

A Community Approach: School-Wide Station Rotation Pedagogy

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Abstract

Our school observed that many teachers faced challenges in applying e-pedagogy (e-Ped) effectively. Developing digital competencies and encouraging collaborative lesson design became a key priority. However, teachers often lacked clarity on how to design meaningful e-Ped lessons and tended to work in isolation. Traditional teacher-led classrooms also limited differentiation, despite students' diverse learning needs and preferences. To address these gaps, a structured pedagogical model integrating differentiation, active learning, and meaningful technology use was introduced. This solution builds on a successful pilot of the Station Rotation (SR) pedagogy conducted by a Lead Teacher from 2021–2022. In these humanities classes, structured, student-centered rotation activities led to improved student engagement and learning outcomes. Following these results, SR was scaled up as a whole-school approach. To assess the effectiveness of the model, both qualitative and quantitative feedback surveys were conducted with students who experienced SR lessons and approximately 75% of the teachers who implemented them. These were administered after the first year of implementation and indicated positive responses regarding engagement, clarity, and lesson design. The feedback informed refinements to the model in its second year. Additional data will be collected at the end of the current cycle to further evaluate long-term impact. The SR model empowers teachers to blend e-pedagogy with personalised instruction and collaboration. It offers a flexible framework for lesson design, enabling varied, engaging activities tailored to learner needs. This approach fosters professional growth, enhances collaboration, and improves students' learning experiences through purposeful use of technology.

Keywords: station rotation, e-pedagogy, school wide, community

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Introduction

The unique context presented by our school is that our school is an all-boys school, whose ages range from 13–17 years old. About 20% of our students are also diagnosed with special Educational Needs. In Singapore, the Ministry of Education is also encouraging e-pedagogy as there is now a push to include technology in the teaching and learning in the classrooms. There is also a collective push by the school to go from a teacher-centred learning environment to a student-centred learning environment. We also want to meet 21st century competencies of collaboration between learners. Boys also need to have agency in what and how they learn and incorporating movement during lessons should be considered to keep boys engaged (Gurian & Stevens, 2010). With all these parameters taken into consideration, a lead teacher in our school, Mr. Marek Otreba, decided to try using a pedagogy called Station Rotation (SR) (Tucker, 2021) as this seemed to meet all our needs that were unique to our school. In a station rotation pedagogy, students would be split into three groups. This gives teachers a chance to group students using various parameters. Whether by personality, academic readiness or in a random manner, whichever suits that class or lesson. The team wanted to ensure that there would be a e-pedagogy station, or what we termed a “tech” station. This would enable both students and teachers the opportunity to use technology in a meaningful and effective way. There would also be a collaborative station. This ensures that there would be a student-centered approach to that one particular station. Lastly, there would be a teacher-led station. This ensures that there is still a teacher-centric station to provide either professional instruction or meaningful and timely feedback to the students. The key to this approach is that the students will go through all three stations and that the stations are independent of each other. That is to say, a student does not need to go to station “A” first before proceeding to station “B”. So a student starting at any station will be learning content from that particular station as part of a larger lesson which contains three parts which are related, but not dependent on knowledge build-up in a linear manner.

And indeed, Marek found the pedagogy useful, his students found the lesson engaging, and he wondered whether SR could be implemented as a whole school approach, involving all the teachers and all the subjects taught in our school, since there were benefits to both teachers and students.

Implementation

In September 2023, a team (the four authors) was formed to look into how we could implement SR where all the teachers would learn, plan and implement SR in their classrooms. By December 2023, a year end staff training session was conducted using SR, giving all teachers in our school an experience of being students in a SR setting, with all the rationale explained to them. In January 2024, teacher training on SR pedagogy was provided to all teachers, through face to face briefings and through online micro-lessons, giving teachers the time and space to learn independently. From January 2024 to March 2024, senior teachers and heads of departments modelled the use of SR in their classrooms and invited teachers to walk into any of these classes to see how SR was implemented in their classrooms. Teachers were then told to try SR in their own classrooms from March 2024 to September 2024. The team in charge of SR implementation was cognizant of the fact that some teachers would need more support. Thus, the senior teachers and the team in charge of this program made themselves available to provide advice and consultation to teachers who needed more support. An online resource where SR lesson plans created by teachers who have already completed their SR lessons successfully was also made available to all teachers

who needed to reference exemplar lessons. Teachers were also encouraged to open their classrooms to their colleagues so that a spirit of community learning would be fostered.

