

Literature Circles: *The School in the Cloud* by Sugata Mitra

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Disruption. Discomfort. Dynamic. These words illustrate some of the emotions that students, parents, and educators have felt during the COVID-19 pandemic. The traditional format of attending school in a face-to-face classroom was dismantled as schools had to reorganize themselves to deliver instruction in a fully remote format or a hybrid format. Natasha K. Warikoo, professor of sociology at Tufts University explains that “The COVID-19 pandemic has created or exacerbated inequality that already exists in education—and really in American society,” (Nelson, 2020, para. 4). Many students and families were thrust into survival mode as COVID-19 not only threatened physical health, but economic health as well.

Although not as widely discussed, distance learning benefitted some students. For example, NPR released a story on several students that were thriving in the remote environment. Ava, a student at the Sioux City Community School District in Iowa shared that "Before virtual, when I was in-person, I had almost all F's, but now since virtual I have all A's," (Tesfaye, 2021, para. 15). It is important to state that the social inequalities that were illuminated during COVID-19 cannot be ignored by schools and communities. However, moving to distance learning also provided an opportunity for all the participants in the education system to find new approaches. In the midst of the chaos, educators and students had the space to explore, and even redefine what education looks like beyond the traditional classroom environment.

Summary of *The School in the Cloud*

The Hole in the Wall

Chaos, exploration, and redefinition are core attitudes in Sugata Mitra’s book, *The School in the Cloud: The Emerging Future of Learning*. In this book, Mitra documents the 20-year journey of The School in the Cloud project. This project began in 1999 at a “playground” in Delhi India, which was actually a garbage dump that children would play in (Mitra, 2020). Mitra

installed a computer in a hole in the wall that was facing the playground. The computer piqued the curiosity of the children, and they began to play on the computer without any instruction or guidance from an adult. Mitra and his team were pleased to discover that the children were exploring the internet without any previous experience. Mitra and his team appropriately named this experiment, The Hole in the Wall. They repeated this experiment in several locations and duplicated similar results. Children were not only developing their digital literacy, but they were also improving their fluency in English and their reading comprehension skills.

Self-Organized Learning Environments (SOLEs)

This led to the next step in The School in the Cloud project which were called Self Organized Learning Environments (SOLEs). Unlike the Hole in the Wall computers which were available in a public location, the SOLEs were designed to be self-contained like a computer lab. Several computers would be available for the children to use. An important feature to note is that the SOLES were designed to have less computers than students. The environment was intentionally created so that a group of children would have to use one computer as a team, rather than each individual child using their own computer. Mitra's team also introduced another feature to enhance the SOLE called Skype Grannies. Skype Grannies are adults that would communicate with the children via teleconferencing software. These adults were not meant to act as teachers, but they would read stories to the children and engage in conversations.

The Schools in the Cloud (SinCs)

The SOLEs and the Skype Grannies were influential to the primary stage of Mitra's project which were The Schools in the Cloud. Mitra spends a significant portion of the book detailing the events that occurred at 7 locations. The Schools in the Cloud (SinCs) were established within schools or nearby schools in India and England. The SinCs retained the

computer lab set up of the SOLEs. However, Mitra conducted experiments where he would gather a group of students for sessions of approximately an hour. During these sessions, Mitra would pose a higher order thinking question to the students such as “Can Trees Think?” If a teacher accompanied their class to the SinC, they were advised to not intervene. The students were responsible to work together and use the computers to research an answer. During these sessions, Mitra noticed that the students took ownership of their learning and would work together to research the question. The students would discuss their ideas with each other and correct their peers if necessary. Sometimes the teachers would be worried that their students would either be helpless in finding the answer or that the students would spiral out of control. However, the teachers were speechless when they witnessed their own students taking charge of their learning and working collaboratively.

Conclusions and Themes

Through the 20-year scope of the project, Mitra drew several conclusions. The first conclusion is that students can learn technology on their own without supervision. Mitra explains that “it shows us a generation that can use any digital technology to solve problems. They can compute the solutions to problems— compute as in put a solution together with the resources available” (Mitra, 2020, p.135). Throughout the book, Mitra praises the children’s capabilities. The SOLEs and SinCs fostered an environment where students could demonstrate their critical thinking skills and problem-solving skills. Mitra also concluded that the School in the Cloud helped students with improving their reading comprehension, building their internet search skills, and cultivating their self-confidence.

