Inquiry & Play-Based Learning is the Way

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As outlined in the Full Day Learning Program (2011):

"Effective Full-Day Early Learning-Kindergarten classrooms make use of play and embed opportunities for learning through play in the physical environment and play activities."

Furthermore:

"Play nourishes every aspect of children's development - it forms the foundation of intellectual, social, physical and emotional skills necessary for success in school and life. Play 'paves the way for learning' ."

This presentation aims to explain how play is fundamental to a child’s complete development and learning in the kindergarten program. We will firstly examine the various ways children learn, followed by an analysis of what play is and what it means to children. Examples of different types of play activities precede this. We then consider how the organization of the kindergarten classroom is important for the success of play-based learning, concluding with examples of how a day in a kindergarten classroom can be organized so as to support play-based learning.
Every child is a unique individual who comes to school with diverse levels of knowledge about how the world works. According to current research, these children have at least one thing in common; that is how they best learn.
Kindergarten children learn through a variety of approaches. They include:

- through inquiry
- through real-life contexts
- through exploration
- through explicit instruction

With the exception of the last approach, these have something in common. They rely on **play** as the way to help children reach their learning goals.
Learning through inquiry

“Tell me and I forget. Show me and I remember. Involve me and I understand.”
– Chinese proverb

* Inquiry is a natural process that begins at birth.
* Babies will observe faces, grasp at objects and turn their heads at the sound of familiar voices.
* As children develop, they continue to form a lot of their understanding of the world through the process of inquiry.
* Play is a vital part of learning through inquiry because “...hands-on, inquiry based learning experiences...foster exploration, problem solving, discovery and dramatization.” (The Institute for Education Leadership, 2012)
Learning through real-life contexts

- Young children gain much knowledge through active learning.
- Active learning uses real-life situations to engage and challenges children’s thinking.
- Examples of real-life learning contexts including raising a butterfly from a chrysalis and growing a plant from seed.
- Children often dramatize real-life situations during play.
Play and exploration are closely connected.

Children learn by exploring their environment, whether they are at home, in school, at the park, inside or outside.

A child who learns through exploration will experience intelligence, social, emotional and physical growth. (Early Childhood Learning, n.d)
Current research does not focus on explicit instruction as a sole means of teaching young children. Rather, it should be used with co-creating, bridging and coaching. (Ministry of Education, 2010-2011)

Some psychological research does indicate that teacher instruction is the best method to teach young children phonics and phoneme awareness. (Foorman, Francis, Fletcher, Schatschneider, and Mehta, 1998)
What is play?

- Play is the natural and best way for children to learn as they investigate themselves and observe others at play and work. It is also known as ‘free play’ or ‘spontaneous play’.

- Play:
  - can happen in situation where there is minimum adult supervision
  - is unstructured
  - has more of an impact than the adult supervised activities
  - is self-motivated and natural
  - results in the development of the brain, stress coping mechanism, creativity and self confidence.

“When children are fully engaged in their play, their activity and learning is integrated across developmental domains. They seek out challenges that can be accomplished... through play, children learn trust, empathy and social skills.”

(Pascal, Every Child. pp. 8.9)
When children get the opportunity to play, they also get the opportunity to learn. During play they:

- Expand their expressive language proficiency
- Develop number sense
- Develop creativity through art activities
- Develop coordination
- Develop strong body through fine and gross motor skills
Play and socio-emotional development

* Social development includes children’s growing abilities to empathize and get along with others. Emotional development nurtures children’s advancement of self-concept, self-reliance and self-regulation by creating a warm and response environment.

Image from:
Children need multiple opportunities for meaningful play in a variety of settings and environments. These opportunities:

- Increase their awareness in activities
- Foster respect for individual differences
- Develop an understanding of the concepts of equality, fairness and tolerance
- Capacity to understand and express emotions to others
- Develop a positive sense of themselves
- Acquire self-confidence and become more receptive to relate to others
- Become successful learners in life
- Manage their stress and frustration more easily
Play and physical development

* Exploration, both indoors and outdoors, helps children build and strengthen brain pathways.
* Playing forms a brain with greater flexibility and gives students a higher potential for learning later in life.
* Outdoor play among children makes them happier, healthier, and stronger.
* When children play, their bodies become healthy, active and energetic.

