Report:

Molefe Mooke Primary School

Coding with Scratch

September 2024

1. Background

The exponential growth of digital technologies has made it evident that there is an increasing need for teachers to incorporate the use of digital technologies for teaching and learning. During a recent media briefing about the curriculum on Coding and Robotics, the Department of Basic Education's Chief Director (MST), Mr Seliki Tlhabane, reported that the education sector has a responsibility to offer a curriculum that will prepare learners for the world of work. The implementation of the coding and robotics curriculum for primary school learners, by the Department of Basic Education, has paved a path which encourages the development of basic literacy and numeracy skills. These skills help build a strong foundation for future learning and prepare learners for lifelong learning and eventually the world of work by inculcating critical thinking, problem-solving, and creative thinking skills.

Backspace Technologies has for the past two years sponsored over two hundred learners from disadvantaged communities to learn basic coding skills. In 2024, Backspace Technologies once again extended the learning opportunity to another deserving school with existing ICT infrastructure to learn valuable Coding skills.

2. Molefe Mooka Primary School

Molefe Mooka Primary School was established in 1959 and is in Dilopye, a small village in Hammanskraal, on the outskirts of Tshwane. The school's Principal, Mme Magdeline Thobejane, assumed her role as the Deputy Principal in 2008 and was appointed as Principal in 2016. The school's motto is, "Thuto ke le Sedi," which translates to "Education is light" in Sesotho. The school's ethos emphasises that education forms the foundation for self-understanding and self-actualisation. Recognising the pivotal role of technology in society, the school principal has called on her teachers to revolutionise teaching and learning within the classroom. She strongly believes that reaching one's full potential involves understanding the society in which one lives and being an active member of it.
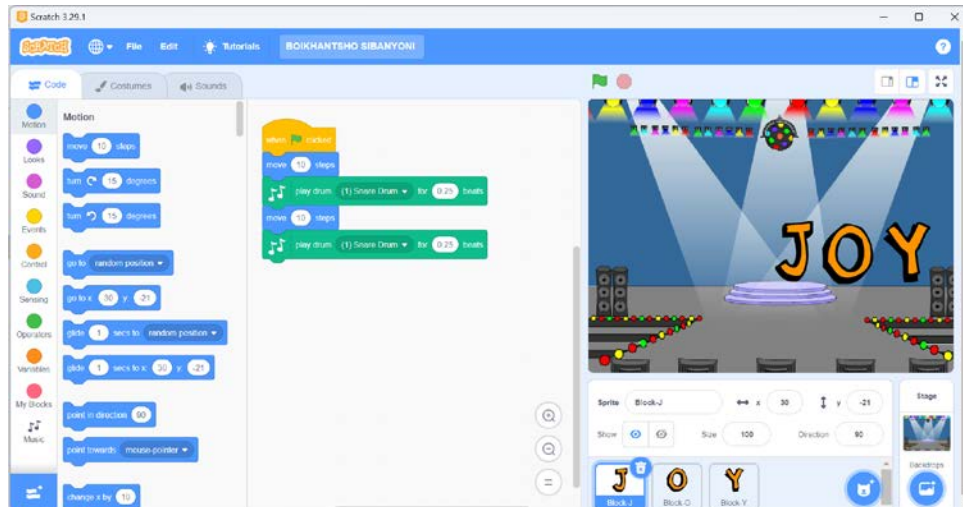
The school focuses on preparing children for the workforce, and utilising technology to build a solid educational foundation from the early primary years. Currently, the school employs twenty-one teachers, with four teachers trained in ICT integration. The available technology at the school is used for administrative tasks such as capturing learner assessment results. The

