

Presented by:

Mr. Kamukama
Solomon

Leadership
Development
Officer- TFU

7th Sep, 2022

Using Metacognition to Improve the Classroom Environment, Social-Emotional Learning, and Content Comprehension

What was my project idea

My project idea was to use metacognition strategies to improve classroom environment and culture, social-emotional learning, and content comprehension among 10 selected primary six students of Karindugu Memorial Primary School, especially in science subject. From the problems shared above, I created an alternative way of setting questions for these selected learners and the whole class as a whole, and I introduced **puzzle questions as opposed to traditionally structured questions**. This reduced cram work especially during answering questions. **A sample of puzzle questions:**

1. Use of a drug in a way that is harmful to the body. (4,5)
2. Use of a drug without a doctor's prescription.(4,6)
3. Use of a drug that is classified as illegal.(4,5)
4. Prescriptions are important in avoiding this.(8)
5. Is an example of an essential drug.(11)
6. This Is an example of drug addiction.(5)

Cont'd

During this study, I focused so much on daily lesson planning, lesson delivery, and assessments. These three lessons were planned, for instance, respiratory system, circulatory system, alcohol, smoking, and drugs. In all these lessons, I ensured that the lesson notes were structured, and this gave the pupils a chance to think and fill in the missing words, as most of these lessons were a continuation of other lessons from lower classes. I also employed a metacognition strategy of setting questions in a simple and complex puzzle form depending on their learning and cognitive abilities I also applied other inclusive education strategies to build positive classroom culture and the environment by changing the sitting arrangement to create peer learning and discussion. I guided them to form classroom rules, vision, goals, and class name.

Why this idea

My great motivation and interest in this project came from the one-on-one session that I conducted at the baseline of the study. It revealed that these children are performing better in Mathematics and English, but not Science. When I deeply asked them they told me that the answers in science require are too long and required cram work, and previous knowledge which they might have forgotten during examinations. The classroom environment wasn't favorable with no learning materials that inspired them and created incidental learning, and lastly, the social-emotional well-being of learners was not being responded to, since they were from diverse cultural backgrounds.

