Play-based learning

Moderate impact for very low cost, based on very limited evidence.

Play can be broadly defined as an enjoyable activity that is pursued for pleasure or its own sake. It can be contrasted with activities that have explicitly defined learning outcomes, or games, which are likely to have clearer rules or a competitive element. Play-based activities might be solitary or social, and involve a combination of cognitive and physical elements. Activities might be adult-guided, for example through the suggestion of a scenario for pretend play. In other cases, activities will be largely child-initiated (“free-play”), with adult involvement focused on the provision of props, or the design and management of the learning environment.

Some examples of play-based learning may overlap with Self-regulation approaches or Social and emotional learning strategies. Some play-based interventions have been developed for children with social, emotional or behavioural problems. These programmes explicitly aim to improve social and cognitive skills by teaching children how to play.

How effective is it?
The evidence base for play-based learning is weak and inconsistent, but does indicate a positive relationship between play and early learning outcomes. On average, studies of play that include a quantitative component suggest that play-based learning approaches improve learning outcomes by approximately five additional months. However, there is substantial variation in effects, suggesting that additional, high-quality research is needed in this area.

Positive outcomes have been identified for a range of early learning outcomes including vocabulary, reasoning and early numeracy. Evidence related to early language and problem solving outcomes is mixed. Play-based therapy can have substantial benefits for children who are identified as having social, emotional, or educational difficulties. There is no clear evidence whether play-based learning has a differential positive benefit on children from low-income families.

How secure is the evidence?
There is currently very limited evidence related to play-based learning in the early years. Though one systematic has been conducted, the underpinning studies are relatively low quality, and frequently do not include quantitative impact measures. The majority of studies have been conducted in the United States, and the evidence base is relatively dated, including a number of studies from the 1990s.

Where studies have been conducted, for example, in a randomised controlled trial assessing the impact of the Tools of the Mind curriculum, play is often only one component of a broader programme, making it challenging to isolate its impact. It is important to recognise the methodological challenges of evaluating approaches that are part of multi-component interventions and that are, in many cases, unstructured by definition. However, this is an important area for further research and more can be done to understand the impacts of various play-based approaches.

What are the costs?
Most early years settings are equipped with indoor and outdoor play facilities, so the additional costs associated with play-based learning are likely to be very low. Specific additional resources and materials may be needed, such as those required for dramatic play or play to support early literacy, and training for staff to develop their understanding of how to develop children’s learning from play activities is likely to be beneficial. This includes training to support decisions about when not to intervene during child-initiated play.
Play-based learning: What should I consider?

Before you implement this strategy in your learning environment, consider the following:

1. How does the way you organise equipment in the learning environment support active learning, play and exploration? For example, can children access resources independently?
2. How effectively does your environment encourage and support children to develop their language, literacy and mathematical understanding through play?
3. How does the balance between child-initiated play and more structured activities meet the learning needs of your children?
4. How confident are your staff in effectively supporting learning through child-initiated play?
5. How will you evaluate the impact of any new play-based approaches you introduce?
Technical Appendix

Definition

The definition of ‘play’ and its relationship with the curriculum, the role of adults and the children themselves varies considerably. Adult-guided activities may involve a ‘playful’ element and child-initiated activities are structured by their environment and experiences and may involve adult interaction.

Play can perhaps be broadly defined as an enjoyable activity that is pursued for pleasure or its own sake. It is likely to be intrinsically motivated. It can be contrasted with activities that have explicitly defined learning outcomes, or games, which are likely to have clearer rules or a competitive element.

Play-based activities might be solitary or social, and involve a combination of cognitive and physical elements. Games, of course, may be chosen as play. Activities might be adult-guided, for example through the suggestion of a scenario for pretend play. In other cases, activities will be largely child-initiated (“free-play”), with adult involvement focused on the provision of props, or the design and management of the learning environment (see Physical environment).

Some examples of play-based learning may overlap with Self-regulation approaches or Social and emotional learning strategies. For children with social, emotional or behavioural problems, some play-based interventions have been developed. These programmes explicitly aim to improve social and cognitive skills by teaching children how to play.

Search Terms: pretend play; play-based activities; play-literacy approach/interventions; guided play activities

Evidence Rating

The lack of consensus about different kinds of play and the role of adults and how activities are structured make it difficult to compare findings across different interventions. Play and guided play activities are usually included in most early years interventions, but it is difficult to estimate the impact of the play component.

There is one systematic review (which does not pool effect sizes) of limited quality. Overall the evidence does not provide sufficient evidence for specific guidance for practice, though the importance of language development; interaction and talk appear to be important. Overall, the evidence appears to be very limited.

Additional Cost Information

Most early years settings are equipped with indoor and outdoor play facilities, so the additional cost of play-based interventions is low. Specific additional resources and materials may be needed, such as for dramatic play, and training for staff in developing their understanding of how to develop children’s learning from play activities is likely to be beneficial.
References

1 Barnett, W. S., Jung, K., Yarosz, D. J., Thomas, J., Hornbeck, A., Steckuk, R., & Burns, S.
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7 Marcon, R. A.
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   Improving preliteracy and pre-math skills of Head Start children with classroom computer games

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10 Roskos, K., & Christie, J.
    Examining the play–literacy interface: a critical review and future directions
Summary of effects

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<th>Meta-analyses</th>
<th>Effect size</th>
<th>FSM effect size</th>
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Single Studies

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Effect size (weighted mean) 0.43

The right hand column provides detail on the specific outcome measures or, if in brackets, details of the intervention or control group.

Meta-analyses abstracts


In this literature review, we examined 30 years of play-literacy inquiry through a quantitative lens in order to identify, assemble and summarize studies of sufficient methodological strength to form a corpus of research that encourages meta-analytic thinking. First, a multi-phase search of the literature was conducted yielding 192 studies that addressed pretend play and early literacy variables. Subsequent screening resulted in a total of 16 studies that met inclusion criteria, constituting a corpus of primary research that quantitatively measured play-literacy relationships in early childhood educational settings serving children ages 3—7. Next, several content analyses were used to describe and organize the corpus as a resource for meta-analytic thinking. The first round of analysis focused on developing a survey matrix that organized the particulars of individual studies into categories of information conducive to a meta-analytic approach. The second round probed for the theory of change used to explain the relations between pretend play interventions and early literacy skills. The third round entailed creating an effect size type matrix. Notably, most of the corpus studies showed modest to large effect sizes on a selected set of dependent variables which points to the potential of meta-analysis for better understanding the practical significance of the play-literacy relationship in promoting the acquisition of early literacy skills.