Images from: www.momscleanairforce.org
Children that play outdoors:

- develop stronger immune systems and tend to have lower stress levels compared to children that do not engage in outdoor play
- have a higher level of respect for themselves as well as for nature
- are less likely to become obese if they engage in regular physical activity
- are able to test their strengths externally and internally by exploring questions such as: How high can I climb? Why does my heart pound when I run? Am I brave enough to jump from this platform?

Images from: www.lakelandgov.net
Psychologist Edward Fisher found that “socio-dramatic play” — what happens when kids pretend together — “results in improved performances in both cognitive-linguistic and social affective domains.”

Engaging in rich complex play helps children develop self-control.

Children that are playing are more likely to test their personal theories and correct them when needed.

Oral language that is used in complex play is has a high correlation to the development of thinking skills.
Children develop conversational skills such as turn taking and perspective taking when playing.

Play develops children’s problem solving skills such as persuasion, negotiation, compromise and cooperation.

Children love to pretend that they are actors, directors, narrators and the audience when playing.

Children learn new words when switching from one role to the next when they are engaged in pretend play.
Play and numeracy development

* When children are engaged in play they become self-motivated in discovering different shapes, patterns, measurements and numbers.
* Children often explore mathematical ideas when they are engaged in free play.
* Young children ask and think about deep questions, try to find solutions, use basic mathematics to solve real problems, and play using mathematics.
When children use blocks to build and play with water they learn the fundamentals of logical mathematic thinking, scientific reading and cognitive problem solving.

Block play is beneficial in child development because it promotes the knowledge of space order, number, classification, measurement, shape and symmetry understandings.

Children learn about volume as they transfer water from one bucket to another, make an assessment about the temperature when they dress to go outside, explore weight differences when they throw a basketball versus a baseball, and measure time when they count down to a holiday.
Role of the teacher in play-based learning

“There should be a balance between teacher-initiated and child-initiated activities – times when a member of the team guides the children’s learning and times when children are given opportunities to choose activities to demonstrate their knowledge.”

(FDEL-K, p. 8)

* A teacher needs to be actively involved with the children in the classroom. In a classroom setting, a teacher must:
  * Be an observer
  * Participate in the activities with the children
  * Be able to advise the children

* A teacher should be there to observe the children playing. However, there will be times that the teacher must interfere.
  * Suggest role changes
  * Provide different vocabulary words related to the activity
  * Guide the learning process in a different direction
  * Avoid inappropriate forms of play, where the children are getting too loud and interfering with other children.

Image from:
Learning centres

“When children are manipulating objects, acting out roles, or experimenting with various materials, they are engaged in learning through play.”
(p. 10 FDK Curriculum)

* Learning centres are areas within the classroom where children can focus, explore, and play with other students.

* Centres play an important role in inquiry based learning. When teachers and/or ECE’s observe a child, they can extend the child’s curiosity and their “play” into a world of learning. Encouraging active learning not only creates a rich learning experience but it also deepens their understanding of the content in a way that meets their needs and their developmental stage.
A wide variety of resources in the classroom also fosters inquiry-based learning. At this stage, children are already eager to learn and possess an innate curiosity.

Individual kindergarten classrooms will vary, and curriculum will vary according to the interests and backgrounds of the children. But all developmentally appropriate kindergarten classrooms will have one thing in common:

_The focus is on the development of the child as a whole_
Student-directed centers in the classroom develop young minds. Children should have access to different activities throughout the day:

- block building and Legos
- pretend play and dress-up materials
- picture books
- paints and other art supplies
- table toys such pegboards and puzzles
- cars, trains, trucks and roads or railways
- dolls and puppets
- board games such as Connect 4 or Guess Who?
- playing cards

Teachers can easily stock their classroom with all these activities and toys. Many of these toys can be found at yard sales or dollar stores.

Additional toys and resources and be found at garage sales and dollar stores. Pinterest.com is an online resource for ideas to create unique centres.