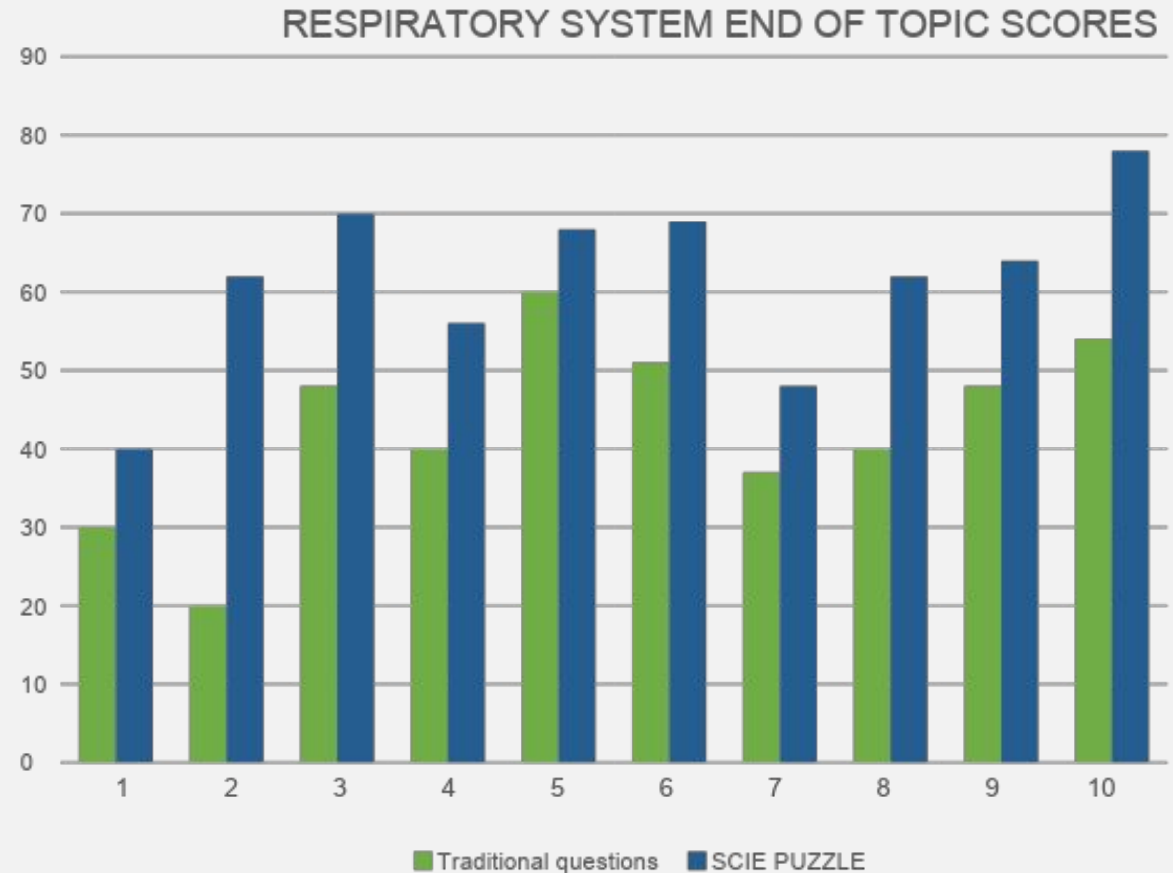
Who was involved

My key direct beneficiaries were the 10 pupils in primary six, however, at the onset of this project, I ensured that all stakeholders are involved and an inception meeting was held at school where the PTA, School Management Committee chairperson, the Headteacher, and all the teaching staff welcomed the project and I have worked closely with all of them and they have supported me in various ways. On this project, I was basically working with all the subject teachers of primary six class, children, and with support from the administration. My coach (Chaitra) and my co-fellow (Seera) played an important role to support me at all the stages of the fellowship.

What have I done?

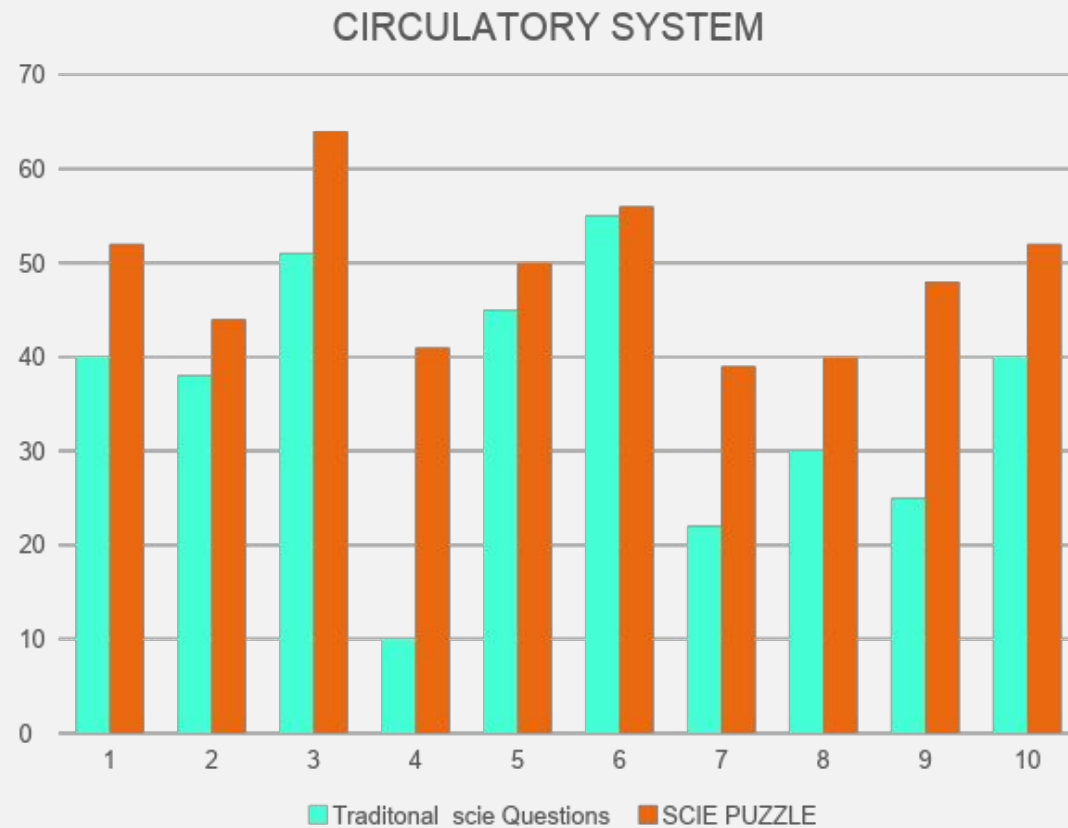
I have collected data on social-emotional learning and this was done informally through oral conversations / one on one sessions. I also used exit tickets to measure content comprehension and mastery after each topic identified above. I also administered pulse checks to determine and improve on my teaching practices and classroom environment and culture. I also administered science topical questions using traditionally structured questions in comparison to puzzle questions. These sets of data helped me to test my hypothesis for this action research project. The data collected was for two sets of questions' where the first paper was normal test questions from the textbooks and I used the same questions and changed the mode of setting to puzzle questions.

