Learning Through Play in Speed School, an International Accelerated Learning Program

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Abstract. This paper documents how play serves as a foundation for learning in Speed School, an accelerated learning program of the Luminos Fund. Speed School provides three years of primary education, grades 1-3, through an intensive ten-month program for out-of- school children between the ages of eight and fourteen who have never attended or who have dropped out of school, living in rural or remote areas of Ethiopia and Liberia. Literature was reviewed using a narrative review of Speed School program evaluations conducted by the University of Sussex, and literature on play pedagogy to identify search terms. Key strengths of the Speed School pedagogy implemented through play—group work, questioning, hands-on materials, demonstration and explanation, use of native tongue, and flexible planning—support social constructivism. Speed School facilitators and learning environments that promote constructivist play pedagogy are discussed. Knowledge acquisition, relationships, social engagement, testing out ideas, and skills building are identified as outcomes from the incorporation of play pedagogy in speed school. The paper concludes by highlighting how play pedagogy in Speed School contributes to the development of life-long learning.

Keywords: accelerated learning, speed school, play pedagogy, activity-based learning, Ethiopia education

Introduction

Kkalama helps the other children in her group draw the hop-scotch spaces using only multiples of three as the teacher instructed. She hums the counting song she learned yesterday and tosses her rock which lands on the number 12. She hops while her group excitedly shouts 3, 6, 9, 12! Firew, the student recorder, asks how many spaces it took to get to 12. Together they count 4, and Firew scratches 3x4=12 in the dirt. Simhal is next, it lands on 21, and they start the process over. In the distance Kkalama's hears her brother Abush count 5, 10, 15, 20 as he jumps rope with another group across the yard. She helped him practice at home last night, will he make it to 100?

Kkalama and her classmates are participating in Ethiopia Speed School, an accelerated learning program for out-of- school children between the ages of eight and fourteen, living in rural or remote areas of Ethiopia, who have never attended or who have dropped out of school. Students cover the first three years

of the national curriculum in just ten months, and prepare to rejoin government schools at the third or fourth grade level. In this model, students spend a good portion of each day moving through the curriculum independent of the teacher, playing games designed to encourage collaboration and stimulate learning through both the mind and the body. Speed School leverages successes from other accelerated learning models (Longden, 2013, Stansbury, 2001, Westbrook, et al., 2013) and supplements the academic module with parent and community engagement groups that catalyze long term support for their children's education.

Speed School refers to an accelerated learning program funded by the Luminos Fund which is managed by Geneva Global. Faculty in the Centre for International Education at the University of Sussex serve as the evaluators for this project. At the time of this review, University of Sussex reports focused only on Ethiopia Speed Schools where 85% of the more than 100,000 Speed School children have transitioned to, and remained in Ethiopia government schools (Legatum Foundation, 2006-2017).

This paper provides background on schooling in Ethiopia, a brief overview of Speed School success, and closely considers the impacts of play and play pedagogy within the Speed School curriculum.

Ethiopian Government Schools
Public education in Ethiopia is free, but education is not compensatory. Families must pay about $10/year for uniforms, books, pencils and paper, which can be prohibitive for impoverished families. Print material is limited, and many teachers and students work without any texts. Text books are now available for download from the Ethiopian Ministry of Education (MOE) website, but only 1.5% of the population currently use the internet. Student workbooks and readers have not been translated into mother tongue. School proximity, access to fresh water and sanitary facilities, teacher quality and parental support vary greatly in government run schools.

Primary school is taught in two phases: functional literacy in grades 1-4 and general education in grades 5-8. Children ages 6-14 are expected to attend primary school and generally enter school between the ages of 6 and 9. There is a national curriculum with established minimum learning competencies (MLC's) for grades 1-4 in literacy skills, Amharic, English, environmental science, and mathematics that all public, private and alternative schools in Ethiopia must follow. Primary school is taught in the mother tongue (local native language). Children begin to learn English in first grade and Amharic in third. English is the medium of instruction for grade 9 and above.
Official class size in Ethiopia is 50, but average class size is closer to 70, and 100 is not unusual. In many regions, school is taught for 3-4 hours a day in two shifts. Government policy recommends a longer school day, but teacher shortages, teacher absenteeism, and a lack of structure and accountability result in large classes and academics for less than 6 hours a day in most schools.

