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Author(s)              Weimin Toh and Fei Victor Lim

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# Let's play together: ways of parent–child digital co-play for learning

Weimin Toh and Fei Victor Lim

Department of English Language & Literature,  
National Institute of Education,  
Nanyang Technological University,  
1 Nanyang Walk, Singapore

## ABSTRACT

In light of the growing phenomenon of parent–child digital co-play of online games, we conducted a study to understand the different ways of digital co-play and how they can offer opportunities for the child's learning. We analyse four cases of parent–child digital co-play on Let's Play gaming videos with Roblox on YouTube. Our research method adopts a netnography research approach and multimodal discourse analysis to examine the data. We identify three ways of digital co-play, which include the parent-directed, parent–child negotiated, and child-directed parent–child interaction styles from the analysis of the videos. Following the analysis, we discuss how each of the ways of parent–child digital co-play can be productive in helping the child learn through shared gameplay with parents. We suggest how children can learn through communicating with parents during gameplay, creating something by themselves in the game, modelling parents' in-game behaviour, teaching their parents by sharing their knowledge, and leading the co-play. Our study aims to serve as a conversational starter to contribute to the global discourse on the phenomenon of parent and child shared interactions with digital technology as well as the ways in which learning can be facilitated through such experiences.

## KEYWORDS

Online games; digital co-play; digital learning; parenting; multimodal analysis; netnography

## Introduction

Digital devices and online gaming have become a part of many children's everyday lives in contemporary societies (Ebbeck et al., 2015). Online game's attractive content, interactive features, and social activities present a strong appeal to children (Ferguson & Olson, 2013). The children's digital play is not all frivolous though as studies have reported that their playing of online games can offer opportunities for their literacy learning and social development (Toh & Lim, 2021; Plowman et al., 2012). Research has shown that there is value of having parents participate with their children in digital play (Wang et al., 2018). In addition, Jiow and Lim (2012) posit that digital co-play between parent and child will become more prevalent when the current generation of game players become parents themselves given that they already have gaming experience and perceive gaming positively (Nikken & Jansz, 2006). Given the growing phenomenon of digital co-play between parent and child, Clark (2011) opined that there was an urgent need for further research to understand how participatory learning can occur through parent and child digital co-play. Our study responds to this call by identifying and describing ways in which parent and child engage in digital co-play and discuss how parents can support the child's learning in such interactions.

## Digital co-play and learning

Previous studies have focused on the parents' mediation of children's digital play. For example, Nikken and Jansz (2006) examined the types of parents' mediation of their children's (8–18 years old) videogaming. They found that parents applied three forms of mediation to gaming. They are restrictive mediation, which involves parental supervision of children's videogaming; active mediation, which involves discussing videogames with children; and co-playing, where parents join their children in playing a videogame together. When parents were concerned about games' negative effects, they restricted game behaviour more frequently and discussed game content more often with their children. In contrast, parents who often played videogames were more optimistic about games' positive effects. They often co-played and applied the other two forms of mediation appropriately. In another study, Jiow (2014) interviewed adolescents and their parents who co-played videogames and reported that co-play can offer opportunities for parents to build rapport with their child. Of particular interest in our study is the mediation form of co-play as described in Nikken and Jansz (2006). We seek to describe the ways in which digital co-play occurs and posit that in addition to rapport-building as reported in Jiow (2014), digital co-play can offer opportunities for the child's learning as well.

Griffith and Arnold (2019) described parent–child interactions during joint educational app use. They examined the relationships between parental behaviours and the child's affect and engagement. They reported that both parent and child adopted different roles during the interaction with the app. The child mostly led the interactions while the parents supported them. The authors argue that parental support for children's self-directed play is important and their engagement with the child during app use was associated with the child's lower negative affect. Building on their findings, our study aims to find whether in the context of online games, there are different ways of parent–child co-play, in addition to the child-led play observed by Griffith and Arnold (2019) in co-play with educational apps.

