Emerging Professional
Let the Games Begin: Why Structured and Unstructured Play Should be Utilized in the Classroom

Carleigh Slater[a]

[a]University of Edinburgh

Carleigh Slater is a doctoral Education student at the University of Edinburgh. She received her master's in teaching from Seattle Pacific University and taught as a primary teacher in the Edmonds School District in Washington State. Her research currently focuses on the universities' role in preparing educators as safe guarders and child protection policy. Personal interest also includes students' perception and opinions of education and inclusive holistic teaching styles.

Abstract

The role of school has drastically changed over the past several decades. Standards and added subjects lead to a challenging and narrow view of education. The consequences of added pressure undermine the role of play throughout K-12 school systems. Research studies continue to describe play as vital for the success of children's development and subsequent academic achievement, not only for younger children, but older children as well. This article explores how play and gamification utilized within all classrooms, including intermediate, middle school and high school classrooms, can provide a comprehensive approach to support both students' academic content understanding and social and emotional development. Play-based and game-based learning reinforces intrinsic motivators which lead to children's lifelong learning mindset and allows for students to take a more participatory role in their education.

Introduction

Research demonstrates play-based learning promotes and improves learning more than direct instruction for elementary students (Wickstrom et al., 2019). In addition to improving social skills, play-based education indicates a positive influence on language abilities and problem-solving skills (Ahmad et al., 2016). While these studies represent the pre-primary and primary grade levels, many arguments remain to support the need for pedagogical approaches for play-based learning in the upper educational classroom as well.

Educators and administrators argue against play-based learning for upper primary, intermediate, and secondary classrooms because of the amount of curriculum and standards required to be taught during a school day, and that play-based learning would not be an efficient use of limited

instructional time. Most facets in the educational system view direct instruction as an easier and more concrete way to educate students, especially those in the upper grades or with students who need intensive support based on grade-level benchmarks. Direct instruction is scripted, holds fewer variables for error, and is controlled by the teacher rather than the students, making direct instruction a preferred approach. Through a review of the research, consideration of applicable theories, and an examination of relevant examples, the current discussion provides a rationale for utilizing play-based and game-based learning experiences in the intermediate and higher school grades. The goal for this discussion is to persuade educators and administrators to incorporate more play-based experiences, not only for children's learning, but also as a means for authentic retrieval practices to assess learning instead of implementing paper/pencil assessments.

Direct Instruction Mindset

With the focus departing from play beginning in second grade and all but disappearing by sixth grade, this issue of incorporating play in learning becomes an increasingly poignant topic among teachers and district leaders. The essentialist mindset of American school systems indicates a preference students receive and retrieve information via direct instruction and lecture (Rosenshine, 2008). Direct instruction and a lecture format suggest more control and consequently, provide the capacity to increase content in a particular class period (Rosenshine, 2008). The many interpretations of the meaning of direct instruction could be argued extensively; however, it is agreed upon that this instructional framework does provide an outline for teachers to guide and support their students in an explicit manner (Rosenshine, 2008). While this mindset systemically prevails, some educators continue to challenge and confront direct instruction with a rationale for unstructured play and structured gamification.

Importance of Free Play

The rise in mental health issues in children between eight through twelve years can be marked by the limitations of play found in the classroom and in general (Gray, 2011). Play, referred to here, is the fostering of the creative imagination or free thought that is often allowed in primary grades and with preprimary-aged children (Gray, 2011). While data show the need for free play and teaching social-emotional learning in the primary school day, minimal attention for older students, who suffer socially and emotionally during a critical intersection of their lives, continues. Importantly, older children, navigating and developing into the individuals they want to become, need as well to be supported by allowing them to still act as children and receive time in their school day to play freely.

Across the country, educators continue struggling with increased content, regulations, and evolving expectations. Past educators, teaching core content, represented expertise in the areas of their endorsements. Currently, educators teach a variety of subjects (or sub-subjects). This pressure on educators is daunting and debilitating for many. In typical passive, direct, and prescriptive instruction settings, teachers remain challenged to reach their students in engaging ways as well as to maintain quality peer interaction and nurture proactive social norms. While many teachers realize direct instruction is not the most effective way to engage students; planning and maintaining interactive lessons become formidable. This current discussion

provide**s** stakeholders with an opportunity to reimagine play as a means to differentiate learning, prioritize standards, and support the social-emotional needs of all students.

