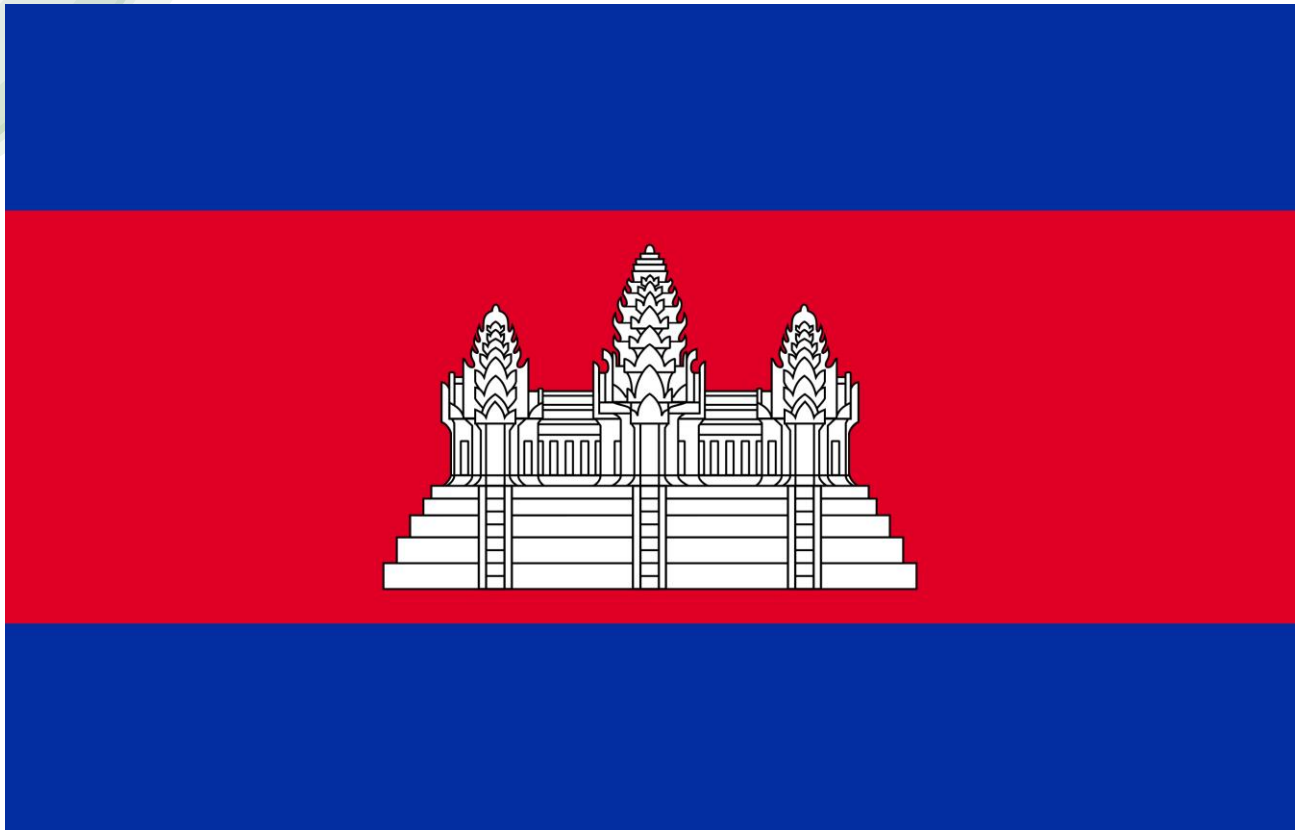

CAMBODIA COUNTRY TIESEA PROJECT

Present by Chea Kosal

29th April 2024

Presentation Outline

- TIESEA Project Introduction
- Project Context
- Project Methodology
- Project Objectives
- Project Interventions
- Project Impacts
- Challenges and Concerns
- Conclusions and Recommendations

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Project Introduction

01

The TIESEA pilot project in Cambodia was a two-year (2022-2023) multi-country program funded by Japan Fund for Prosperous and Resilient Asia and the Pacific through ADB.

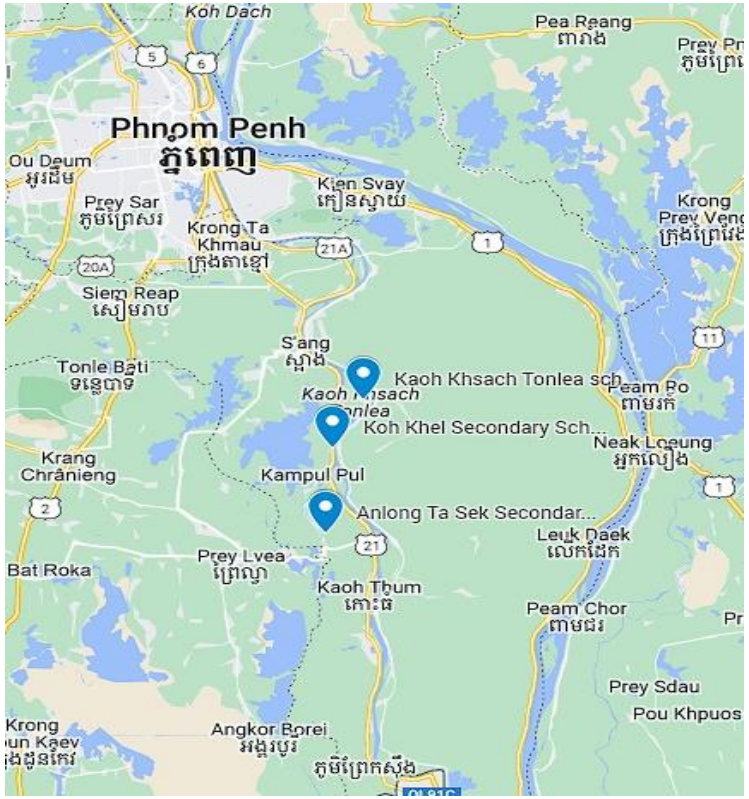
02

Implemented by IBF International Consulting and Learning Possibilities.