In our study, we define learning to include the learning of language, new literacies, such as communication and problem-solving skills, creativity, critical thinking, and empathy (Duncan, 2020) as well as prosocial behaviours in the affinity space (Gee, 2004). There is international evidence from correlational, longitudinal, and experimental studies that playing games in which game characters help and support each other in nonviolent ways can increase both short-term and long-term prosocial behaviours (Harrington & O'Connell, 2016). However, while past studies have investigated the effects of children's digital play, they have not examined the different ways of parent–child digital co-play and the opportunities such experiences can offer for the child's learning.

In this paper, we analyse four cases of parent–child digital co-play on Let's Play gaming videos with Roblox uploaded for public access on YouTube and explore the following two questions:

- (1). What are different ways of parent–child digital co-play?
- (2). How do parents interact with children in digital co-play to facilitate the child's learning?

## Method

Our study adopts a netnography research approach (Hattingh, 2017) to identify the various ways of parent–child interaction in Let's Play videos with Roblox. Netnography is based on the principles of ethnography in an online environment (Kozinets, 2002) but is more naturalistic and unobtrusive than focus groups or interviews as it focuses on the context (Radde-Antweiler & Zeiler, 2015). A multimodal discourse analysis (Jewitt et al., 2016) is

performed for the videos selected. A feature of the multi-modal discourse analysis approach is the “bottom up orientation where theories and ideologies are extrapolated from the intensive analysis of actual texts” (O’Halloran & Lim, 2014: 141). An analysis of the multimodal data involves detailed transcription and annotation of the multimodal corpus. Analytical approaches range from repeated viewing of data, at variable speeds, and zooming into marked or particularly unusual occurrences for discussion. In this study, we watched the YouTube videos, transcribed the video portions that specifically involved parent–child interactions, read the transcriptions, reread them, re-watched the videos and immersed in them, allowing the data to talk to us, and eventually also talking back to the data (Patterson, 2018).

We use a multiple case-study design (Yin, 2009) and is guided by the concept of information power (Malterud et al., 2016), which indicates that the more information the sample holds, relevant for the actual study, the lower number of participants is needed. Our paper’s aim is to provide a preliminary description of a selected parent–child pairs which can serve as foundational categories for a corpus in future research. In terms of the ethical principles of research practice on using YouTube videos as research data, we follow Hattingh’s (2017) position that specific permission from the video creators need not be sought when the data is publicly available (Patterson, 2018). We provide the video analyses in the paper<sup>1</sup> and the links to the original YouTube videos in the endnotes for reference.

A consideration that guided the selection of data was that the video analysed must be relatively typical of the entire collection of videos that the child (or parent) has on his channel. To determine that a given video was reasonably typical of the entire collection of videos that the child (or parent) has on their channel, we browsed through more than 5000 videos by the parent–child pairs to identify the salient subgenres based on the video titles and the playlists they belong to. We found that a large portion of the videos is dominated by Let’s Play videos, which is a type of gameplay video that records the playthrough of a video game with the video commentary of the gamer embedded in a corner of the screen. In addition, to allow the data to speak to us rather than impose our own aims upon the data, we randomly selected the Let’s Play videos that included both parent–child co-play for analysis.

The videos selected for analysis and the parent–child dyad are presented in Table 1.

*Table 1. Parent-child pairs, online games played, and video titles.*

Pair number nationality	Parent/child (age)	Games played
1 Canadian	Sitarow (father)/Sisarow (son)	<i>Roblox: Swordburst 2</i> <sup>1</sup>
2 American	SgDad (father)/Simas (son)	<i>Roblox: Jailbreak</i> <sup>2</sup>
3 Canadian	Freddy (father)/Karina (daughter) (13)	<i>Roblox: Prison Break</i> <sup>3</sup>
4 Canadian	Freddy (father)/Karina (daughter) (13)	<i>Roblox: Bloxburg</i> <sup>4</sup>