Improvements and Focus After One Year

After the first year where all teachers tried SR, it was observed by the team in charge that the e-pedagogy and collaborative elements were lacking in impact. Many times, it was observed that the students were cooperating with each other, instead of collaborating. Thus, a collective effort was made to train the teachers how to plan a better e-pedagogy lesson and to plan better collaborative activities. A e-pedagogy framework provided by the Singapore Ministry of Education was adapted into the lesson planning template used by teachers to scaffold them in planning a e-pedagogy station in SR. Professional Learning Teams (PLT) of 4–5 teachers were also formed so that teachers worked together to collectively and collaboratively plan and execute a SR lesson with the PLTs using a modified Lesson Study methodology as a research tool to help assess the effectiveness of their SR lessons.

Methodology

We wanted to measure the effectiveness of SR in teaching and learning on both the teachers and students. Two surveys were created, one for students and one for teachers. Both quantitative and qualitative results were obtained from the survey. The table below shows the sample size.

Table 1

Sample Size of Survey Respondents

Year	2024	2025
Students	340	421
Teachers	70	65

Students were asked to complete the survey after attending an SR lesson. Teachers completed the survey at the end of term 3, by which they would have completed their SR lessons.

Below are some sample questions completed by students.

- Q. I was engaged till the end of the lesson when the Station Rotation Model was used.
- Q. This lesson using the Station Rotation Model enabled me to learn better.
- Q. Elaborate why you agreed or disagreed that the lesson with the Station Rotation Model used, enabled you to learn better.

