**Addendum A:**

**The purpose of the questions bellow is to broaden my understanding of how you as a teacher implement construction play regarding young children:**

**Semi-structured Interview:**

**School code: S1**

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| 1. **What do you understand under the concept construction play?**   Building  cognitive play  language  fine motor |
| 1. **Where does construction play usually take place? Indoors or outside?**   Mostly indoors |
| 1. **How often do the children in your class engage in construction play indoors?**   Every day  30 min |
| 1. **How often do the children engage in construction play outdoors?**   Twice a term |
| 1. **Which materials do you frequently use for construction play?**   LEGO  Big blocks  Duplo blocks (2-4 years)  Small LEGO (4-5 years)  Motor |
| 1. **How do the available construction materials for the indoor and outdoor constructions differ?**   For the outdoor construction materials: Waist material and more open ended |
| 1. **What requirements do you value as important in a construction play environment? Please motivate your answer.**   Enough space  Small number of children playing at a station  A mix of different materials |
| 1. **How much time do you think the children should play with construction materials during a normal school day?**   Very important  1 hour for the whole day |
| 1. **What do you think are the benefits or advantages of construction play?**   Fine motor play  Imagination play  Group work – The children learn to share  Cognitive development |
| 1. **In your opinion what are the disadvantages of construction play?**   None |
| 1. **How do you think you can address the disadvantages of construction play?**   The teachers feels there is no disadvantages to address at their school |
| 1. **Do you use construction play to enhance problem solving skills in young children? Please explain.**   Yes – The teachers uses different zoo animals for problem solving during construction play.  The children have to construct different enclosures for all the animals |
| 1. **Do both the boys and girls equally make use of the construction materials? If not, how do they differ in play?**   Yes – Both boys and girls equally make use of the construction toys |
| 1. **How do you think construction play benefits a child’s problem-solving abilities?**   The children have to put their scientific view on things when they are busy constructing |
| 1. **When your class is engaged in construction play, do they make use of any toys or materials and if so, what are those and how do they do this?**   Yes – Small family figures  Dinosaurs  Small toys |
| 1. **Percentagewise how much time do the children prefer to play with construction materials compared to other toys?**   60% |
| 1. **What type of constructions do the children build when they engage in construction play? Do you have evidence of any constructions?**   The teacher does not allow the children to build any guns  Houses  Helicopters  Superhero’s (4-5 years)  Things they see on TV programs |
| 1. **Does it sometimes happen that these constructions are being built over the course of a few days? If so, please provide an example.**   The constructions usually gets broken down  Sometimes the constructions are kept until the parents comes and fetches them |
| 1. **Do the children engage in group construction play activities or do they prefer to build their own constructions?**   Mainly group construction play |

**Thank you very much for your willingness to share your time, knowledge, and expertise with me.**

**Is there anything else you would like to share?**

Magnetic constructions

There is a LEGO club, junior builder, that comes to the school. They have a set program that they do with all the children.

**Addendum B:**

**Structured Narratives:**

**School code: S1**

**Please write a 150-word story about your own experiences with construction play as a child:**

**A few things to keep in mind when writing your narrative:**

* What is your earliest memory of construction play?
* Did you have your own construction toys (blocks, big or small LEGO) growing up and what were they?
* Did you enjoy construction play as a child? (Please explain why or why not)
* What constructions did you build as a child?
* Did you combine construction play with fantasy play? (Please explain why or why not)
* When building constructions would you make use of open-ended materials? When you were young or in your learning environment now (Please provide examples)
* If you have a photograph of yourself engaging in construction play, please will you provide a copy of the image?