Roblox is an online game creation platform that hosts more than fifty million user generated games. Roblox, originally created under the name DynaBlocks by co-founders David Baszucki and Erik Cassel in 2004, was officially named Roblox in 2005 and launched on September 1, 2006. Roblox’s accessibility and “unstructured play” have aided its popularity;

<sup>1</sup> <https://tinyurl.com/coplay01>

<sup>2</sup> <https://tinyurl.com/coplay02>

<sup>3</sup> <https://tinyurl.com/coplay03>

<sup>4</sup> <https://tinyurl.com/coplay04>

anyone with a handheld device can play anywhere and children can share the experience of playing with others (Dredge, 2019).

## Analysis

We identified three ways of parent–child co-play from the video analysis. They are described as parent-directed, parent–child negotiated, and child-directed styles. We also observed that there is a clear mix of styles for all parent–child pairs, where parents were observed to style-shift during gameplay.

### Parent-directed style

The parent-directed style describes the parent as the expert player (Soylu & Bruning, 2016), where the parenting style is more directed and with strong parental leadership. The subcategories include “parental guidance of the child” and “managing the child’s behaviour”.

Table 1. Parent-child pairs, online games played, and video titles.

Parental sharing of gameplay secrets/information/tips is an interaction pattern that the parent engages in during co-play. When games are co-played with someone the child cares about, such as the parent, the game experience becomes significantly more enriching and memorable and enhances the learning process (Wang et al., 2018). During parent–child co-play, the game space provides a safe environment for informal learning together, and the game content draws parent and child together into shared exploration and learning (Nolan & McBride, 2014).

In Pair 3, Parent 3 demonstrated to Child 3 how to glitch through the wall to reach their goal faster. Glitching is a form of emergent digital literacy in video gameplay and is defined as a process where the player identifies videogame system errors, or glitches, and appropriates them in ways that allow them to transform and expand how they participate within these games (Rivero & Gutiérrez, 2020). During the co-play, Parent 3 controlled his character to walk towards a corner of the outer prison wall. He asked Child 3 to observe how he glitched the game to scaffold her performance of emergent digital literacy:

Parent 3:  
Can you glitch through that wall? (27:03)

Child 3:  
I don't think you can.

Parent 3:  
Somebody glitched through this wall here before in this corner ... Oh, I am at the other side. I glitched through.

Child 3:  
You did? Oh wow!

During co-play, when children do not cooperate with parents, parents may persuade children and guide them by leveraging their prior experience to accelerate gameplay progress.

Parents may reflect on children's past behaviours to teach them how to learn from failures and provide opportunity for them to build socioemotional resilience (Lozada et al., 2016). Parent 2 persuaded Child 2 to retry the previous failed attempt when the child's character was killed by explosives at the door, advising the child to stay away from the door. Parent 2 controlled his character to stay out of the explosion range while guiding Child 2 to stay near him by using voice chat:

Child 2:  
Actually, let's take the normal way. (17:00)

Parent 2:  
I'm going to take this way.

Child 2:  
Why dad? It takes forever.

Parent 2:  
Just don't stand by the door and you will be fine.

### **Parent–child negotiated style**

The parent–child negotiated style describes the parent–child relationship as peer-like. The parent collaborates with the child on missions and strategies. The subcategories include “parent–child sharing”, “promoting prosocial behaviour”, and “parent–child coordination”.

Multiplayer games offer their users opportunities for communication while in the pursuit of shared goals (McCreery et al., 2011). Parents can negotiate the co-play with the child by communicating with them to set a common goal for the gameplay session. At the beginning of gameplay, parents can define the goal for both, but include the child's input. Parent 1 used a question to mitigate the directive and specified the goal of the session for Child 1 at the start while teleporting to the child. Hence, Parent 1 provided opportunity for the child to learn how to practise collaboration skills so that both parties were on the same page:

Parent 1: So, you are trying to finish the boss, is that what you are trying to do? (5:16)  
Child 1: No, I mean that's on my list, but I'm kind of just waiting to level up, not really much of boss.