Enrollment in school at age 7 is as high as 100%, but 8th grade completion rates are as low as 41%. Corruption, corporal punishment, discrimination by gender, ability, minority and financial status, are not unusual. Corporal punishment is prohibited, but is still widespread due to cultural beliefs and lack

of systems for documentation or enforcement. Child labor, particularly in rural agrarian communities, contributes to school drop-out at all ages. Retention rates are lower overall for girls, and lower in rural schools. In Ethiopia over 3 million children do not attend school, or have had to drop out of school.

Instructional delivery in Ethiopian government schools is traditional, where teachers talk and children listen, write and recite. Every year children take a promotion exam.   In addition to the government issued MLC's, children are assessed in mother tongue literacy, visual arts and/or physical education. There is a national exam given in grade 8 to determine whether children may pass on to secondary school. If they do not pass after their first attempt, they repeat year 8.   Failure after their second attempt means they can no longer attend a government school. 80% of students who take the 8th grade exam pass on to secondary school (Gebreselassie, 2012; All Our Children, n.d.; Ethiopia Speed School Fund, 2015. Federal Democratic Republic of Ethiopia Ministry of Education, 2016.; Legatum Foundation, 2006-2017; National Association of Foreign Student Advisors, 2012; Roots Ethiopia, 2012; Save the Children Sweden Ethiopia Program 2011; USAID, AIR, TELL, 2012).
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Speed School Success

Concluding statements in the University of Sussex report entitled Research into the Speed School Curriculum and Pedagogy in Ethiopia noted that *The whole experience over the ten months appears to create learners who are not only reflexive but autonomous and resilient, having learnt how to learn over the ten months of their immersion in the Speed School. In knowing how to process and make creative and intellectual use of new concepts learnt, and how to problem- solve and work collaboratively in groups, graduates are well set up to succeed in the contrasting classrooms and social environment of the Link School when they integrate* (University of Sussex, 2016a, p.25). This powerful statement is supported by data that includes reviewer observations of Speed School classrooms. The Ethiopian Speed School model of small class size, student engagement and collaboration sits in stark contrast to more traditional classrooms where large class sizes, teacher absenteeism, and "chalk and talk" pedagogy lead to many children dropping out of school.

Speed School children come from impoverished, often illiterate families, and their education may have been disrupted or absent due to family needs and values. Because of the persistent, pernicious belief that without basics early on in life, the rest of the curriculum is inaccessible, Speed School children are considered among the least educable by local teachers and school administrators (Pritchett & Beatty, 2012). This model re-conceptualizes who can learn and why. Facilitators accept the premise that ALL children can learn. Training utilizes current pedagogies that encourage students to interact in small groups. Teaching and learning are fluid, allowing students to learn from the teacher, local experts, community members and peers. Rather than focusing on memorization and recitation, Speed School teaches skills that encourage the development of thinking, and acquisition of new knowledge and skills (University of Sussex, 2016a). *It is because of what I learned in Speed School that I can read better and know how to study. It helps me to have confidence in my academic performance, which I did not have previously* (University of Sussex, 2016b, p.77.).

The Speed School curriculum uses the same Ethiopian government textbooks and Minimum Learning Competencies (MLC's) for grades 1-3 in literacy skills, Amharic, English, environmental science, and mathematics that are used in traditional government classrooms. Yet, Speed School graduates' comprehension and aptitude levels are much higher than peers in government schools. Speed School graduates exceed their government school peers on placement exams. Ethiopia woreda (district) and kebele (neighborhood) officials, school principals, and even the students themselves recognize this, highlighting greater motivation, better attendance, classroom participation, and good behavior as contributing to their success (University of Sussex, 2016b).

Method
This paper uses a narrative literature review. Speed School evaluation reports written by the Centre for International Education at the University of Sussex, United Kingdom, and research on the role of play in learning were reviewed. Search criteria were developed based on a critical review of the documented teaching practices and learning outcomes articulated in Speed School program evaluations, as well as research about learning through play and primary research on play-based learning. Search criteria focused on play in an academic setting, including social/emotional and cognitive learning in relation to learning standards and expectations. Criteria such as play pedagogy, play-based learning, playful learning, play and learning, and learning through play formed the nexus. Play referring to recess, sports, athletics, fitness, and outdoor group games were excluded. Literature that provide a foundation for understanding the Speed School learning model were identified using the same narrative review process. Search criteria included accelerated learning, educational development programs. Sub-Saharan Africa education, out-of-school children, Ethiopia education, indigenous learning, and youth at risk. Learning outcomes related to self-help and social capital were not examined. Qualitative analysis of evaluation reports, empirical research about play, and accelerated learning programs for at-risk youth resulted in the identification of four key topics that are discussed; what play looks like; talk, movement, and materials. The study is intended to provide a clear look at the structures and outcomes of Speed School that relate to play in the context of current research. The scope of the study is limited as it does not look at research that disputes the effectiveness of the model, or of play as a pedagogy.