03

The project piloted EdTech devices in three secondary schools Koh Ksach Tunlea, Koh Khel and Anlong Tasek in Saang district, Kandal province. There are 15 teachers (6 females) and 186 (93 girls) eighth-grade students from these schools participated in the project.

Project Context



- Kaoh Khsach Tonlea is on an island in the Bassac river; Koh Khel is on the side of the Bassac river and Anlong Ta Sek is 10 km from the highway
- Teachers at Kaoh Khsach Tonlea mostly young males; teachers at Koh Khel and Anlong Ta Sek more experienced; at Koh Khel 3 of the 4 teachers are female.
- Higher dropout rate for girls at Kaoh Khsach Tonlea (13%) and Koh Khel (11%) than Anlong Ta Sek (6%).

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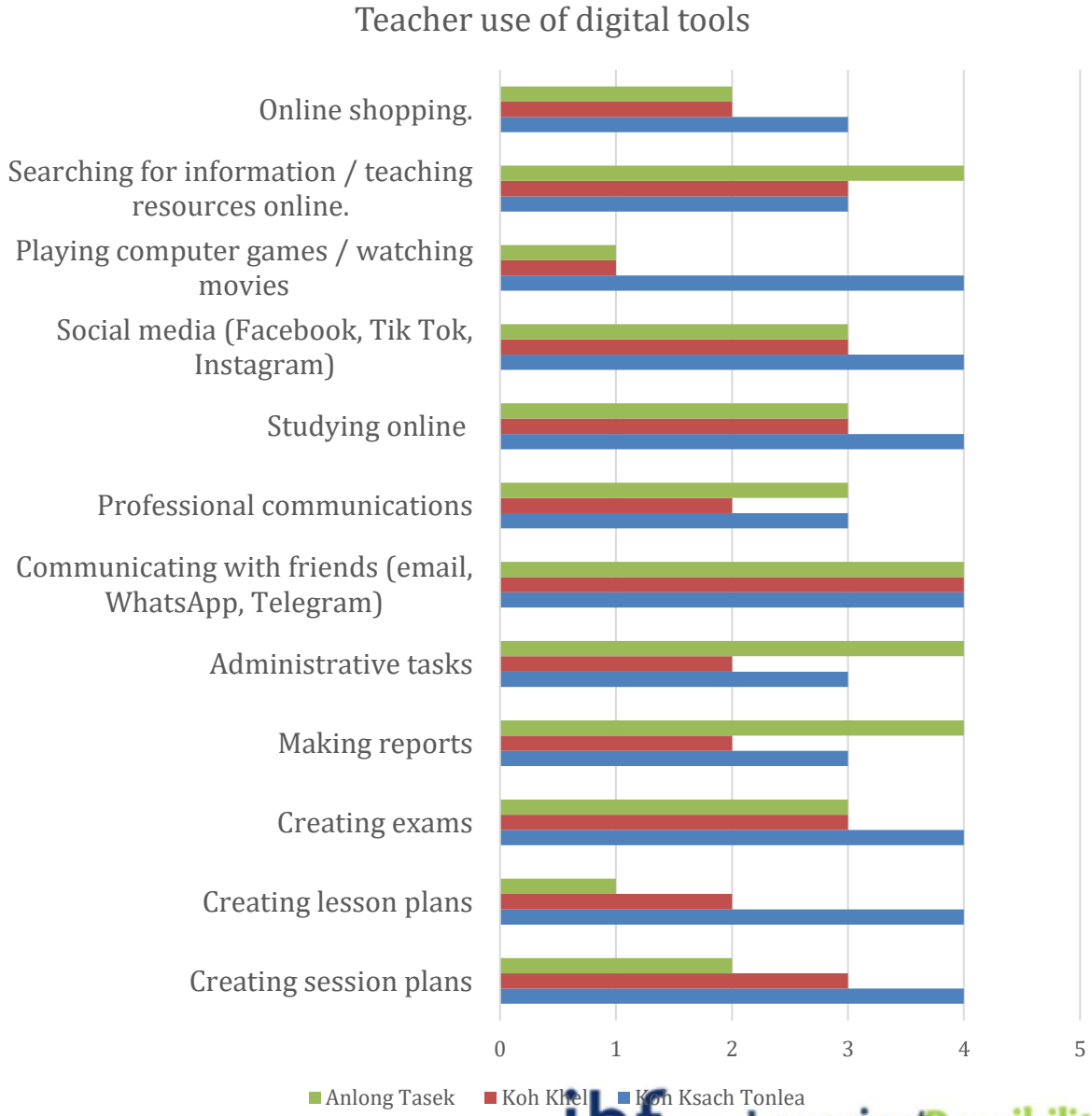
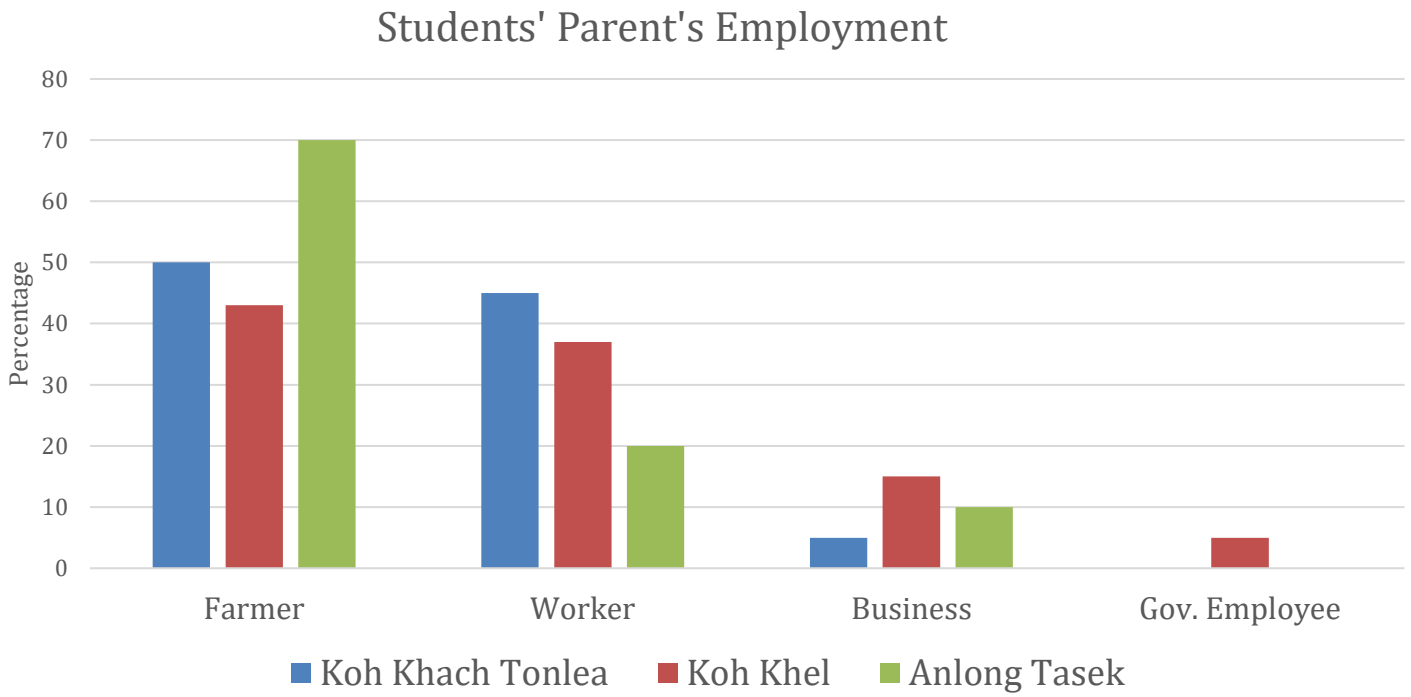
Project Context