During gameplay, Parent 1 shared how he can use a keyboard macro to automate his actions. In return, his son shared how he used a mouse macro to improve his gameplay effectiveness. Therefore, Parent 1 provided opportunity for Child 1 to demonstrate emergent digital literacy (Rivero & Gutiérrez, 2020) and socioemotional well-being and the father–child bond was strengthened from their shared interest:

Parent 1:  
Okay, if you do have a broken arm, what's nice is if you have a Logitech keyboard, you could just use a macro. You know, just keep on ... (1:16:10)  
Child 1:  
Ya, I have been using my super clicker because it fires, it clicks faster than you can click. And so, you can get more hits off the mobs. It's like ...  
Parent 1:

But when I do that everybody starts dying because I keep leaving it on and walk towards them.

Parent 2 also prolonged the conversational turns with questions. As Pair 2 rode the dune buggy together, his son told him that he preferred the volt bike. Parent 2 then prolonged the conversation, asking his son why he preferred the special motorcycle. Hence, he provided opportunity for his son to practise his language skills by using the causal conjunction “because” to construct a logical sentence and bonded with him over his favourite item:

Child 2:

I want the volt bike though. (4:20)

Parent 2:

Why you want the volt bike so bad?

Child 2:

Do you know why? Because it goes super-fast.

Word/phrase repetition was used to promote bonding and reciprocal exchange during parent–child co-play. While Pair 4 was making pizza together at the workplace, Child 4 complained about some avatars, who appeared dirty, moving near them. He responded to her by repeating her phrase “stinky people” to show his attentiveness to her. Hence, he made her feel safe and helped to strengthen her socioemotional well-being (Britto et al., 2017) by playing with her.

Child 4:

There’s someone standing on my pizza. They can be so fresh. It’s all those stinky people. (17:00)

Parent 4:

Oh, my goodness. You got the stinky people.

Child 4:

They are going to make my pizzas bad, and then I am going to get like an F for my work performance.

As children learn from social interaction, we observed that the parents appropriate online social platforms to model positive behaviours during co-play to facilitate children’s learning of prosocial behaviours in human interaction. For example, Parent 1 shared favourite items with Child 1 to build trust with him (11:45) and helped the child with the gameplay (18:40):

Parent 1:

My favourite one is this one. Where is it? Inventory. The Peacekeeper, where is it?

Child 1:

Yay, now I have these two. They do how much damage each? Oh, at least they do a hundred now.

Parent 1:

See, doesn’t kill them as fast.

Child 1:

That’s not too bad. Oh look, now I do six hundred.

Parent 1:

It’s nice. Ok and jumping this guy.

Parent 4 was observed to take care of his character's hygiene by immediately going to shower after a long day of work (30:13) and in doing so, role-modelling the practice of hygiene as a self-regulatory behaviour in daily routines (Ailincai & Weil-Barais, 2013). Children can learn these positive behaviours to interact with other people to promote a prosocial environment:

Parent 4:

I'm just going to park right here, ok? I have to rush to the bathroom, take a shower.

Child 4:

Alright.

Parent 4:

And then I'll go upstairs.

Child 4:

Alright, I'm going to respawn my car.

Parent 4:

Aww, I feel so good.

Child 4:

Ok cool that.

In multiplayer games, player communication and coordination of actions are key to build player relationships and learn together (Williams & Kirschner, 2012). Parents and children communicate with each other to coordinate their gameplay through voice chat when they are located at different game areas. When Parent 3 was killed by another player at the prison entrance, Child 3 communicated to him that she was waiting in the car to pick him up at the starting location to try to break into the prison again. Hence, Child 3 could practise her communication and collaboration skills, which are part of socioemotional well-being:

Parent 3:

Oh, I died now. Oh no. (3:43)

Child 3:

Ok. Don't worry. I'll wait here to pick you up. And we are going to get in from the hard way. From the tree and that's like the really hard way.