Ask for donations from parents to help complete your centres.
Examples of learning centres

* **Restaurant centre**
  * Use pretend food, plastic plates, forks, etc. Children can create their own menus. The bill is a great opportunity to teach children about numbers. Ask for donations of clean food containers and materials from local fast food restaurants.

* **House centre**
  * Use a playhouse stocked with linens and dolls. Toy food can also be used in the playhouse in the kitchen with toy pots and pans and colanders.
  * Have men’s and women’s clothing (shirts, ties, dresses) and shoes for dress-up
* **Post office**
  * Have papers, pens, and envelopes available. Use ink stamps or stickers for pretend stamps. Create a mailbox for students to mail letters to friends. Children can take turns being a mail delivery person. Have a mail bag and uniform for them to carry the mail.

* **Doctor’s office**
  * Have toy medical materials such as a stethoscope, thermometer, blood pressure band, and a tensor bandage.

* **Grocery store**
  * Use pretend foods, toy shopping carts, reusable grocery bags, a cash register, and plastic money.

* **Business office**
  * Have telephone books, office supplies, and a pretend telephone or computer

* **Theatre**
  * Use a puppet theater (which can be made from PVC pipes and a curtain), pretend popcorn and soda containers, and use pillows for theatre seating.
**Writing materials for centres**

- Collect letterhead stationery, blank forms, or any other type of business paper.
- Have coloured pens, markers, pencils, and creative scissors. Clipboards are also great resources that can be added to the classroom.
- With these items students will pretend to fill out prescriptions at the doctor’s office, write down a customer’s order at a restaurant, send letters to friends at a post office, or write a traffic ticket. They can make price tags, labels, traffic signs, pretend money, and store signs among other things that they see in the real world. These simple resources encourage children to write.
Math materials for centres

- Make any materials used in math lessons available for students to explore and play with during play times.
- For example, have measuring cups in the sand/rice box, measuring tapes for construction workers, and rulers at the building block centres. Put money manipulatives in cash registers for students to use at their restaurants and stores.
What does a Kindergarten classroom look like?

* **Designated Areas**
  Children should be provided with copious amounts of time and plenty of space to work in learning centres.

Examples of Learning Centres:
* The book corner
* Writing, word-study, and listening centres
* The block centre
* The dramatic play and puppet centre
* The sand and water tables
* The science and technology & discovery centres
* The visual arts centre

*The dramatic centre changes frequently, appealing to the interest of the students*

(Ministry of Education, 2010)
Image from ETFO, 2010
Math centre with dividers and small shelves.

Image from: http://earlylearningcentral.ca/?p=25
Open spaces for music & movement activities

Image from: http://www.thev3h.com/wp-content/uploads/2010/07/all_day_kindergarten.jpg
**Organization, Space, & Materials**

- Related centres and materials should be group together
- Visual displays are at the eye level of the students
- Open area for music and movement activities
- Small group area should be defined, small shelves, dividers or book cases could be used
- Quiet areas should be allotted for quiet centres with rest areas
- Bins should be labeled with pictures and written labels
- Meaningful and inclusive literacy and numeracy materials should be placed throughout the classroom

*(Ministry of Education, 2010)*

*Image from ETFO, 2010*

**Bins are labeled by the children for organization.**
**The Outdoors**

- The outdoor learning environments include but are not limited to:
  - The school yard
  - Fields and trails in the community
- Children should be encouraged to observe, explore and appreciate their natural environment
- Bring the outdoors inside by having a nature corner where students can continue to explore

*(Ministry of Education, 2010)*

Image from ETFO, 2010

*Exploring the outdoors.*
What does a day in kindergarten look like?

* Full day Kindergarten programs are most effective with use of a consistent framework, daily routines, and schedules that include:
  * well-defined time periods, from the beginning of the school day until the end
  * a balance of active and quiet times
  * developmentally appropriate length of time in large-group, teacher-led activities
  * individual and small-group play
  * daily outdoor play
  * approximately two hours for self-selected individual and group activities
  * sufficient time for transitions and routines, such as clean up.

(British Columbia Ministry of Education, 2010)
The following schedule is an example for a Full Day Kindergarten program. This classroom follows a balanced day, which means that they have two larger nutrition breaks immediately followed by an outdoor recess. The day is broken up into three approximately equal time segments.