Play-Based Learning

Play-based learning refers to the concept that children learn and grow to understand the world around them through social experiences and active unstructured exploration. This type of learning can be solitary or social and can represent many forms. Play-based learning is commonly associated with young children in the pre-primary to primary years. However, an understanding of play-based learning and the potential benefit are becoming more widely accepted as reflected through different forms as children age into intermediate and higher-level schooling.

The origins of play-based learning can be traced significantly back to the works of Froebel (1887) and Piaget (1971). Both theorists advocate for the child's right to self-discovery (Curtis, 2021). Froebel, founder of the kindergarten, believed that children's understanding of the world is developed through their personal experiences (Curtis, 2021; Froebel, 1887). Developmental goals become realized through play when time is provided to young children to pursue their own self-interests (Curtis, 2021). According to Froebel (1887), an individual's potential originates through a child's range of interactions with people and materials. With extended exposure and greater freedom to explore, children realize enriched learning and enhanced development (Curtis, 2021).

The principles posited by Jean Piaget (1971) remain significant in the debate regarding play (Babakr et al., 2019). Piaget's research describing play led to his theory of the four stages of development: sensorimotor (birth to two years), pre-operational (two to seven years), concrete operational (seven to 11 years) and formal operational (12 years and beyond) (Babakr et al., 2019). Analogous to Froebel's argument for free play, Piaget supported young children's need for both sensory and unstructured play (Ahmad et al., 2016). However, significant to the current discussion, Piaget furthered the importance of the idea of playing into a more concrete and advanced state with his final two phases for advancement of learning (Gardner, 1993). In the final stages of development, Piaget (Ahmad et al., 2016; Piaget & Inhelder, 1969) argues that in the concrete operational and formal operational stages of development, learning departs from free exploration and, instead, bases understanding on past experiences learned in the sensory and pre-operational stages (Ahmad et al., 2016; Piaget & Inhelder, 1969). In these final stages, learning becomes more dynamic and consistent (Ahmad et al., 2016; McLeod, 2018). The individual child/player draws upon past experiences and knowledge and begins to synthesize input into output and generates thought (Ahmad et al., 2016). It is in these final stages of development that children and adults employ their ability to access knowledge, skills, and concepts and apply them suitably in new situations (Gardner, 1993; McLeod, 2018).

If educators consider the research of Froebel and Piaget important for their own teaching and, consequently, for children's learning, why is it then some teachers assume that suddenly at the age of approximately eight years old, children achieve peak development and knowledge and no longer require instructional strategies and interactive experiences through free play? Why does the instruction shift drastically away from exploration and unstructured curiosity to that of direct

instruction? Is it that the benefits of play no longer exist or is it that managing this type of interactive learning is overly challenging at this age? Through a study of Froebel and Piaget, an understanding clearly demonstrates that children and adults alike grow through play; play provides beneficial skill development that left unnurtured or ignored could be detrimental both cognitively and socially (Gray, 2011).

If indeed, educators want to employ play into their classrooms, it is then beneficial to provide examples of such strategies. To begin to understand the overall ways in which to instruct and guide students of all ages through free play and game-based learning, it is critical to start with a reframed mindset of scaffolding and the meaning therein.

Reframing Play as a Scaffold

Scaffolding and differentiating for students become the supports in place to both initially help students learn the material and as well retain the knowledge gained (Rosenshine, 2008). Typically, scaffolding is a mixture of strategies and consists of traditional methods such as note taking, mnemonic devices and songs, pre-teaching, and visual aids like graphic organizers (Agarwal & Bain, 2019).

Traditionally, play is not included in the mixture of scaffolding strategies; yet, play is another means to scaffold. Many teachers use a variety of scaffolding techniques in their teaching, but not play. However, to incorporate play into the class is as straightforward as providing any scaffold. For example, all effective instruction begins by describing each child's stage of cognitive development.