### **Child-directed style**

The child-directed style describes the parent as a learner/novice player, whereas the child is the expert (Soylu & Bruning, 2016) who leads the co-play. The subcategories include "just-in-time teaching" and "supporting the child's lead".

Just-in-time teaching occurs when the child engages in real-time teaching during gameplay and problem solves on the spot for the parent. Parent 4 did not understand why he could not purchase the moped at the motor store even though he thought he had enough in-game currency. As Parent 4 explored the sales items, he discovered that different in-game currencies were used for different items. He then asked Child 4 whether dollars were not the same as Blockbux. The child responded affirmatively and engaged in just-in-time (Gee, 2005) teaching, which reflected her knowledge of the gameworld (Duran, 2016):

Parent 4:  
Oh, I don't have enough Blockbux. I thought I have enough ... Okay, wait a minute. (26:56)

Child 4:  
What?

Parent 4:  
The dollars are not the same as Blockbux?

Child 4:  
Not really, no.

Parent 4:  
Oh ok. That's why I cannot buy it.

Teaching the parent can occur when the parent does not know how to proceed in the game due to a lack of understanding about the sequence of actions required to produce a specific outcome, such as creating a game object. The parent explicitly asks the child for help and the child teaches the solution to the parent. The metacognitive strategy of reflection and connected learning (Foster & Shah, 2015) occurs as the child draws upon her knowledge of playing Roblox to teach the parent how to actualise the game object. For instance, when Parent 4 did not know how to spawn the moped he purchased at the motor store in his house, he asked Child 4. She taught him by reflecting on her player experience as she was simultaneously selecting the options to paint her moped in her house:

Parent 4:  
Where is my moped? How do I respawn my moped? (27:53)  
Child 4:

You got to spawn it at your house ... You got to get to your lawn and just spawn it there.  
Parent 4:

You know, I don't know how to spawn it. Do you know how to spawn it?  
Child 4:

No idea. Well, I, okay, I do have an idea. Ya, you have to go to your, er, lots and then you have to place it down and then you ...

Parent 4:  
How do I place it down?

Child 4:  
Go to build mode.

Parent 4:  
Oh, okay, okay, okay. Build mode, ya ... mm, inventory ... Yay. I got a moped, alright. I'm so happy.

As Child 4 taught her father how to create game objects, she demonstrated socioemotional well-being, such as empathy, by adopting her father's perspective, so they can grow together in co-creating game objects in a playful learning environment (Kangas, 2010).

Father's involvement in daughters' activities has a positive relationship on the daughters' self-esteem (Allgood et al., 2012). Expressive types of father involvement such as companionship, father-daughter activities, and emotional involvement (Allgood et al., 2012)

can have a positive effect on daughters' socio-emotional wellbeing. In our data, parents have been observed to play a supporting role in children's co-play in Roblox. For instance, Child 3 helped Parent 3 to escape from prison at the beginning of the game. Child 3 first controlled her character to climb up the sewer ladders to check the surrounding area while her father's avatar followed her closely behind. She observed the surroundings, saw that it was clear, and responded to him:

Parent 3:

Okay, I don't have a gun yet. So, I'm going to need something. (00:27)

Child 3:

Okay, we are going to help you get a gun. Wait, I'm going to check if there's no one up there.

Parent 3:

Is it safe?

Child 3:

Ya, my car's still here. My red car.

Similarly, Parent 4 allowed Child 4 to help him find a job in Bloxburg. As Child 4 drove her father around the neighbourhood, she told him about their plan:

Child 4:

So, I will show you a couple of work options you can do and then I am going to work. Alright? (14:18)

Parent 4:

Okay, sounds good. I'm excited. Which place are we going to work in?

