabited by the octopus, gave a new FDC interaction between children and the educator. This is in keeping with a cultural-historical conception of play.

Further, in contrast to the idea of using an object as a pivot in the imaginary situation (Vygotsky 1967), everyday experiences of finding a real rake brought forward the imaginary situation of Rosie’s farm, as Educator M shares during the reflections:

And they found the chicken house. So they said, oh, this is like Rosie... And then they said, well, look, there's the rake. They had a rake at the end of it that they cleaned the chalk out with. And then we go a little bit further .. the cafe... (Education M).

This is a new theoretical point not yet discussed in the cultural-historical literature. This has emerged in this research we believe, because FDC setting are simultaneously real world homes and educational institutions (Bromer and Korfmacher 2017) and how play and learning emerges in those settings has not received sufficient research attention.

Theme 5: Educators mature the play inside the imaginary situation

In this section data are presented in relation to how the collective imagining progressed over time (see 5a, 5b) and cultural age periods (5c).

Theme 5a: Experiencing a plan-view

In Figure 5 the educators, the storyteller and the children are imagining they are flying over Rosie’s farm.

[Figure 5 near here]

Theme 5b: Making maps, using a plan-view

In Figure 6 the educators and the children share the maps they have made of their farm. The plan view orientation is imagined (Figure 5) and later replayed as a drawing of Rosie's farm. These were collectively shared through zoom. These maps supported the imaginary situation.

[Figure 6 near here]

Theme 5c: Imaginary situation across cultural age periods

These figures show the context of one of the key challenges facing FDC which is the broad age range of children who attend their service. An exchange between Educator C and M when reporting on their CPW brought out the cultural age periods in relation to the imaginary amplified across a zoom platform:

Educator C: We had also set up a sort of 3D map. And I think that was the day that then the **baby** started screaming, and then we just weren't able to join. So they played with the map while I tried to deal with the screaming baby...

Educator M: ... these have **older siblings** ...because if we don't know something we go and research it on Google or whatever...the older ones when they first come in the mornings would look in the tray and I would have all these different pictures of parts of Rosie ... these older children have actually really emphasized perhaps the pond. Last day all the children had a go with that, even the **school aged children**. The little ones did not do on their own. But the others did a lot. Where are we going to put this? And the actual map itself of the route around.

We noted across the data sets that there was simultaneously present imitation with some understanding by the toddlers, as well as collective imaginary situation being mapped and modelled in service of going to a party. The latter gave the possibility for the rules that govern the play of the children to be more consciously explored. Therefore, both the mature form of play and the rudimentary form of play action were constantly in interaction within FDC.

The findings of our research suggest that multi-age groups bring forward different leading motives of a broad cultural age period. We can identify the challenges of imaginary play across cultural age periods, not only from a psychological perspective, but also a challenge of practice. But, most studies reported in the literature were oriented to centre based practices, where the same age cohorts dominate the practices. What these studies miss, is how multi-age groups play together to develop play.

Conclusion

In line with van Oers (2013, 188), we believe that a list of play characteristics in FDC contexts does not explain the richness of the digital and real world relation between “players’ activity, the internal relationships of its dimensions, and the developmental changes (of the play activity and its players)”. Nor does a list acknowledge the historical development of play in particular cultural communities (Elkonin 2005), the cultural nature of children’s play activity (van Oers 2013), the role of adults in some communities who introduce imaginary play to their infants (Lillard 2007) or games to older children (Ugaste 2005), or how play itself develops (Hakkarainen et al. 2013; Vygotsky 1967). Rather, this study of children’s play activity in digital and real world context of FDC is symbolic of a particular historical moment (Elkonin 2005) in a pandemic where new needs created new practices and play conditions for children.

It was found that the play relations between educators, children and researchers were amplified in the digital play practices, and were consciously explored through the reflection sessions that were a key part of the educational experiment. This was the process of the research.

To explain the content of the play activity and what it afforded for children’s development, we had to first understand the unique FDC context. It was through the digitally enabled CPW

across homes with educators, in addition to the broad cultural age period of the children in FDC settings, that we found new play activity that appeared to create new kinds of developmental conditions for children.

First, we identified how the digitally enhanced play activity across the FDC settings brought forward 5 developmental conditions. They were:

- (1) Adults and children create *collective imaginary situations*
- (2) Adults in real relations and *play relations*
- (3) Dramatic and *emotionally charged play* virtually across FDC settings
- (4) Imaginary *play narrative is distributed across time and place*
- (5) Adults mature the play inside the imaginary situation

These conditions are in relations with each other. But it was the educators across homes who were central in this model for amplifying play development (Figure 2). *It was found that the educators matured the play from within the imaginary situation.* Imagination as a neo-formation makes the illusionary realisation of desires possible in the play activity. We determined that collective imagining was actively supported by the educators in ways that took into account the unique characteristics of FDC and zoom platform.