Understanding how each child learns allows a teacher to meet individual needs with appropriate materials, relevant goals, and meaningful instruction. For primary-aged students, a quick free play activity is coloring or building with blocks. For older students this may be an advanced art design, independent problem-solving project, science experiment, or a free choice writing activity. These activities allow children to explore their own thoughts, play with ideas, and cement their ideas into tangible items.

Observing and/or conferring with students during free play provides teachers with insight into their understanding of the content as well as their world view. Within all phases and ages, allowing children to discover ways in which to construct their thoughts and ideas is a key component of free-play and of cognitive development (Piaget, 1971). By offering a constructive, unstructured learning environment, teachers create expectations without conformity or constraint, where students become playful with their own ideas.

Game-Based Learning

Gamification or game-based learning is the advanced play of children who represent a higher cognitive developmental stage (Kapp, 2012). In game-based learning, children evidence the stage in which they exhibit the capacity to follow directions, rules, and social norms to complete a task (Kapp, 2012). Within an understanding of play, this task does not refer to a worksheet or an essay/project; instead, as a process, it is a focused and engaged game in which the person grows,

shows, and advances his or her knowledge on a topic through individual, peer, or group game styles. This interaction provides new knowledge or involves a review of an academic skill (Kapp, 2012).

Some examples of such games include the modifications of classic games such as Chutes and Ladders, SORRY, and Jeopardy. Board games of many types can be modified to include educational content such as math problems or reading comprehension questions simply by covering game board spaces with sticky notes or printing blank paper copies that can be distributed to students. These games implement multiple standards and strategies by using a commonly known board and set of directions and can be differentiated for challenge. Not only do students engage academically, but as well socially; thereby, students advance their internalization of both moral convictions and logico-knowledge capacities (Kamii et al., 2004). Further, in order to incorporate a less prescriptive and more flexible and free-play dynamic, teachers may offer blank board game templates for older children (eight -14 years) to design/construct their own games and pass these games along to share with peers.

In order to practice retrieval, typically, game-based learning is implemented with intermediate and middle school students (8-14 years). Agarwal and Bain (2019) explain retrieval practice is the act of remembering what you previously learned. This skill is completed in many ways, but the most effective involves intentional and engaging activities that target not only assessment, but further learning. The games may support prior learning and/or retrieval practice; importantly, games may also provide opportunities for children to learn and advance their knowledge on a new topic as well (Agarwal & Bain, 2019). These topics can be an array of standards found within math, science, social studies, and other subjects. For a quality game-based learning environment, students learn as much or more than in what would be called a direct instruction model (Kapp, 2012). Additionally, working as a small group nurtures students' higher-order thinking as they collaborate to generate questions.

Games and Retrieval

Some of the most applicable ways of implementation of retrieval practice are found in the form of a game or playful activity. Educators may use some retrieval practices for remembering previous information with online platforms such as Kahoot and GimKit or pen and paper "quiz games" conducted at the beginning, middle or end of a unit or lesson. Educational content such as math facts, historical dates, or summaries of events within literature are only a few examples of what students can play to recall and/or further expand their learning when participating in retrieval activities. For example, a game comprised of planet information might include facts (How many moons circle planets in this solar system?), planet comparisons (Identify the planets with the hottest and coldest temperatures and provide the range.), and for challenge, analyses questions (How long will it take an astronaut to travel between Venus and Neptune?). Games targeting the ocean, pollution, economics, or finances will prove interesting and engaging for older students.

Importantly, the difference between a traditional assessment and the type of retrieval strategy discussed here in a "game" is all students outwardly participate and then, receive immediate feedback on their responses/interactions; therefore, the "game" not only provides immediate

feedback, but also supports students further learning in their content knowledge (Agarwal & Bain, 2019). Critically, these "game-like" quizzes are not provided for a letter or point-based grade, but as an enjoyable learning strategy. There are no consequences; this is not a test. Instead, there is student buy-in to play the game and student self-confidence improves as the capacity to experience fun during the game abounds (Agarwal & Bain, 2019).