## **Discussion**

From the analysis, we identified three ways of parent-child interaction patterns in the co-play videos. They are the parent-directed, parent-child negotiated, and child-directed styles. We do not suggest that any of these styles are superior to the other but that each style offers unique opportunities for children's learning. We also observed that parents can style-shift where appropriate during game-play to facilitate their child's learning.

## **Learning through communicating**

Children are sensitive to shared intentionality (Tomasello & Carpenter, 2007) and mutual knowledge (Wyman et al., 2013) in their use of gaze, gestures, and concise language for effective communication. In all the co-play styles, parents can foster children's learning of prosocial behaviours, such as collaboration and communication skills, as both work towards a common goal through parent-child coordination and sharing, as reported in our data. The brain activities of parent and child can synchronise during co-play in the processes of adult-child brain, behavioural, and physiological entrainment (Wass et al., 2020) and predict cooperative performance as the parent-child brain-to-brain synchrony is linked to the child's emotion regulation (Reindl et al., 2018) and executive control (Qu, 2011).

The ability to regulate one's emotions and prosocial behaviours is an important skill for the future-ready workforce in the twenty-first century (Paolini, 2020). During co-play, parents can remain attentive to children's gameplay activities; listen to what children communicate without interrupting or correcting them; be mindful of what they say, do, and ask; and use both language and actions to coordinate with the child to support their development of collaboration skills.

### **Learning through making**

We also observed that when children were provided with the opportunity to learn how to create something by themselves in the game, such as when Child 4 bought the moped from the store, spawned the moped in the house, and painted it, they can develop digital literacy and creativity (Lim & Toh, 2020). Additionally, when Child 4 taught her father how to create the moped in the game world and make pizza at the pizza store, she developed the ability to learn how to learn as she reflected on the correct sequence of steps needed to produce the game objects in the game world before instructing her father how to do it.

### **Learning through modelling**

Parents' behaviour plays an important role in influencing children's media use, such as mobile phone involvement (Hefner et al., 2019). According to social learning theory (Bandura, 1971), children learn by observing and imitating other people's behaviour. If certain behaviours are reinforced due to the positive fulfilment of children's personal needs, such as having a sense of belonging and acceptance from others, then these behaviours may become habitualised and repeated in future scenarios.

When parents model prosocial behaviours for their children, such as observing their character's hygiene, sharing their items, and helping other players in the parent-child negotiated style, then children may model and transfer these good behaviours from the virtual world to the real world. However, if parents behave inappropriately in online games, then children may model these negative behaviours in the virtual world (Wu & Chen, 2013) and transfer them to the real world according to the proteus paradox (Yee, 2014). Therefore, during co-play, parents can consider practising pro-social behaviours so that their children can learn appropriate behaviours.

### **Learning through teaching**

Parents can encourage children to learn through teaching in the child-directed style and "parent-child sharing" (Topping, 1996) in the parent-child negotiated style during co-play. Learning to teach others involves different mental processes than learning something for oneself (Duran, 2016). When learning to teach others, the learner must understand, revise, and organise the material for presentation; identify the basic structure of the learning process; and articulate the steps taken to solve a problem to reach the goal. During co-play, the learners are teaching by interacting as the parent and child develop a joint action to build knowledge (Graesser et al., 1997) and solve increasingly challenging problems in the game together.

The children in our videos taught their parents to create game objects (e.g. Child 4), took short-cuts to reach the goal faster (e.g. Child 3), and shared knowledge of computer programmes, such as macros, to enhance their co-play experience (e.g. Child 1). When sharing their knowledge, children can also develop cognitive flexibility (Voica & Singer, 2013) as they constantly revise their mental models (Potter et al., 2017) of the game and develop empathy by understanding others' perspectives to communicate their learnings to others.