Second, the toddlers experienced the narrative of the play initially by the storyteller via zoom, and later revisited the CPW of the story through the recreation of imaginary play situation in their respective homes. Iteratively introduced were the props, using the props to make farm models, then conceptualising the models as maps with a social purpose to visit the farm for a party. Toddlers were swept along with the drama of the story and the excitement of the birthday party, as educators cycled them back and forth between the homes, zoom platform, and the real world of everyday life, such as visiting the café and seeking a rake in a garden.

In FDC with the diverse cultural age period, the different social situations of development co-exist in the relations in same CPW imaginary situation and interpretations of the same environment will be different (Vygotsky 1994). The crisis of age three brings in the neoformation of imagination, and the child's relationship to her/his environment changes as a new social situation of development emerges. Both mature and real forms of play co-exist through zoom platform. Therefore, we conclude that a zoom platform of a CPW has the potential to promote all the children's development across the cultural age periods as they collectively bring to fruition the imaginary situation of the CPW. The children are imitating the collective form of the elementary play, but also for the more experienced players are acting 'as if' in a mature of collective play. It is the educator who is in the collective imaginary situation, and who can in this play position support children's initiatives. As this study showed, imitation with increased understanding supported the psychological movement from object play to social play where the rules and roles of the story gave new play conditions that appeared to develop children's imagination – as they went from objects as props, to real objects as pivots for imagining.

Third, whilst the props acted as placeholders in the CPW for the story as the collective imaginary situation, we also found that real world tools became props for bringing the imaginary play theme back into the everyday interactions of the educators and the children when in the community. The example of the rake in the garden illustrated this. What is new, is how the *real objects acted as pivots taking the children and educators back into the imaginary situation, where the common narrative of the story collectively oriented them, irrespective of their cultural age period*. Real objects acting as pivots for imaginary play does not appear in Vygotsky's original writing on play. We think this was identified because few have studied play activity in FDC settings with this unique context in mind.

Fourth, the educators and children created imaginary situations in the CPW that is both in and across FDC homes seen on the screen. Different to other conceptions of play, is that the imagining was distributed beyond the screen, the home, and across time and place.

Imagination was active and the circle of imagining appeared to grow in its reach. Not only has the research made visible the play practices of the educators who have previously not been studied, but it has identified a distributed form of play narrative across time and geography—as seen through the narrative emerging during different parts of the day and in different settings. The Zoom platform with its imaginary situation of the CPW changed the meaning of the interactions in the FDC home. Imagining the same social situation of the family home in new ways, is in keeping with Vygotskian conception of play. What is new is how *play was not concentrated to a corner, but rather was shown across the whole FDC home*, as we saw with the stairs acting as the cave for the Octopus in the CPW of the Rainbow Fish, *across the community* when visiting the café, and when *zooming into each others' FDC homes*.

Taken together, the collective imaginary situation on and through zoom of a CPW gives a cultural-historical model of play for FDC that speaks positively to this context, and includes the characteristics of a multi-age group, and geographically distanced programs. In so doing, deals with the problem found in the literature of educators working in isolation of other educators, and adds to our limited understandings of play activity in FDC. Finally, this study of digitally enabled play in and across FDC settings sheds new light on how the pandemic has changed children's play conditions, and identified the key role of the educator in being in the imaginary play situation, in play relations with children, and in supporting the development of imagination by keeping constant or amplifying the mature forms of play for the broad cultural age period that is characteristic of FDC.