A recurring theme from the book is the importance of developing students’ capacity to gather knowledge rather than simply memorize it. “In this world, we need the skills to access the

knowledge we need. We need to know where and how to find knowledge. These are very different skills than the skills needed to access information in a library” (Mitra, 2020, pp. 47-48). As discussed earlier, COVID-19 dramatically changed how students and educators were conducting their schooling during the 2019-2020 and 2020-2021 school years. Change is inevitable. Even as the world begins to reenter normalcy after the pandemic, there will always be events that will challenge future generations. But when students have the confidence and the skills to find the information they need, they can navigate change for the rest of their lives.

Recommendations for Teaching and Learning

Recommendation #1: Use SOLEs for Student Centered Learning

Self-Organized Learning Environments are an effective way to promote student centered learning. Student centered learning occurs when instruction is tailored to the needs and interests of the students (Costa, 2014). Not only is student centered learning more personalized towards children and adolescents, but the onus is shifted from the teacher to the student. Throughout *The School in the Cloud*, the children were ecstatic as they searched for answers to the big question that was posed before a SOLE session (Mitra, 2020). In Killingworth, North Tyneside, England, Mitra asked the students to solve a math equation. However, the students went beyond answering the question and they researched the history of algebra. The students took ownership of their learning. They were highly motivated during the SOLE session.

Teachers can use a SOLE to introduce a new unit to the class. The SOLE could be combined with a KWL chart. On a KWL chart, there are three columns: what I know, what I want to know, and what I learned. The students can record their discoveries from the SOLE session on the KWL chart. This experience would help shape the unit so that the students feel like they have a voice in selecting the curriculum and exploring their personal interests.

The SOLE model can be implemented in a remote environment but there is a caveat. If every student has a computer, it is harder to replicate the results that Mitra was able to develop in his experiments. The Schools in the Cloud were specifically designed to have less computers in a classroom than students, so only a few students could pilot the computer at one time. The rest of the students had to work with the student who was controlling the computer. When the teacher moves the students into breakout rooms, they need to designate one person from each group to have the responsibility of using the internet for research.

Overall, Mitra's principles from The School in the Cloud project can be adapted for the face-to-face classroom or Zoom environment. SOLES can help teachers to incorporate more inquiry learning, problem based learning, and cooperative learning. All of these styles help shift the responsibility of learning from the teacher to the student. While this shift of responsibility could be nerve wracking for the teacher, Mitra's (2020) 20 years of experience show that students can brilliantly rise to the occasion.

Recommendation #2: Use SOLEs for English Language Learners

Another trend from The School in the Cloud project was that the SOLEs had a positive impact on English fluency and reading comprehension (Mitra, 2020). Five of the 7 SinC locations were in India where the majority of the children did not speak English as their first language. However, the children managed to navigate websites that were written in English, and they improved their pronunciation during the sessions with the Skype Grannies.

Mitra does not discuss any of the hypotheses by Stephen Krashen in *The School in the Cloud*, but Krashen's research could explain how the children were achieving English fluency in the SOLEs and SinCs. Krashen's Acquisition-Learning hypothesis explains that people develop their language skills through exposure and informal practice (Bilash, 2009). Examples of

acquisition activities are cooking, playing games, conversations, reading books, and watching movies (Beltran, 2018). Formal instruction of a language such as grammar, conjugation, and quizzes are not to be completely disregarded (Beltran, 2018; Bilash, 2009) but acquiring the language helps the brain to retain the language versus learning the language in a formal setting.

How does this relate to The School in the Cloud project? The SOLEs create an environment that allow for language acquisition activities to naturally occur. Students are working in groups. Students are using the internet to read information, play games, listen to music, and watch videos. Mitra (2020) even uses the term “multimedia comprehension” (p. 135) since the students are building their fluency through a variety of media. Krashen’s research supports Mitra’s success with improving English fluency since the SOLEs provided a variety of activities that allowed students to learn a second language in a natural way.