- Young teachers at Keoh Ksach Tonlea avid users of technology for personal and professional activity.
- Only two of the teachers at Koh Khel use technology regularly



Project Context



- Parents at all schools mainly farmers and workers

Project Methodology

Quasi-Experimental Design

Koh Khsach Tonlea

TREATMENT SCHOOL 1

- **Students take tablets home**
- Teachers supplied with laptops, projectors, speakers, offline content server populated with subject-related and KAPE videos and other digital content.

Koh Khel

TREATMENT SCHOOL 2

- **Tablets available in class time; kept in charging cart**
- Teachers supplied with laptops, projectors, speakers, offline content server populated with subject-related and KAPE videos and other digital content.

Anlong Tasek

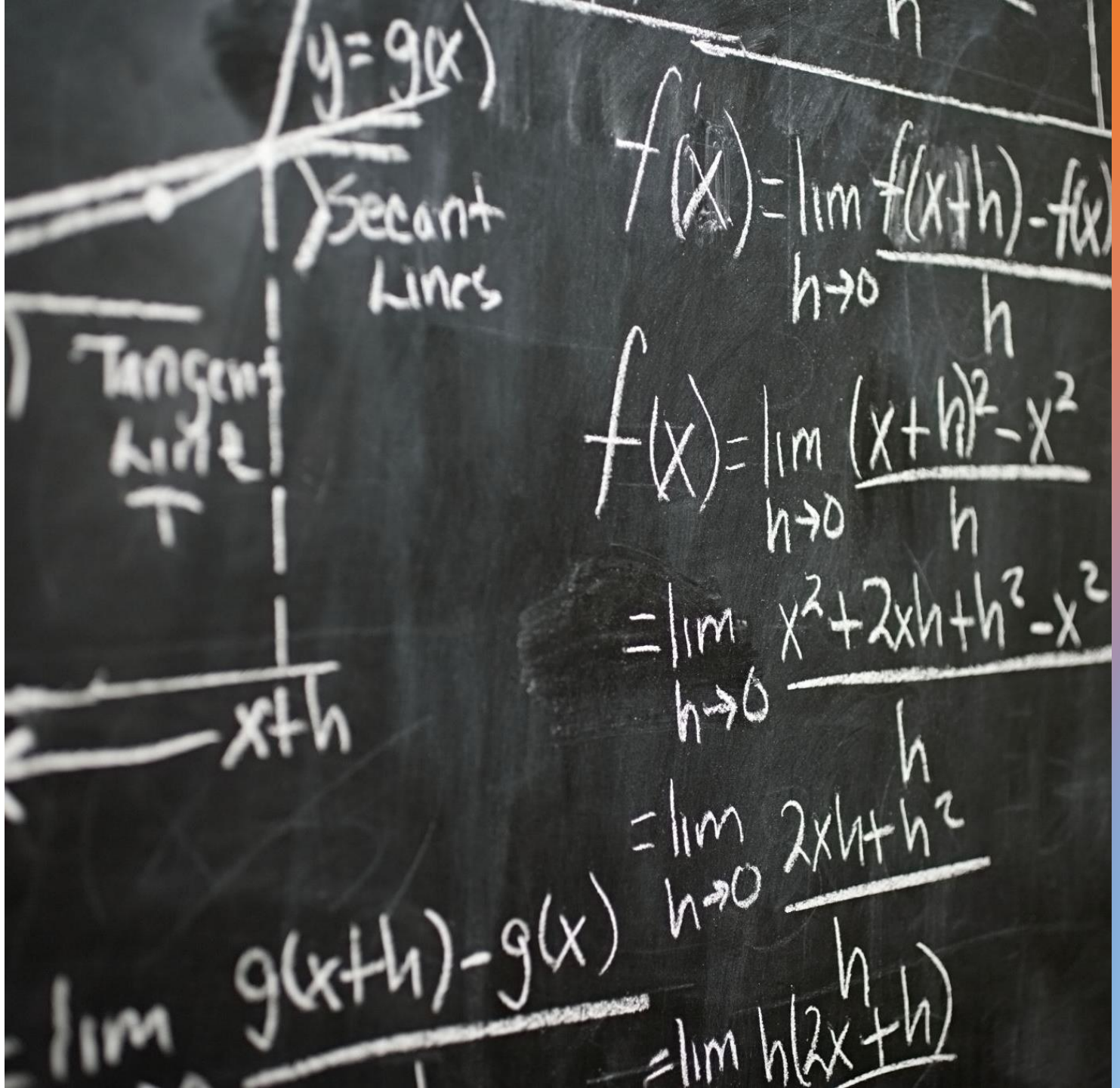
CONTROL SCHOOL

- **No tablets**
- Teachers supplied with laptops.

Project Methodology

Data collection methods included:

- Classroom observations
- Teacher surveys