Comparison in performance: Respiratory system



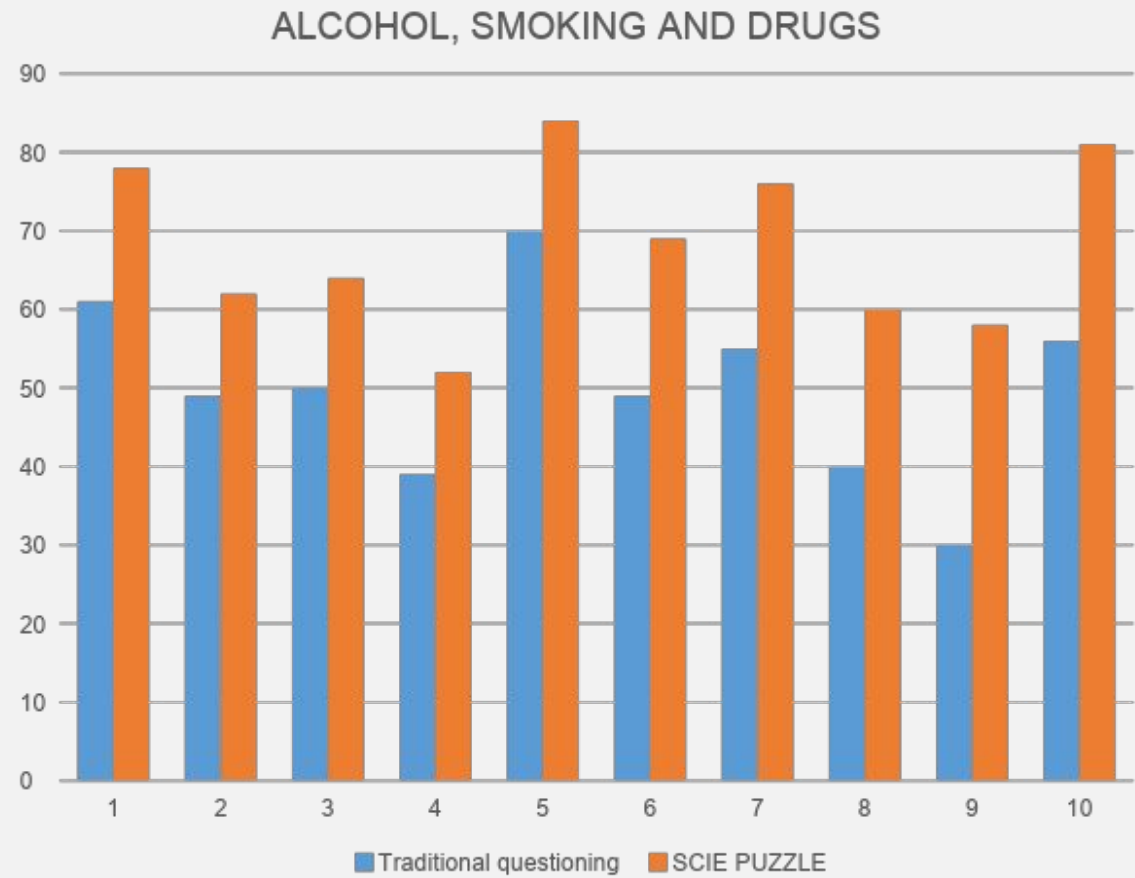
As it can be observed from the graph, each individual learner improved by at least 10% and above in puzzle questions as opposed to the traditional structure.

Circulatory system



As observed from the graph, the performance of every learner improved especially one student whose performance rose from 30% and 40% in all sets to 40% and 55% respectively. These changes in performance are attributed to changes in lesson design, content delivery, and assessment.

Alcohol, Smoking and Drugs



From the bar chart above, the findings from this study reveal that all the beneficiaries from 1-10 excelled above 50% in puzzle test questions compared to traditional filling-in questions. From the first set of the exam as seen above, the performance of my students kept increasing from test to test regardless of the different topics being taught.

What have you learnt so far?

From this research project, I have learnt a lot of lessons especially during the implementation stage. I have learnt that learning in schools should be dynamic in a way that it should be focused to develop the different abilities of individual learners.

It was exciting when I introduced the approach of using puzzle questions in science lesson. They openly told me that it is a good approach as it makes them think so much and from thinking they remember what they learnt, some times they would visit a dictionary to crosscheck their answers.

I have also learnt that the social emotional being of a learner plays a big role in learning, therefore it is a responsibility of a teacher to find out and respond to social emotional learning of the children. The data collected is following my trend because the increase in participation in class due to metacognitive practices and inclusive education practices.

Plans for the future?

The project is set to continue in the school because it involved pupils and teachers, and all the school stakeholders. I will always pay a monthly or termly visits to the schools just to inspire the teachers to continue uplifting and inspiring them to continue implementing the inclusive education practices. I also plan to engage district education officers in kitagwenda district so that they can all adopt metacognition and inclusive education practices in schools and my hopes are high that I will continue engaging even up to the national level so that, these practices are included in the curriculum.

Cont'd

At the end of the last July, I signed a contract with Teach for Uganda as a Leadership Development Officer, therefore with the experiences and the connections I have made during this fellowship, I will be able to design different sessions about inclusive education (**Culturally Sustaining Pedagogy, Universal Design for Learning, and Metacognition**) and present to the fellows so that inclusive education practices are seen their classrooms. I will ensure that these 25 fellows gain and get familiar with these practices.