Rationale for Implementation

Educational standards and the ways in which children learn show drastic shifts through the last 10 to 20 years (Gray, 2011). Utilizing play, free-play, or gamification, not only enhances the social environment in the classroom, but also motivates students and maintains engagement in their learning (Kapp, 2012). Recent data describing Learner-Centered Practices indicate that when students intentionally perform and apply meaning to subject matter, they can create coherent representational knowledge (McCombs, 2010). Thus, learning can be employed within a system of retrieval practices where gamification can be swiftly adapted into a daily schedule for all intermediate to high school learners and classroom settings. For example, students can play quiz-like games to retrieve or remember information on any topic of current study. Using entry tasks or exit tickets is a form of retrieval practice and can set the tone and expectations for the entire day. An entry task is any task that is given prior to new explicit instruction and is primarily used to gauge the students' understanding of previous material or a future topic. An exit ticket is a task taking place at the conclusion of instruction. At this time, the students' new levels of understanding or reflections become challenged. Both entry and exit tickets can take many forms but most consist of a brief question-answer format that interacts with the current study taking place. In traditional assessment, these tasks are quick and consist of open-ended questions or forced-choice answers. Instead of traditional assessments, games provide students with interesting, engaging, and playful alternatives. Games can be introduced at any point in the year and can be built into the daily schedule as entry and exit tasks or offered as needed for cognitive relief while still utilizing all class time.

Another key aspect introduced within Learner-Centered practice is the understanding that learners of all ages engage in different strategies and experience a range of constraints (McCombs, 2010). Learning is most effective when experiences become differentiated across focus areas and develop using physical, intellectual, and social domains (McCombs, 2010). By combining different subjects and task completion methods, students become exposed to more content in a variety of ways. Games, as a multidiscipline approach, help build metacognition and enable long-term retention. For example, students participating in a word game or song where they are clapping and following a beat can support syllable and word mapping within literacy learning. A combination of physical and verbal cues as well as melodical components solidify the learning by providing greater ease and longer retention.

Teachers' expectations evolve and change with time; contributing to this transition is an acknowledgement of the holistic needs of children and the importance of planning for students' differentiated learning (Karl, 2017). For teachers to effectively use and implement game-based or play-based learning, they will need to create resources and develop a routine that balances an individual student's learning within the curriculum and through meaningful connections (Agarwal & Bain, 2019).

Barriers to Play and Game-Based Learning
Several barriers undermining teachers' implementation of game-based or play-based learning do exist. For example, teachers do not always have the financial ability to purchase games, the time to research and create resources, or the supplies and knowledge needed to support this system of learning (Karl, 2017). In other words, teachers who may want to use play-based and game-based learning in their classrooms often find it difficult to balance time and resources (Agarwal & Bain, 2019). Recalling the earlier example describing students creating games for their peers, becomes notable. In order for a group of students to create a game, they must not only demonstrate accurate content knowledge, but will also need time and materials to develop the game.

Additionally, teachers who want to instruct through play and games may meet with difficulty if other teachers use traditional pedagogies such as tests and worksheets instead of play and games for evidence of learning (Agarwal & Bain, 2019). In the next section, examples and substitutions provide support for teachers' implementation of play-based and gamification-based learning.

Transitioning to Play-Based and Gamification-Based Learning

While game-based learning opportunities suggest a profound impact on students' intrinsic growth, there is evidence that game-playing can also initiate a positive influence on academic learning and retention as well (Agarwal & Bain, 2019). A system of game- or play-based learning can substitute as a formative assessment in monitoring students' on-going progress. Teachers employ overt and covert types of retrieval practices (finding out what students know and understand) (Agarwal & Bain, 2019). Overt retrieval practice is a deliberate pre-learning or post-learning activity that can be observed by the teacher such as a quiz or test; in contrast, covert retrieval practice is not directly observable as it is metacognitive and is not outwardly expressed (Agarwal & Bain, 2019). For example, a covert activity does not evidence any student output (i.e., written, or verbal responses); students' internal thoughts/metacognitive processes remain within each individual. This learning is an internalized mental process and not outwardly disclosed, but may serve as a stimulus for overt responses.