(British Columbia Ministry of Education, 2010)
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity Description</th>
<th>Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:45</td>
<td>Welcome: children get ready for class</td>
<td></td>
</tr>
<tr>
<td>8:55</td>
<td>Shared book time (parents are invited in to read with their child if they wish)</td>
<td>Shared book time at the beginning of the day allows for transition between home and school for children and parents, and allows time for parent-teacher conversation.</td>
</tr>
<tr>
<td>9:10</td>
<td>Opening circle time: Hello song, calendar, weather, morning message; singing, finger plays, or teacher reads big books or story or poetry; planning.</td>
<td>Opening circle time is important for classroom community building. Children think about and share their plans before moving to individual and small group activities at learning centres.</td>
</tr>
<tr>
<td>9:35</td>
<td>Healthy snack time</td>
<td>Children choose a healthy fruit or vegetable snack. It is important to offer a snack time early in the morning as many students have not eaten since 7:00 AM. Some schools offer morning snack programs.</td>
</tr>
<tr>
<td>9:45</td>
<td>Centre time</td>
<td>Centre time provides opportunities for children to learn and meet Learning Outcomes through play.</td>
</tr>
<tr>
<td>10:30</td>
<td>Review, cleanup and washroom break</td>
<td>Review time provides opportunities for children to discuss what they did and learned during centre.</td>
</tr>
<tr>
<td>10:40</td>
<td>First nutrition break - children eat lunch in classroom, often supervised by older students and the ECE. Lunch is followed by outdoor physical activity.</td>
<td>Lunch provides opportunities for promoting social behaviour and healthy habits. Regular physical activity is essential for learning and wellbeing and to meet daily physical activity requirements.</td>
</tr>
<tr>
<td>Time</td>
<td>Activity Description</td>
<td>Commentary</td>
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</tr>
<tr>
<td>11:25</td>
<td>Transition from break (washrooms, etc)</td>
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</tr>
<tr>
<td>11:30</td>
<td>Quiet drawing time with music (crayons and paper or drawing journals set out before children come back from lunch)</td>
<td>Quiet drawing time helps children “wind down” after lunchtime play; the music promotes attentive relaxation. Drawing helps children express and generate ideas.</td>
</tr>
<tr>
<td>11:50</td>
<td>Story/Discussion</td>
<td>Stories and discussions foster children’s language and literacy development and knowledge of the world. Discussions are focussed on topics of study.</td>
</tr>
<tr>
<td>12:00</td>
<td>Math stations: (at least 4) — children rotate after 10-15 minutes; teacher works with children to develop math skills at the different stations</td>
<td>Math stations promote mathematics and numeracy learning through hands-on play, exploration, and manipulation. Activities are designed to relate to Prescribed Learning Outcomes.</td>
</tr>
<tr>
<td>1:00</td>
<td>Group time: singing or sharing drawing journals, or big book</td>
<td>Group time contributes to classroom community building and language development. It also acts a transition.</td>
</tr>
<tr>
<td>1:10</td>
<td>Second nutrition break, followed by outdoor physical activity.</td>
<td>Outdoor play and snacks are needed in the morning and afternoon in full day Kindergarten</td>
</tr>
<tr>
<td>1:55</td>
<td>Transition from break (washrooms, etc)</td>
<td></td>
</tr>
<tr>
<td>2:05</td>
<td>Centre time or hands-on science/art education/literacy activities</td>
<td>Hands-on science/art education/literacy activities address Learning Outcomes in developmentally appropriate ways. Connect with activities from the morning.</td>
</tr>
<tr>
<td>2:45</td>
<td>Tidy up and Group Reflection</td>
<td>Tidying up is part of social responsibility. Group reflection is a transition time that encourages children to reflect on their learning and bring closure to this part the day.</td>
</tr>
<tr>
<td>3:00</td>
<td>Children go home or transition to after school activities</td>
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</tbody>
</table>
We hope that the information and ideas presented here will assist Kindergarten teachers with creating a positive and child-centred classroom environment.

Our research supports the use of play in a daily schedule, both indoors and outdoors.

We hope that Kindergarten teachers recognize and understand the importance of including play and designing learning centres in their program planning.
References