- Student surveys
- Parent focus group discussions



Project Objectives

To assess the impact of EdTech on student learning outcomes in STEM subjects.

To evaluate the effectiveness of different EdTech intervention models.

To explore the challenges and opportunities of EdTech integration in Cambodian schools.

To inform the development of future EdTech policies and programs in Cambodia.

Project Interventions

Pre-Implementation Activities
Meeting with Ministry
Identifying implementing partners
Selecting pilot schools

Project Interventions

First Phase Implementation

Project Orientation Sessions

Distributing and Installing Necessary Equipment

Project Interventions

First Phase Implementation

Organizing Teacher Training Workshops

EdTech device utilization, STEM education, effective teaching methods, and project-based learning (PBL)

Project Interventions

Second Phase Implementation

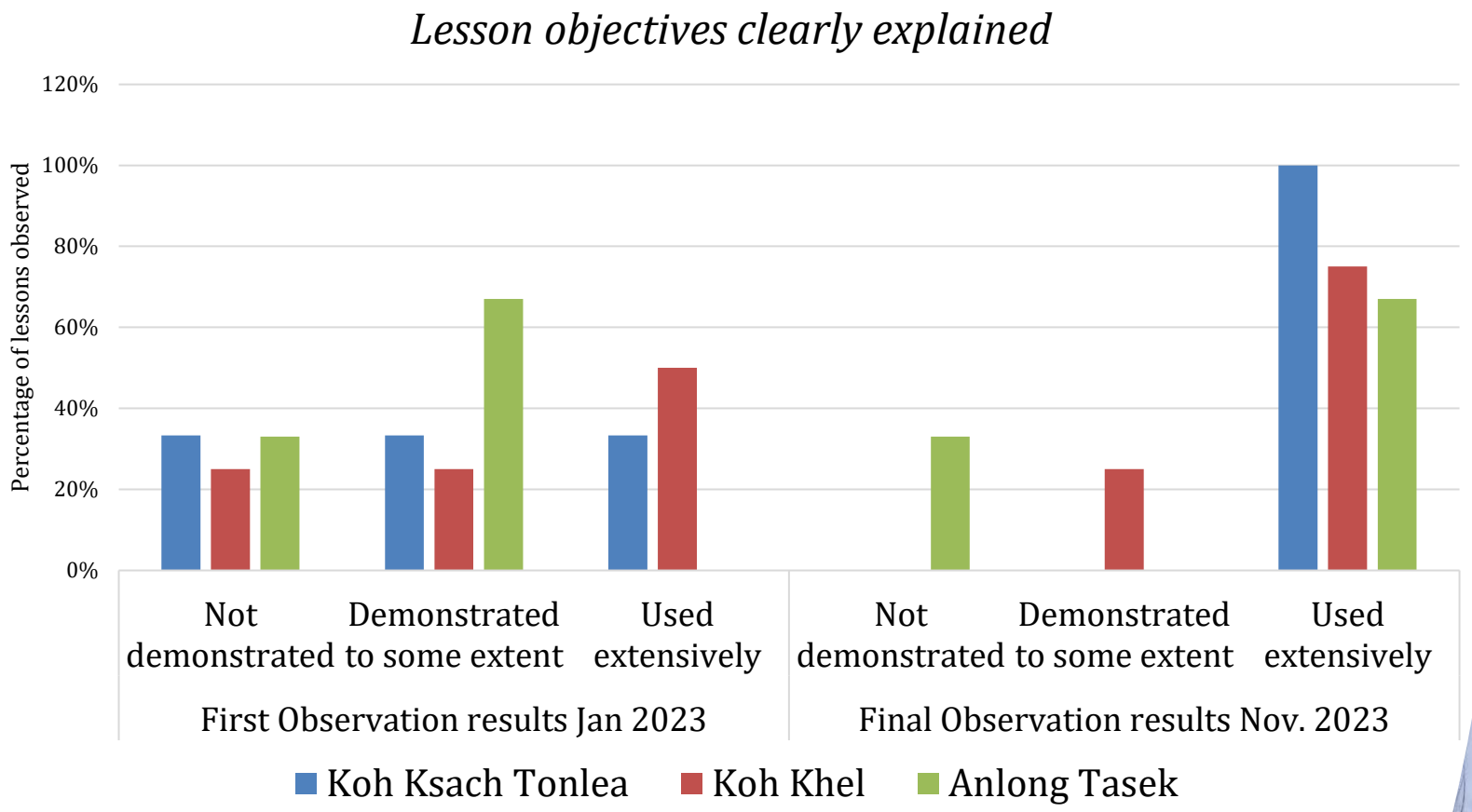
Providing Continuous Monitoring and Support