## Learning through leading

Although research has shown that active adult involvement in children's play can increase the social level of play and impart a beneficial impact on children's cognitive growth, child-directed play can be supported when the adult does not over-dictate the child's behaviours (Ward, 1996). Parents can use the child-directed style to scaffold the child's development of initiative, autonomy, creativity, socioemotional development, and leadership skills when they let the child lead the co-play.

From the data, we observe that parents in our sample do not over-dictate children's behaviours and actions during co-play. In Pair 2, when the child communicated his intention to get the dune buggy first instead of going to the museum directly, they ended up having fun by testing out the vehicle's speed and functions (14:47). Towards the end of the game, Parent 2 initially rejected the child's request to get his character to hang on the rope outside the helicopter but later acquiesced to his request. The child is supported in learning to think out-of-the-box when the parent provides opportunity for the child to develop cognitive flexibility through the joy of learning (Kumpulainen et al., 2018).

Parents can value children's experiences (Nolan & McBride, 2014) by listening to them and participating in co-play activities. Parent 4 supported his child's performance of socioemotional skills by allowing her to help him find a job, engaging in household chores, and reminding him that he did not take a shower in Bloxburg. Parents can also show their trust in their children to develop their self-esteem when they are supported to lead the co-play (Nolan & McBride, 2014). For instance, Parent 3 asked his child to help him escape from prison. He positioned her as an "expert" player (Soylu & Bruning, 2016) to develop her confidence by having her lead the co-play.

## Conclusion

In this paper, we have identified the ways in which parent-child digital co-play can occur and how these interactions can facilitate the child's learning. Given the design of our study, the ways of digital co-play are intended as a conversational starter to help us understand the growing phenomenon of parent and child shared interactions with digital technology and the nature of learning that can be facilitated through such experiences. Future research can explore a larger corpus for a more complete identification of different ways of parent-child digital co-play. Another limitation is that the selected data are from YouTubers, and their interactions in the videos may be performed and dramatised to a certain extent (Miller, 2012). By sampling YouTube videos that include only those parent-child pairs who are sufficiently experienced with co-play and technologically literate that they feel comfortable recording and sharing videos of their performances online, we have wholly omitted parent-child pairs who are less experienced and who are generally poorer communicators. A future study can be carried out on parent-child co-play interactions at home to understand what the co-play styles are in an authentic context.

We have identified three ways of digital co-play – parent-directed, parent-child negotiated, and child-directed co-play styles. In the parent-directed style, the parent can engage the child in literacy activities by modelling behaviours for the child to scaffold their performance of emergent digital literacy in the game context. Using gaming to model behaviours can allow parents to demonstrate digital skills in the immediate context of the game environment for children to learn using experiential (Miettinen, 2000) and just-in-time teaching (Gee, 2005). The parent-child negotiated style is unique in that the relationship between the parent and child is not hierarchical, but is reciprocal, and peer-like and the child can feel included in the learning activities. Finally, in the child-directed style, the roles between the parent and the child are reversed. The parent does not dictate what the child can do in the

gaming context, but allow the child to lead the gameplay and experiment with different learning styles. In digital co-play, parents could leverage children's interest in gaming to guide them in developing communication, collaboration, creativity, and critical thinking skills.

Notes

1. <https://tinyurl.com/robloxdatacoding>

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### **Notes on contributors**

Weimin Toh is Research Fellow at the National Institute of Education, Nanyang Technological University, Singapore. His research interests are social semiotics, multimodal discourse analysis/multimodality, game studies, game-based learning, and early childhood research.

Fei Victor Lim is Assistant Professor at the National Institute of Education, Nanyang Technological University, Singapore. He researches and teaches on multiliteracies, multimodal discourse analyses, and digital learning. He is editor of *Multi-modality and Society* and author of the book *Designing Learning with Embodied Teaching: Perspectives from Multimodality* published in the *Routledge Studies in Multimodality*.

### **ORCID**

Weimin Toh <http://orcid.org/0000-0002-6468-227X>

Fei Victor Lim <http://orcid.org/0000-0003-3046-1011>

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