References

- Björk-Willén, P., and K. Aronsson. 2014. "Preschoolers' "Animation" of Computer Games." *Mind, Culture, and Activity* 21(4): 318–336. doi:10.1080/10749039.2014.952314.
- Bromer, J., and J. Korfmacher. 2017. "Providing High-Quality Support Services to Home-Based Child Care: A Conceptual Model and Literature Review." *Early Education and Development* 28(6): 745–772. doi:10.1080/10409289.2016.1256720.
- Davydov, V. V. 2008. "Problems of Developmental Instruction. A Theoretical and Experimental Psychological Study". In *International perspectives in non-classical psychology*, edited by D. Robbins and V. Lektorsky. New York: Nova Science.
- Elkonin, D. B. 2005. "On the Historical Origin of Role Play." *Journal of Russian and East European Psychology* 43(1): 49–89. doi: 10.1080/10610405.2005.11059243.
- author, M. 2018.
- Gerstenblatt, P., M. Faulkner, A. Lee, L. Doan, and D. Travis. 2014. "Not babysitting: Work Stress and Wellbeing for Family Child Care Providers." *Early Childhood Education Journal* 42(1): 67–75. doi: 10.1007/s10643-012-0571-4
- Hakkarainen, P., M. Brèdikytè, K. Jakkula, and H. Munter. 2013. "Adult Play Guidance and Children's Play Development in a Narrative Play-World." *European Early Childhood Education Research Journal* 21(2): 213–225. doi:10.1080/1350293x.2013.789189.
- Hedegaard, M. 2008. "The Educational Experiment." In *Studying children: A cultural-historical approach*, edited by M. Hedegaard and M. Fler, 181–201. Berkshire: Open University Press.
- Hooper, A., R. Hallam, and C. Skrobot. 2021. "Our Quality is a Little Bit Different: How Family Childcare Providers Who Participate in a Quality Rating and Improvement System and Receive Childcare Subsidy Define Quality." *Contemporary Issues in Early Childhood* 22(1): 76–94. doi:10.1177/1463949119858985.
- Lillard, A. 2007. "Guided Participation: How Mothers Structure and Children Understand Pretend Play". In *Play and development: Evolutionary, Sociocultural, and Functional Perspectives*, edited by A. Göncü and S. Gaskins, 131–153. New York: Lawrence Erlbaum.
- Lindqvist, G. 1995. "The Aesthetics of Play: A Didactic Study of Play and Culture in Preschools." PhD diss. University of Karlstad.
- Pihlainen, K., C.S. Montero, and E. Karna. 2018. "Digi-Bags on the Go: Childminders' Expectations and Experiences of a Tablet-Based Mobile Learning Environment in

- Family Day Care.” *Mobile Information Systems* 2018(1):1-8.
doi:10.1155/2018/6967505.
- Porter, T., D. Paulsell, P. Del Grosso, S. Avellar, R. Hass, and L. Vuong. 2010. “Review of the Literature on Home-Based Child Care: Implications for Future Directions”. Princeton, NJ: Mathematica Policy Research.
- Rusby, J.C., R. Crowley, L.B. Jones, and K. Smolkowski. 2017. “Providing Opportunities to Learn in Home-Based Child Care Settings: Observations of Learning Contexts and Behavior.” *Early Education and Development* 28(6): 715-726.
doi:10.1080/10409289.2017.1303305
- Schaack, D.D., V.N. Le, and C.M. Setodji. 2017. “Home-Based Child Care Provider Education and Specialized Training: Associations with Caregiving Quality and Toddler Social-Emotional and Cognitive Outcomes.” *Early Education and Development* 28(6): 655-668, doi: 10.1080/10409289.2017.1321927
- Stratigos, T. 2015. “Processes of Categorisation and the Politics of Belonging in Early Childhood Education and Care: An Infant’s Experience in Multi-Age Family Day Care.” *Contemporary Issues in Early Childhood* 16(3): 214–229.
doi:10.1177/1463949115600029
- Tonyan, H. A., and J. Nuttall. 2014. “Connecting Cultural Models of Home-Based Care and Childminders' Career Paths: an Eco-Cultural Analysis.” *International Journal of Early Years Education* 22(1): 117-138. doi: 10.1080/09669760.2013.809654.
- Trawick-Smith, J., and L. Lambert. 1995. “The Unique Challenges of the Family Child Care Provider: Implications for Professional Development.” *Young Children* 50(3): 25-32.
<https://www.jstor.org/stable/42727011>
- Ugaste, A. 2005. “The Child’s Play World at Home and the Mother’s Role in the Play.” PhD diss., University of Jyväskylä.
- van Oers, B. 2013. “Is It Play? Towards a Reconceptualisation of Role Play from an Activity Theory Perspective.” *European Early Childhood Education Research Journal* 21(2):185–198. Doi: 10.1080/1350293X.2013.789199.
- Vygotsky, L. S. 1967. “Play and its Role in The Mental Development of the Child.” *Soviet Psychology* 5(3): 6-18. doi:10.2753/RPO1061-040505036.
- Vygotsky, L. S. 1994. “The Problem of The Environment.” In *The Vygotsky reader*, edited by R. van der Veer and J. Valsiner. United Kingdom: Blackwell.

Funding

This work was supported by Australian Research Council under Grand (FL180100161).

Acknowledgement

The research team included Dr Rebecca Lewis, Oriana Ramunno, Yuwen Ma, Dr Sue March, and data organisation by Sonya Nedovic.