Speed School Approach
Analysis of Speed School classroom observations revealed that facilitators emphasize learning through group activities and processing skills. They develop lessons that use a wide range of learning resources and activities within and outside the classroom, keeping lessons lively and engaging. Classroom observations and interviews provide evidence that facilitators support students' sense of belonging to a learning community both in school and at home. Facilitators meet students where they are, relying upon social interactions and local resources that are both contextual and relevant (University of Sussex, 2015, 2016a). Independent work and small group instruction rich in play and discourse sit in stark contrast to the current Ethiopian government classrooms

where 60-100 children learn through lecture and drills. Speed School facilitators serve as the primary teacher for small classes of 25 students, allowing for individual attention and follow up (University of Sussex, 2016b). In Speed School, communicative strategies are embedded within the interactive pedagogic practices that include group work, questioning, teaching resources, using a local language as medium of instruction, lesson planning, and sound explanations.

Even in the hands of less experienced teachers, pupils engage with the content through a variety of activities that include social interactions, ensuring that learning far more likely to take place. An Ethiopian student who successfully transitioned from Speed School to the local government articulated how these multiple modalities supported her learning. *The difference between Speed School classes and here [government school] is in the Speed School we learn and re-learn the points until all of us understand... the teacher explains but [in government schools] there are teachers who simply write notes and do not explain* (University of Sussex, 2016b, p. 90). In addition to the 21-day training prior to the start of the ten-month program, facilitators receive professional development, ongoing supervision, and evaluation, factors known to be critical supports in teacher preparation (Beare, Marshall, Torgerson, Tracz, & Chiero, 2012). This model translates directly to student success (University of Sussex, 2015).

Facilitator (Teacher) Training

Research strongly suggests that a combination of intensive and principled teacher training and pedagogic structure enables Speed School students to access the curriculum and achieve high levels of attainment by the end of the ten months (University of Sussex, 2016a). Speed School facilitators are not government-certified teachers. They are tenth grade completers, recruited from each local community to attend an intensive, 21-day training equivalent to three college-level teaching courses. The content of the facilitator training focuses on language and literacy development and mathematics, critical elements of early learning (Ball & Forzani, 2010; Foorman & Torgesen, 2001). Inquiry, discussion, practice, and collaboration are emphasized as well. Facilitators review teaching strategies and curricula, ask questions, practice teach, and build content knowledge and skills (Pang & Ling, 2010) through activities and lessons that include flash cards, movement, singing, small group discussions, hands- on investigations, activity-based learning, community engagement, authentic materials, and indoor/outdoor play. In small groups, facilitators learn how to help students become active, independent learners and problem solvers, mirroring the pedagogical frameworks they are expected to apply in their classrooms (Dinsmore & Wenger, 2006). Westbrook et al., (2013) found that when teachers formed more positive attitudes towards their pupils and the pedagogy promoted in their training, they were more likely to use three important communicative strategies: paying inclusive attention and giving feedback; creating a safe learning environment; drawing on pupils' backgrounds.

Play as Pedagogy

A pedagogy of play is central to the Speed School curriculum, evolving in sophistication as children move through grade levels in months rather than years. For example, in a grade one lesson on numeracy, children learn how to follow directions and work with others while playing counting and sorting games with natural objects. By grade two, children engage in discourse and argumentation through ball-tossing games that teach multi-digit operations and probability. In grade three, students might construct tools and toys that illustrate fractions, multiples, or relative events over time. In the process of designing and building these objects, students learn to analyze reflect, and revise. Play is essential to the success of the Speed School model at all levels, providing a framework for cohesive learning experiences and inspiring creativity, risk-taking, and initiative. With a focus on small group play, students not only catch up on their basic skills, they become proficient learners (University of Sussex, 2016a; Mardell et al., 2016). The power of this approach is illustrated through this student's comment: *We were learning like playing and the things we learned as play have remained inside us like heritage* (University of Sussex, 2016b, p. 76).