Project Interventions

Second Phase Implementation

Monitoring, Data collecting and Evaluating

Impact on pedagogy



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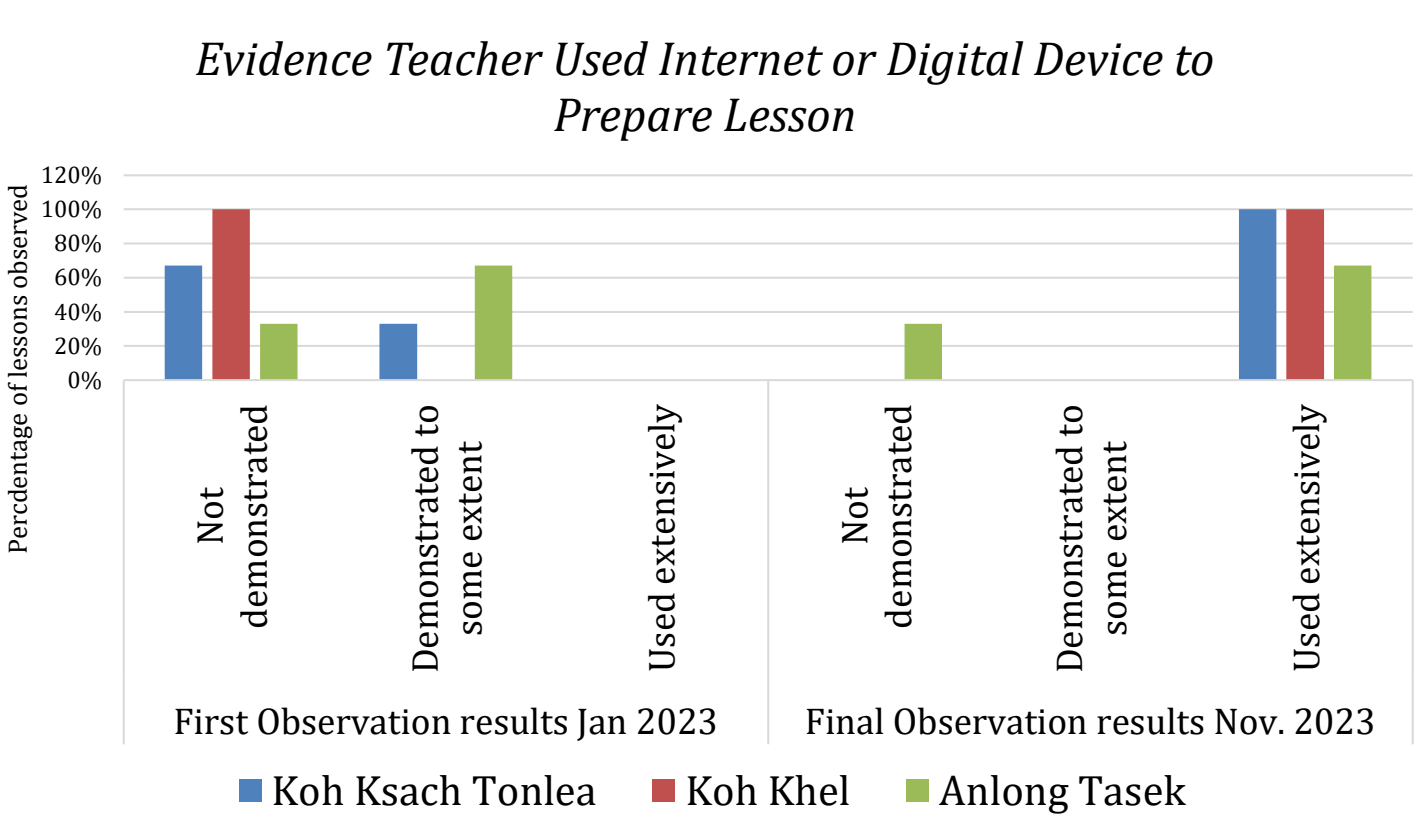
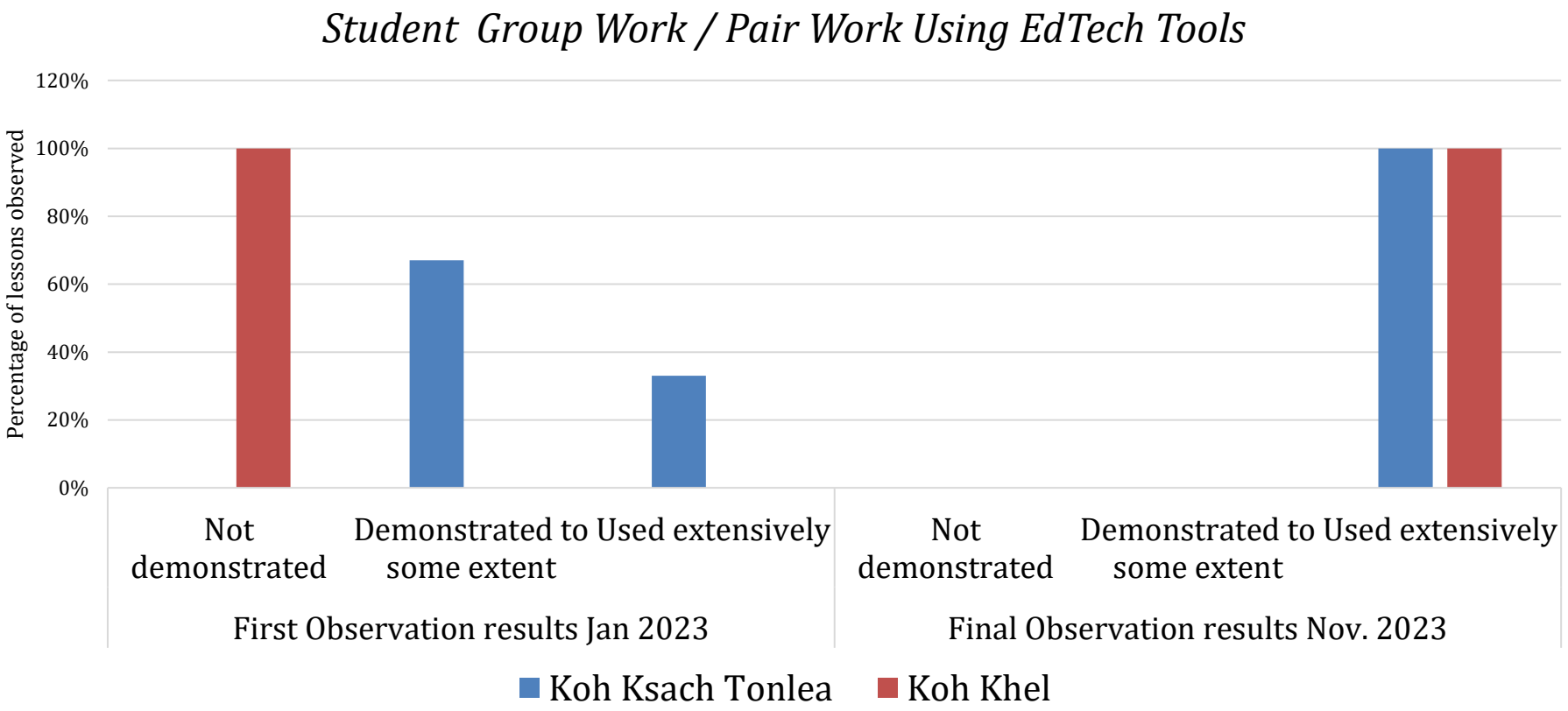
Teachers using devices