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**Addendum C:**

**Observation checklist of learning environment:**

**School code: S1**

**Scale: 1 – None**

**2 – Partial**

**3 – Almost fully**

**4 – Fully**

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| **Checklist:** | **Scale:** | **Comments:** |
| 1. Does the school’s learning environment for 4 – 5-year-olds have a dedicated construction play area? | |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** | **3** X | **4** | | Every class has their own construction area |
| 1. Where does the construction play take place? (Indoors or outside?) | |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** | **3** X | **4** | | Indoors |
| 1. What materials does the construction play area have?   (Tick the various options)   * Wooden blocks * Large LEGO blocks * Small LEGO blocks * Boxes * Open-ended materials * Other | |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** | **3** | **4** X |  |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** | **3** | **4** X |  |  |  |  |  | | --- | --- | --- | --- | | **1** X | **2** | **3** | **4** |  |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** | **3** | **4** X |  |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** | **3** X | **4** | | Name the open-ended materials:  Toys  Dinosaurs  Toy animals  Trains sets  Toy cars |
| 1. Where are the construction materials stored? | |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** X | **3** | **4** | | In the classroom in different containers |
| 1. How accessible is the materials to the children? | |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** X | **3** | **4** | | Most of the materials are accessible, but some are stored high on shelves |
| 1. Do the children know where everything is? | |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** | **3** X | **4** | | Yes, the older children know where all the toys are |
| 1. Do boys and girls take part in construction play? | |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** | **3** | **4** X | | Both engage in group and individual play |
| 1. How often do the children get the opportunity to play with the construction materials? | |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** | **3** | **4** X | | Every day |
| 1. How does the teacher promote construction play? | |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** | **3** X | **4** | | Yes, the children have set construction periods a day and external people coming in |
| 1. What stage of construction play are the observed group of children engaging in? | |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** | **3** X | **4** | | Stage 1: Carry, move, hold, pile, knock down  X  Pile the boxes  Stage 2: Vertically and horizontally X  Stage 3: Enclosures appear  **Stage 4:** Bridging begins X  **Stage 5:** Patterns begin  X  **Stage 6:** Begins with dramatic play X  Pack the dinosaurs in the boxes  **Stage 7:** Symbolise real life structures X |
| 1. Does the stage of construction play cohere with the age of the children? | |  |  |  |  | | --- | --- | --- | --- | | **1** | **2** | **3** X | **4** | | Yes – Bridging, patterns and real-life structures occurred |
| 1. Does problem-solving occur during construction play? | |  |  |  |  | | --- | --- | --- | --- | | **1** | **2**X | **3** | **4** | | 1. Understand:   Understood how the blocks worked.   1. Plan:   Plan structures and replan when they fall over.   1. Carry out/ act:   One girl was very driven and build a big construction.   1. Check:   She checked the construction by building higher and if it fell redoing it by trying something different. |
| 1. Additional observation |  | Prefer the wooden blocks.  Do not really like the open-ended materials.  Do not use the LEGO.  Later they discovered some of the open-ended materials and started putting the toys in the boxes. |

**Addendum D:**

**Play observation of children with construction and play resources:**

**School code: S1**

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| **Date and time:** | **Situation:** | **Participants:** | **Action Observed:** | **Reflection:** |
| 11/02/2021 | **Is construction play taking place indoors or outside:**  Indoor in the classroom | **Number of children, girls and boys taking part in construction play:**  4 - Children  2 – Girls  2 – Boys  **Teacher interaction towards children:**  Teacher is an observer, but very interested.  **Teacher’s general attitude towards this form of play:**  Teacher has a positive attitude. | **Type of construction play:**   * X **Box play** * X **Block play** * X **Big LEGO play** * **Small LEGO play** * X **Open-ended material play**   **Materials and resources used:**  Boxes  Wooden blocks  Toy animals  Open-ended materials  Big LEGO | The teacher was very open to the experience.  The children preferred the wooden blocks and started playing with them and the toy animals.  They did not like playing with the LEGO or some of the open-ended materials.  Later on, they started playing with the boxes. |

**Addendum E:**

**Polya’s problem-solving techniques:**

**School code: S1**

**Do the children make use of Polya’s problem-solving techniques when engaging in construction play activities:**

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| **Understand:**  The children understood the problem that was set “they had to build a house to keep the dog dry from the rain”.  One girl did her own thing and continued building her own constructions.  One boy rather wanted to build a car and not a house. | **Plan:**  The children got distracted a lot.  They tried out different boxes to see what works the best.  Varies from group play to individual play.  One boy took the rapper of the water bottle to make a TV for the dog in his new house. |
| **Carry out/ Act:**  The boys started playing with the boxes and pretending they are cars.  The children rather wanted to play with the boxed than build a house for the dog.  One boy ended up crawling into a box.  One girl continued with her own construction and never even tried to build a house. | **Check:**  None of the children checked their constructions.  In the end there was no construction build to solve the problem. |

**Addendum F:**

**Teacher’s personal information:**

**School code: S1**

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| **Teacher’s age:** | 67 years |
| **Teacher’s years of teaching experience:** | 47 years |
| **Teacher’s home language:** | English |
| **Teacher’s qualifications and training:** | BE.d and early education |
| **Schools language of teaching and learning:** | English |