The more traditional style of assessment is an overt test which is when a student is simply relaying information about a certain subject by way of writing, answering multiple choice questions or verbally explaining a topic. Data demonstrates that students can learn as much from covert reflections as they would from overt responding (Smith et al., 2013). In other words, the act of thinking about the information is just as critical to learning and retention as it is to produce it outwardly. Therefore, playing a game as an individual or with peers is an example of covert learning and retrieval which represents the student's internal thinking and overt response to that thinking.

To implement play- and game-based learning into a routine that does not overwhelm the stakeholders involved (i.e., the teacher and students), it is critical to substitute retrieval practices through play or games in place of formative assessments such as a quiz. Play and game retrieval practices are simple and effective ways to solidify knowledge of students and serve as well as a formative assessment for teachers to gauge the effectiveness of student learning (Agarwal &

Bain, 2019). This process of playing takes place overtly or covertly, as pre-learning entry tasks, post-learning exit tickets, individual or group reflections, and student-teacher conferring sessions (Agarwal & Bain, 2019).

For example, instead of creating, administering, collecting, and grading formative assessments in the form of quizzes or worksheets, a teacher quickly distinguishes which students understand the material through their retrieval play and game practices. It is simpler and highly time efficient to gauge the students' understanding through a brief consultation or observation than using traditional formative assessment types.

A further advantage for this type of formative assessment, in contrast with traditional ways of monitoring student progress, is that it takes place in a low stakes' environment with a tone of inclusion and positivity (Agarwal & Bain, 2019). The positive outcomes attained from game and play-based retrieval practices afford educators knowledge and insight regarding students' learning and the effectiveness of lessons (Agarwal & Bain, 2019). Observing a quiz-like game such as Kahoot or Jeopardy quickly communicates to the teacher what areas of the subject knowledge remain lacking and additionally, what other learning gaps students may demonstrate. Consequently, students become more motivated in their learning and remain longer engaged as a participant (Agarwal & Bain, 2019).

Vannsteenkiste, Lens, and Deci (2006) describe how students with intrinsic not extrinsic motivational goals could recall and retain more information about a related topic. When students participate in low stakes, highly engaging forms of retrieval practice and Learner Centered games and play, they are more likely to feel motivated to learn because, simply put, it is fun. This intrinsic motivator lends itself to a lifelong learning mindset and allows for the student to take a more participatory role in their education.

Conclusion

The implementation of play-based and gamification learning as forms of instruction and assessment in classrooms positively supports the academic and developmental opportunities of all students, including intermediate, middle school and high school learners. It has been argued here that play, both structured and unstructured, clearly improves the learning ability and retention of content in contrast with other techniques and pedagogies.

Most teachers are knowledgeable about the research and studies conducted on play-based learning and understand the developmental positives that students show when games and play are implemented in the classroom; yet, many educators do not utilize such techniques. Lack of support remains a primary obstacle for teachers implementing play-based and gamification-based learning (Agarwal & Bain, 2019). It is time teachers receive assistance in this regard, but are also encouraged to use play-based and gamification as a tool for retrieval practice. Play and games become fun tools for helping teachers to identify student progress. Not only do play and game-based learning benefit students' covert and overt learning abilities, but efficiently supplement and substitute for traditional formative assessments as well.

Play and gamification support student development in a holistic way (Karl, 2017). Play supports physical activity as well as mental engagement. Play is a learning alternative affording a more inclusive means to engage students no matter the age. Furthermore, the teamwork associated with play and game-based learning allows students to grow in their social-emotional development and become not only adept at social cues, but also in their own perceptions of self (Ahmad et al., 2016). In a society that pressures students to be socially and academically confident, it is critical educators support and foster students' play-based learning opportunities. The benefits of intrinsic motivation provided through play and games remain vital for students' engagement and overall development in both academic and social-emotional health (McCombs, 2010). Play allows for several functions in creating and fostering healthy social and academic skills and is a key motivator for students. It follows that incorporating and implementing play- and game-based learning into the classroom and educational settings is critical and beneficial to all students in all age groups.

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