Students using devices



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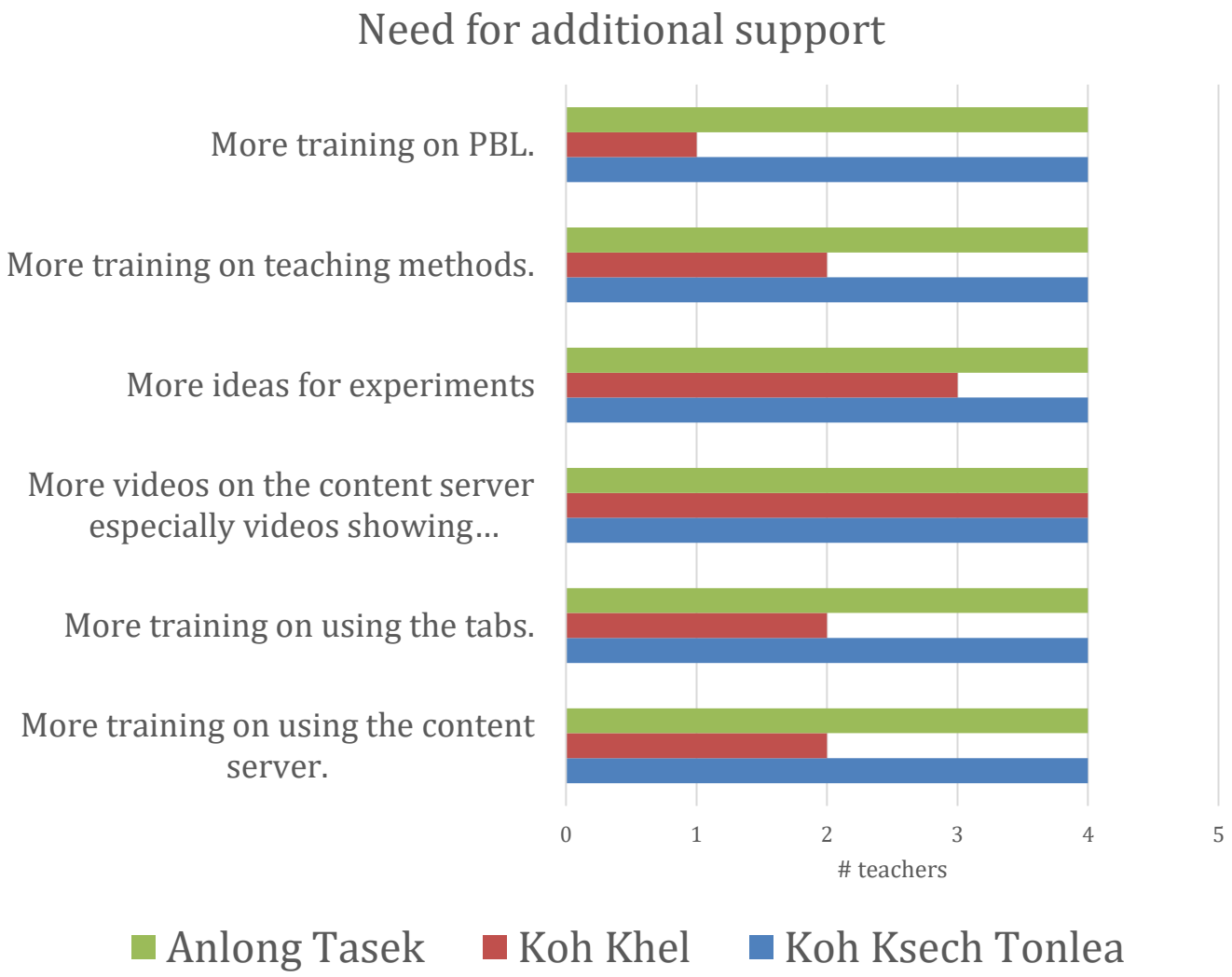
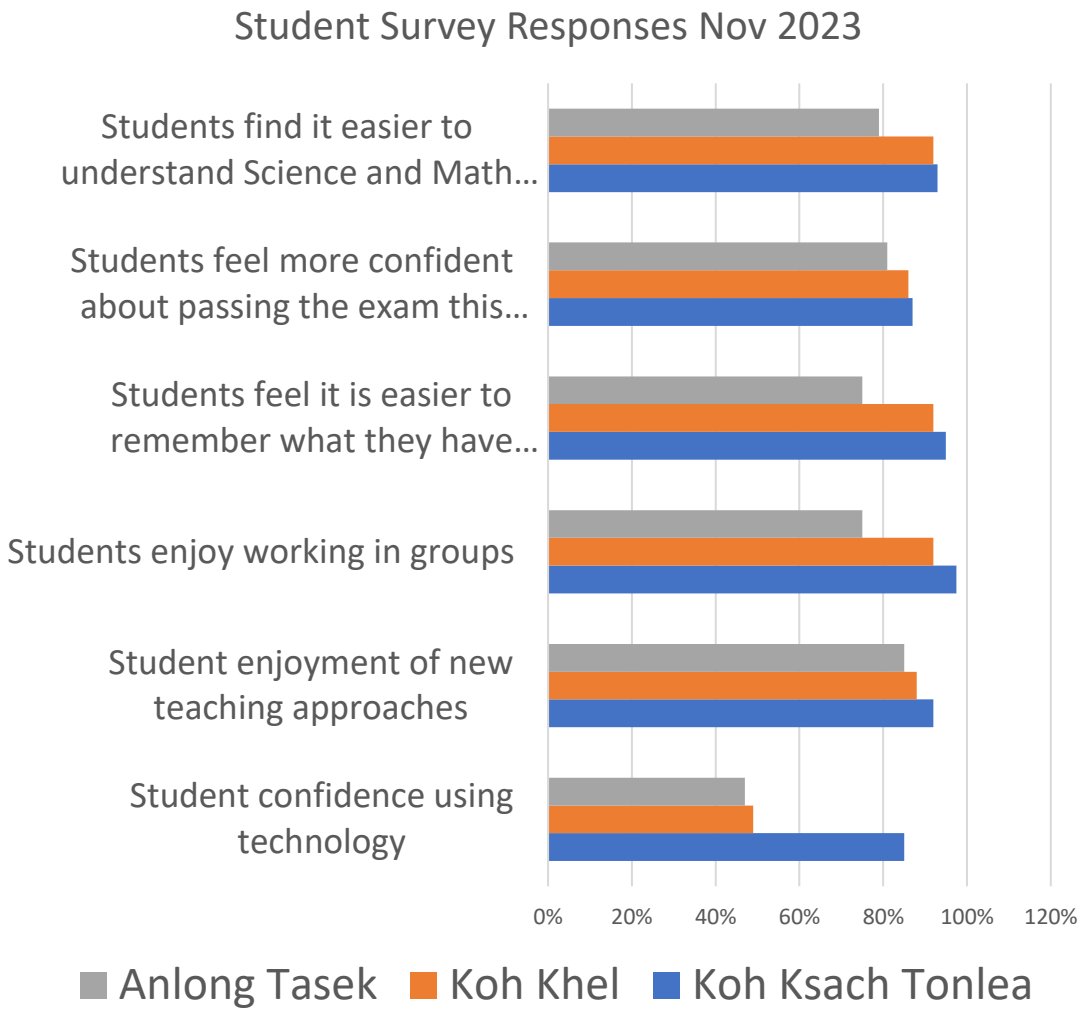


What teachers said…

- Concerns expressed about needing more time for lesson preparation, having to use their own money for teaching materials and experiments, content server does not work during power cuts
- Delays in retrieving tabs from charging cart at Koh Khel
- Teachers at Koh Ksach Tonlea and Anlong Tasek keen for more training.

What students said….

- Responses indicate high impact of new teaching approaches
- Level of Koh Ksach Tonlea student confidence in using technology twice that of other schools suggests less than expected use of tabs at Koh Khel.