Play conjures up images of children using toys to create and tell stories, running, laughing, negotiating rules, etc. We see it as tactile and kinesthetic, and synonymous with exuberance and creativity. Play is usually associated with free time rather than school, however research shows that play paves the way for learning, leading to cognitive and social maturity. When there are other children to play with and adults who can encourage and guide children to play effectively with each other, play inspires and even drives learning (Bodrova & Leong, 2010; Smith, 2009). Play as a medium for learning promotes foundational skills, making it possible for children to achieve higher levels of mastery of specific academic content (Bodrova & Leong, 2010). Collaborative play builds cross-curricular knowledge and skills by making the most of students' backgrounds, promoting a safe learning environment and encouraging inclusiveness and constructive feedback.

In Speed Schools, play is a platform for communication between teachers and students where teachers actively draw upon students' life experiences and promote an environment where students feel safe and supported, ultimately leading to positive student outcomes. Play provides a pedagogical framework (Baker, et al., 2016) that shapes both the social structure and content delivery within the Speed School classroom. Classrooms are interactive, and learning is a process rather than an outcome (Krug, 2011). In Speed Schools, the student/teacher paradigm shifts from authoritative to collaborative, from teacher- centered to student-focused. Speed School facilitators emphasize how learning happens and are shaped by their own experiences and understanding of the teaching and learning process. Communication with students is the priority, and play is at the center of that communication (University of Sussex, 2016a).

Pay in the Speed School Classroom
What Play Looks Like

Play takes many forms, and elements of play are most commonly integrated within and across an activity, stimulating physical, social, emotional, and

intellectual learning. Facilitators present the same concept through many different forms and activities, using a variety of real objects, body movement, and analogies. Students are encouraged to work together, and it is common for children to learn from one another. *We work in a group … when there are points not clear for me I learn from my friends too … We show and compare what we do and these helped me to understand what we learn* (University of Sussex, 2016b, p. 76). Students process compelling questions through activities that employ flash cards, pictures, natural objects, toys, and music to illustrate concepts. Exposure to content through multiple modalities enables students to create multiple associations with familiar materials in their communities and the use of their own body. Play allows students to personalize content understandings (Bodrova & Leong, 2010; NAEYC, 2012; Smith, 2009; Thomas et al,.2011).

The University of Sussex (2016a) cites a Speed School lesson on 'Sources of Power' that illustrates the many forms of play in the classroom. The facilitator gave out group discussion questions, and allocated different content to each group by asking the 'music group' to focus on natural sources of power, the 'card group' on electricity, the 'game group' on liquid fuels, and the 'handcraft group' on solar power. Observations showed that students were very engaged with the group activity. The level of noise varied with the task in hand, and the facilitator understood that the boisterous talk, inspired by the manipulation of materials and social interactions, was productive and supported learning. While enhanced student cognition is key, changes in confidence, participation, values, and social indicators such as teacher-student interaction, inclusion, higher student attendance, and stakeholder satisfaction are also outcomes associated with play pedagogy (Westbrook, et al., 2013). Talk, movement, materials and social engagement provide unique platforms for the incorporation of play within the curriculum.

Talk

In Speed School, using the learner's first language and familiar context provide cultural relevance and encourage questions and critical dialogue with peers and teachers. Talk is rich and deep when play is at the center of a balanced curriculum. Speaking or presenting in front of a group builds self-esteem and confidence (Heckman & Rubinstein, 2001). Structuring lessons around games and activities in small and large groups generate social interactions and helps students build communication skills. In the process of developing a skit, song, dance, or story, students learn to think, explain, and reflect. As differences of opinion arise, they negotiate, building interpersonal skills, and learn how to substantiate their claims with evidence.

Sharing reflections, discussing ideas, asking questions, brainstorming, presenting, and responding are all ways in which facilitators generate student talk through play scenarios. Speed school teachers allow freedom of expression and tolerate levels of noise and movement, encouraging active participation of students in the teaching and learning process (University of Sussex, 2016a).