Findings

Figure 1
Student Enjoyment Perception Results Over Two Years

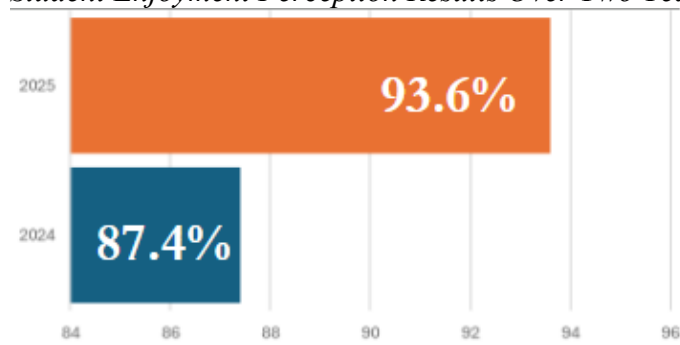


Figure 2
Student Engagement Perception Results Over Two Years

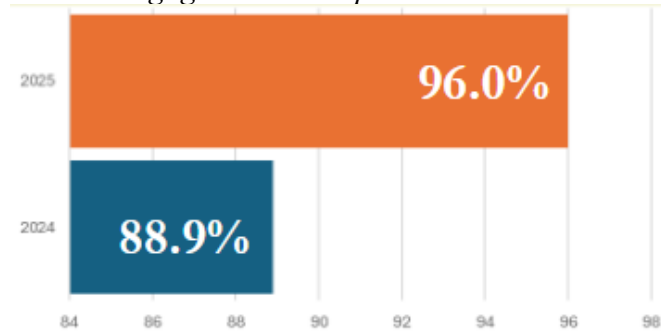


Figure 3
Student Learning Better Perception Results Over Two Years

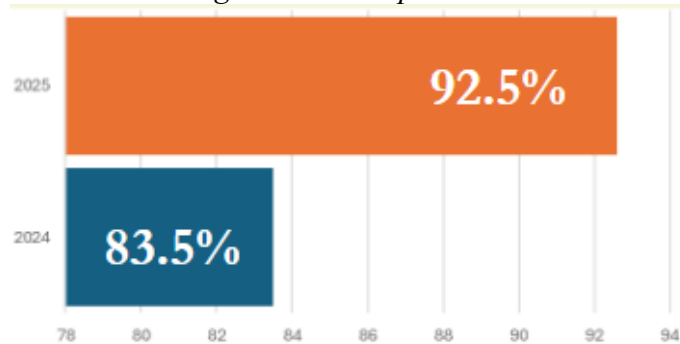
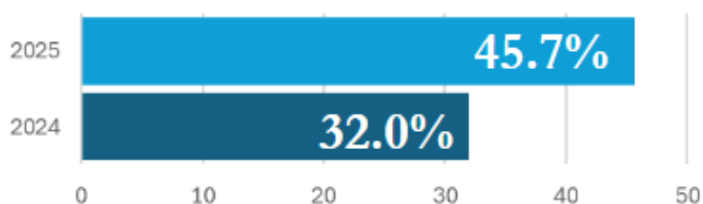
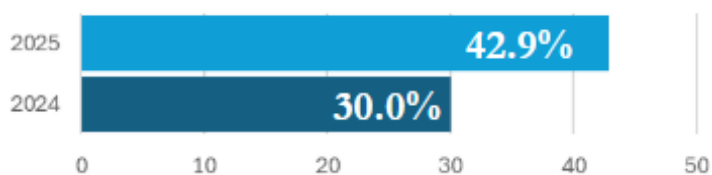
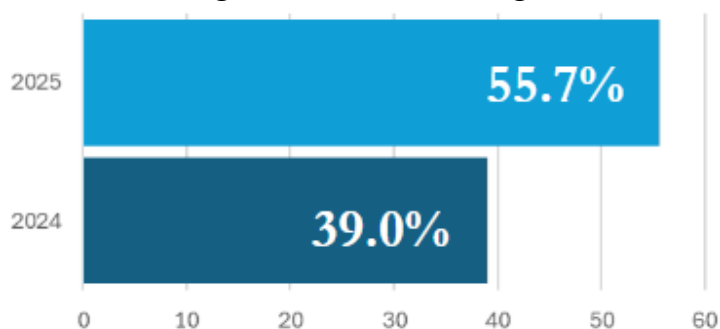


Table 2
Some Qualitative Feedback From Students (2025)

	Sample qualitative feedback by student
Student 1	It allows me to learn a lot more in the same amount of time as a regular lesson
Student 2	It teaches me teamwork
Student 3	I get to use my ipad
Student 4	I don't have to learn 1 thing at a time. Instead, I can learn 2 things in one lesson
Student 5	I could learn from others when playing with people better than me (PE lesson).
Student 6	We were able to move around and learn in smaller groups rather than as one big group.

Figure 4*Teachers' Positive Impact on Learning Perception Results Over Two Years***Figure 5***Teachers' Student Learning and Achievement Perception Results Over Two Years***Figure 6***Teachers' Willingness to Continue Using SR*

There is a difference in perception between teachers and students on the effectiveness of SR in terms of engagement, effectiveness and enjoyment. The team was not surprised with the results as teachers are humans too. And humans are usually hesitant in using something new. Teachers were asked to not just learn, but to plan and implement a new pedagogy. So the less positive results obtained by the teachers were not unexpected. What is encouraging is that the teachers perceptions have improved over the two years.

The positive results obtained by students were encouraging, give us information that students were not just engaged but enjoy learning using the SR pedagogy. The improvement in students' perception also points to teachers getting better in planning and executing their SR lessons.

Conclusion

Over two years of teachers using SR, it was shown that SR is implementable for all subjects, from Languages, Math to Physical Education. Although there is a gap in teachers' and students' perception in how effective SR is, the improvement in survey results points to positive trend. Having scaffolds built into lesson planning templates also showed an observable improvement in how e-pedagogy was carried out in the tech station.

There were certain challenges that the school faced over the two years of SR being implemented by the whole school. It was clear that it was more complex to plan for an SR lesson as the teacher needs to be aware of all activities in all the stations planned to start and end at the same time. Logistically, there were some issues faced by the teachers, such as moving the furniture to accommodate the three or two stations. A lack of teacher presence at some stations also presented some challenges to both the students and teachers, leading to unclear directions for students. It was also apparent that not all topics were suitable for SR. And SR should not be employed all the time as this will cause teachers to spend an unreasonable amount of time in planning for SR lessons.

Institutions looking to implement SR should start with a two station rotation. This provides a simpler planning and implementation strategy. Each station should also last a minimum of twenty minutes to provide sufficient time and space for impactful student learning. Each station must have clear instructions as the teacher will not be present at all the station at all times. Support and training for teachers is key to the success of SR implementation in any institution. Collaboration between teachers and knowledgeable others increases the effectiveness and chances of success of SR implementation in any institution.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

The author declares that Google Gemini, an AI-assisted writing software, was used in proofreading, checking for formatting compliance, and refining the language used in the manuscript. The usage was limited to correcting grammatical and spelling errors and ensuring adherence to the specific IAFOR submission guidelines. The author further declares that, apart from Google Gemini, no other AI or AI-assisted technologies have been used to generate content in writing the manuscript. The ideas, design, procedures, findings, analyses, and discussion are originally written and derived from the careful and systematic conduct of the research.

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