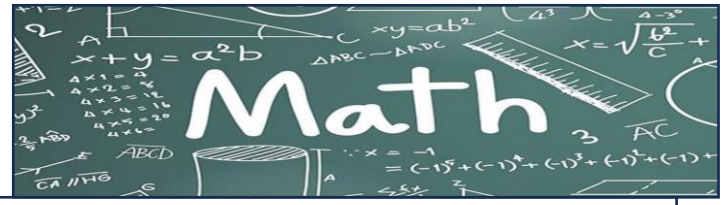
What parents said…

- Parents overwhelmingly supported expanding the program to other schools due to the positive changes observed.
- Most parents felt comfortable managing potential distractions from games and social media through screen time monitoring.

What parents said…

- Parents appreciated the innovative teaching methods used with the tablets and a majority preferred them over traditional classes.
- Parents at the control school (without tablets) also reported seeing increased enthusiasm for learning, suggesting other factors like new teaching approaches might also be contributing.

Impact on results…Koh Khsach Tonlea



Results of the paired-t test indicated that there is a significant large difference between Gd 7 (M = 51.2 ,SD = 18.8) and Gd 8 (M = 65.6 ,SD = 17.3), t(64) = 6.9, p < .001

Effect Size = 0.85

Results of the paired-t test indicated that there is a significant large difference between Gd 7 (M = 23.5 ,SD = 11.4) and Gd 8 (M = 32.4 ,SD = 7.1), t(64) = 7.2, p < .001

Effect Size = 0.89

Results of the paired-t test indicated that there is a significant small difference between Gd 7 (M = 29.6 ,SD = 6.3) and Gd 8 (M = 31.4 ,SD = 9.2), t(64) = 2.1, p = .037

Effect Size = 0.26

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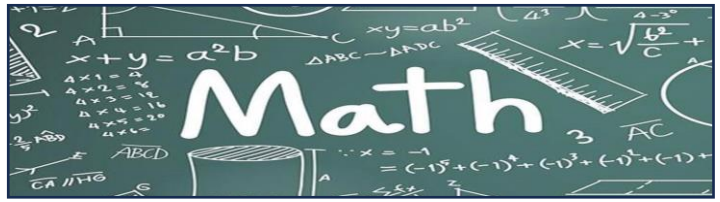
Impact on results…Koh Khel



Results of the paired-t test indicated that there is a significant medium difference between Gd 7 (*M* = 55 ,*SD* = 16.1) and Gd 8 (*M* = 62.3 ,*SD* = 20), *t*(55) = 3.5, *p* < .001

Effect Size = 0.47

Results of the paired-t test indicated that there is a **non-significant** very small difference between Gd 7 (*M* = 30.6 ,*SD* = 7.9) and Gd 8 (*M* = 32 ,*SD* = 10.2), *t*(55) = 1.2, *p* = .248

Effect Size = 0.16

Results of the paired-t test indicated that there is a significant medium difference between Gd 7 (*M* = 32.3 ,*SD* = 8.5) and Gd 8 (*M* = 36.6 ,*SD* = 11), *t*(55) = 3.4, *p* = .001

Effect Size = 0.46

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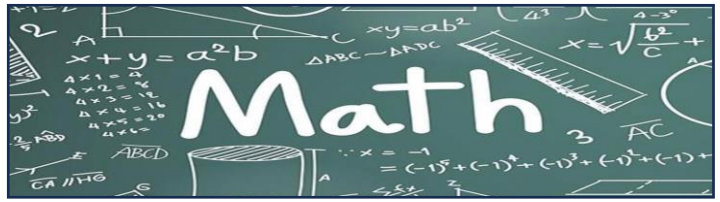
Impact on results…Anlong Tasek



Results of the paired-t test indicated that there is a **non-significant** very small difference between Gd 7 (*M* = 56.8 ,*SD* = 12.4) and Gd 8 (*M* = 57 ,*SD* = 23.5), *t*(65) = 0.08, *p* = .939

Effect Size = 0.0095

Results of the paired-t test indicated that there is a significant small difference between Gd 7 (*M* = 32.5 ,*SD* = 9.3) and Gd 8 (*M* = 35.9 ,*SD* = 9.2), *t*(65) = 2.8, *p* = .007.

Effect Size = 0.34

Project Impacts

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Challenges and Concerns

- Lack of learning material in the content server
- Increased lesson preparation time and curriculum coverage concerns
- Students who take tabs home admit to occasional distractions....
- Some parents raised concerns about potential distractions from social media and games.

Conclusions

- Training and ongoing support in pedagogy by KAPE was successful in improving teachers' instructional methods across all three schools.
- Technical support on device troubleshooting by KOOMPI improved the digital integration.
- The introduction of digital devices and content in the treatment schools led to more interactive and engaging lessons, with Koh Ksach Tonlea showing significant improvement despite facing challenges.

Conclusions

- Students, parents, and teachers reported a more enjoyable and motivating learning environment, with students at treatment schools demonstrating better understanding and confidence in science and math, along with increased technology skills.
- The pilot suggests that scaffolding pedagogy with educational technology can enhance learning environments even in disadvantaged schools.
- An offline content server can be an effective solution for delivering educational content in areas with weak or no internet connectivity.

Recommendations

- Provide ongoing monitoring and mentoring for teachers in both pedagogy and educational technology use, in addition to initial training.

- Offer further training focused on developing students' higher-order thinking and 21st-century skills.

Recommendations

- Establish collaboration between schools and parents to manage student use of tablets for educational purposes.
- Develop solutions for the practicalities of using tablets in schools.

Recommendations

- Expand content on the offline server, including model lessons from experienced teachers and project ideas using low-cost materials, for schools utilizing offline content servers.
- Conduct a wider study with a more diverse sample of schools to definitively assess the advantage of allowing students to take tablets home.

THANK YOU

ANY QUESTIONS?

Contact Email: kc@tiesea.org