Teachers can use SOLEs to support English learners. It is important to simulate the factors that Mitra used such as arranging the students in groups, making sure each group only has one computer, and supplying a higher order thinking question. English Language Learners will also benefit since many websites provide visual support to help students to decode the language. Teachers can feel confident in using a Self-Organized Learning Environment for their English Learners because the technique is supported by Mitra’s (2020) data in *The School in the Cloud* and Krashen’s Acquisition-Learning hypothesis.

Recommendation #3: Use SOLEs to Build 21st Century Skills

“In the 21st century, the nature of work has changed and so have the skills that are essential for success” (Weisblat et al., 2019, p. 64). The Self Organized Learning Environments can be used as a strategy to help students develop transferrable skills for the workplace. Weisblat et al. (2019) describe these skills as Key 21st-Century Skills and examples of these proficiencies

include problem solving, effective oral and written communication, and agility and adaptability. Since students are 100% responsible for gathering the information to answer the big question that is posed in the SOLE session, students are held accountable to follow through and meet the deadline by the end of the session. Regardless of what profession a student chooses to pursue, a student must be able to communicate effectively with others, develop solutions for problems, and manage their time. Teachers can use a SOLE to not only enhance the instruction of content, but to also build students' soft skills.

Throughout the book, Mitra does not tell a story of a SOLE session where the students had the big question ahead of the session. The students had to improvise in the moment. COVID-19 and distance learning showed students and teachers that life can change in an instant. Students need a skillset that will allow them to navigate inevitable change. If a teacher incorporates several SOLEs into the school year, the students have multiple opportunities to build their 21st century skills for college and career readiness.

Recommendation #4: The Role of Technology and Students' Assets

It is tempting to pigeonhole *The School in the Cloud* as an educational technology book. It is understandable since a SOLE would not be possible without access to computers and the internet. Researching big questions is dependent upon the ability to surf the web. Even though the technology is critical, the strength of the School in the Cloud project is to be attributed to the children that participated. Mitra (2020) frequently explains to the reader how impressed he was by the children and would praise the students for their performance. Weisblat and McClellan (2017) found that the SOLE promotes Asset-Based Learning. In the SOLE, students are not being judged on the end results of their research, but importance is placed on the process. Regardless of whether the students succeed or fail, the true value from the SOLE comes from

what was learned in the room. Since the students work in groups, they can rely on one another to support them through the experience. The SOLE cultivates a positive environment that encourages collaboration and multiple ways of answering the questions.

The final recommendation for teachers is that while they should explore new technology, it is not the technology that is going to ultimately be responsible for good instruction. The technology is effective because of the talents of the students and teachers that are using the technology. Mitra (2020) does not refer to specific websites or technology tools that made the students successful, but Mitra gives credit to the children. The students possess powerful assets that make the classroom such an inviting place to be. Teachers should lean into the asset-based lens.

Conclusion

The School in the Cloud takes the reader through many memorable highs and lows in the 20-year journey of The School in the Cloud project. Mitra (2020) and his team faced challenges like adolescent boys breaking into a SinC in the middle of the night to use the computers for inappropriate viewing. But Mitra and his team experienced their share of successes like a group of girls in India vowing to escape their culture's cycle of becoming maid servants.

These anecdotes show the impact of The School in the Cloud project. Mitra even wrote a chapter that explains how a person can build their own School in the Cloud. However, a teacher does not have to go to that extent to experience the benefits of a Self-Organized Learning Environment. Teachers can use the SOLE to promote student centered learning, to improve fluency for English Language Learners, to cultivate transferrable skills for after graduation, and to give students the space to use technology with an asset-based lens.

Despite the self-contained structure of the SOLEs and SinCs, Mitra and his team managed to create an idea that touches so many educational topics including technology, inquiry, collaborative learning, real life skills, student motivation, and digital literacy. *The School in the Cloud* is a memorable narrative for educators and non-educators alike. While the School in the Cloud project can be labeled as disruptive (Weisblat and McClellan, 2017), the results are absolutely dazzling.

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