few teachers trained in the use of technology are using digital tools to prepare their lessons. Principal Thobejane welcomed the opportunity for her students to learn through technology and this project was eagerly anticipated. SchoolNet SA collaborated with the school to discuss and agree on dates for training sessions for learners.
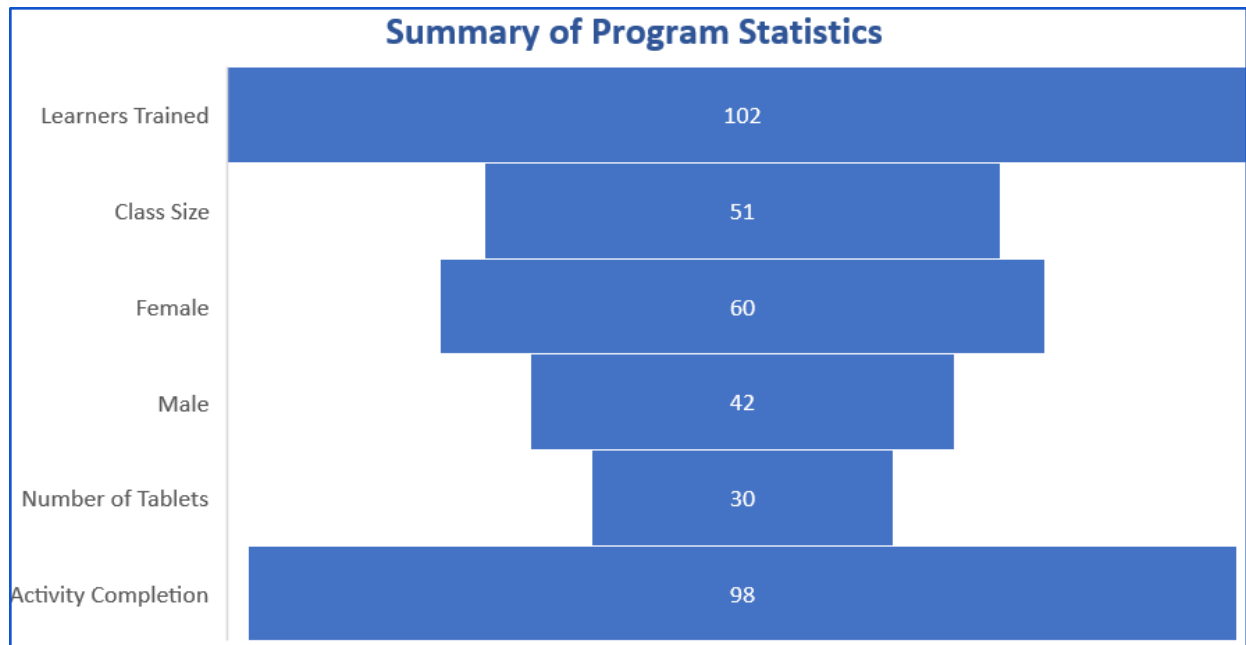
3. Learner Workshops

The classroom atmosphere was electric, where learners were both attentive and active participants in the discussions and activities. The use of tablets added an extra layer of excitement, as learners were thrilled to type and interact with the Scratch coding program directly. After introducing Scratch, the facilitator demonstrated a simple coding example which was to create a basic animation by dragging and dropping code blocks to move a sprite across the screen. The learners were then guided to follow the same steps, replicating the process on their tablets, ensuring they understood each action and its effect. This hands-on approach helped solidify their understanding of Scratch's fundamental concepts.

This practical experience allowed them to see the immediate results of their coding efforts, which further fueled their enthusiasm. Throughout the session, learners expressed their joy and satisfaction with the coding activities. Comments like "This is so cool!" and "I can't believe I made that happen!" were common. The sense of accomplishment was evident as they completed various coding tasks and projects.

4. Summary of Program Statistics

The graph below provides a brief overview of the training statistics, where a total 102 Grade 6 learners were trained. The gender distribution included 60 females and 42 males. The learners were divided into four groups of 25 and 26, with two groups per day over two days as the school had 30 tablets available for use. Impressively, 98% of learners managed to create their first project program and completed it.

Summary of Program Statistics

Category	Value
Learners Trained	102
Class Size	51
Female	60
Male	42
Number of Tablets	30
Activity Completion	98

5. Challenges

- Some learners struggled to follow along or navigate the Scratch platform due to not being familiar with using tablets. This difficulty led to moments where learners lost focus when they were unable to perform tasks on the platform.
- Dedicated time slots were arranged with the school, which limited our ability to provide additional support for learners who needed support.

6. Recommendation

Given the positive response, it is recommended to continue offering similar coding sessions and expand the program to add depth to skills and include more advanced topics. Additionally, it is crucial to conduct further training for teachers to equip them with the necessary skills to effectively teach coding to learners. By empowering teachers with the right tools and knowledge, we can ensure a sustainable future for our learners.

7. Conclusion

The training funded through Backspace Technologies introduced learners of Molefe Mooka Primary School to the world of coding and inspired confidence and curiosity, which will certainly assist their future learning endeavours. The learners' excitement and engagement were exceptional, creating a vibrant and dynamic learning environment which shows what learning should be about.

With thanks to Backspace Technologies

www.schoolnet.org.za

September 2024