Movement

Physical play stimulates learning through multiple modalities which, in turn, helps to deepen and codify understanding (Cutter-Mackenzie & Edwards, 2013; Thomas, Warren & deVries, 2011). The Speed School program encourages

students to interact with and learn from people and the environment around their school.

Working with tools or artifacts such as soil samples or stalks of corn; exploring a local farm, blacksmith, potter, or market; playing with toys they construct from found materials; and dancing and singing as they recite numbers or phrases are some of the ways Speed School incorporates movement. Even a simple activity such as flash cards require students to engage different cognitive pathways to express and process knowledge. Working with peers, community members, or text to verify the information that goes on each card; the physical act of writing and drawing on the card; learning to read the card and respond to the prompt; singing or acting out what is on the card; and taking turns to respond all stimulate physical and cognitive processes that use and generate memory in the mind and body (NAEYC, 2012).

Materials

While the government textbook is the sole reference point for the Speed School curriculum, facilitators adapt the content for play pedagogy; local materials— such as clay, stones, and trees—as well as chalk and paper are used regularly to augment learning and make it meaningful (Westbrook, et al., 2013). One Speed School facilitator links learning to many concrete real life examples in the local environment, taking students outside to use the open space and maize stems, and presenting the material in an alternative form for students with special educational needs (University of Sussex, 2016a). Children learn naturally from interacting with materials, and exploring and playing with everyday objects leads to flexible and sophisticated thinkers (Gopnick, 2012). Tactile and kinesthetic learning increases student understanding, and playing with these materials— whether through manipulation, interaction, or construction— increases learning opportunities (Klebanoff, 2009).

Discussion

In Speed Schools, play serves as a foundation for learning. Ethiopian government teachers and school officials recognize that Speed School pedagogy is "better" at providing students with the knowledge and skills they need to succeed. (University of Sussex, 2016b, p. 76). Through classroom talk, physical movement, hands-on materials, and social engagement with classroom facilitators/teacher, peers, and community members, Speed School students acquire the skills and dispositions of life-long learners. Not only does this enable them to succeed within the Speed School model, but it positions them to succeed and even excel in the more standardized learning environments of Ethiopian government schools.

Practices described by the University of Sussex as the key strengths of the Speed School pedagogy—group work, questioning, hands-on materials, demonstration and explanation, use of native tongue, and flexible planning—illustrate how the pedagogy of play also supports social constructivism (University of Sussex, 2016a). The student- centered learning environment of Speed School encourages peer-to-peer learning. Speed School students learn in classrooms where facilitators/teachers take on more democratic and less authoritative role. Learning from facilitators who are from their own

communities, and who share the same language and culture make the culture of play more accessible to both facilitators and students. Constructivist play pedagogy encourages students to test out ideas and build skills that form and maintain quality relationships, resulting in a commitment to social engagement and learning (Burriss & Burriss, 2011). Despite the lack of more formalized teacher training, facilitators are able to establish opportunities for social interactions which, in turn, makes learning more accessible to students. (University of Sussex 2016a, p.3).

Individual and group play focused on problem solving and project work stimulate more complex thinking and processing than listening to a lecture or reciting text (WISE Channel, 2015). As children interact—whether in agreement, discussion, or argumentation—children engage in social interactions that traditional approaches and settings rarely achieve (Westbrook, et al., 2013). Many forms of play require social interactions which, in turn, provide students both the opportunity and the time to engage, think, and rethink. Play enables children to make connections to units of study, encourages social nature of learning, and invites transfer of knowledge from life to classroom and vice versa (Mardell et al., 2016). Children are experts at play. Starting in infancy, they naturally interact with the world and others through play (Smith, 2009). Speed school takes advantage of this innate skill, helping students become active, independent learners and problem solvers through hands-on, interactive activities, games, and toys. Rather than passively sitting and receiving information, students develop games, toys, and activities that serve as both assessments for student understanding and as a resource for further learning. In the process, students transfer new knowledge into a different medium, enabling visualization, and relate meaningfully and creatively to abstract concepts through active participation. By incorporating play, Speed School facilitators help learners to engage in complex thinking and manipulate concepts on multiple levels. Play encourages students to construct knowledge rather than memorize facts (University of Sussex, 2016a).

This report shows how play serves as an important pedagogical approach to learning in Speed School. The incorporation of play across the curriculum fosters the development of independent learning that can contribute to students' long-term academic success.

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