

Project Title

Redesigning Lean Training from Classroom to Digitally-Enabled Microlearning

Project Lead and Members

Project lead: Lim Hui Pin

Project members:

- Mr Loo Wei Hann
- Mr Mohamed Razeen
- Mr Nat Liew

Organisation(s) Involved

Tan Tock Seng Hospital

Project Period

Start date: Oct 2019

Completed date: Jul 2020

Aim

To leverage on Microlearning to change the way we train and learn as an organisation and Central Health network.

Background

See poster appended/below

Methods

See poster appended/below

Results

See poster appended/below

Lessons Learnt

If not for the pandemic, we would have preferred to:

- transit existing pool of trainers from trainers to coach first before rolling out the change. We are currently following up on this transition.
- engage the division heads on the change before change happens. In our case, we had conducted a series of engagement sessions (on top of our hospital-wide announcement) with division heads and managers right after the rollout of the Microlearning module to ensure that the awareness was there and address any queries they had.

Conclusion

See poster appended/below

Additional Information

- 2020 National Healthcare Innovation and Productivity (HIP) Best Practice Medal – Workforce Transformation (*video: <https://bit.ly/3hlZRog>*)

Always be in conversation with the ground to know what works for them. It is important to engage the ground to understand their needs and what works for them. With Microlearning, it is even more important to ensure that day-to-day support and application are in place for knowledge retention. This sentiment was echoed by the ground staff in our follow-up conversations with them, post rollout.

We must never see improvement as a linear process that stops post implementation but rather an iterative process. In our case, we have embedded a post-course feedback in the Microlearning module to continuously collect qualitative inputs from our colleagues on areas of improvement that would enhance their learning. This allows us to ensure that we keep the Microlearning module content and andragogy relevant to the needs of our colleagues.

Project Category

Workforce Transformation

Keywords

Workforce Transformation, Healthcare Training & Education, Quality Improvement, Lean, Kaizen, Microlearning, Productivity, Tan Tock Seng Hospital, Identifying Waste, Improving through 6S

Name and Email of Project Contact Person(s)

Name: Lim Hui Pin

Email: hui_pin_lim@ttsh.com.sg



Tan Tock Seng
HOSPITAL
National Healthcare Group

Redesigning Lean Training from Classroom to Digitally-Enabled Microlearning

Lim Hui Pin¹, Loo Wei Hann¹, Mohamed Razeen Bin Samsudeen¹, Liew Hai Meng Nat²

¹ Kaizen Office, Tan Tock Seng Hospital

² Nursing Service, Tan Tock Seng Hospital

REASON FOR ACTION

Limitation in Training Capacity

Staff strength in the hospital has grown over the years and so has the duty to train up community partners who work closely with us in patient care. If we continue with classroom training, another 9 years would be required to reach out to all staff. There is a need to consider an alternative training modality to reach out to more staff and community partners in an efficient manner.

Labour Intensive

An average of 91.25 work days were invested yearly to carry out classroom trainings. This included:

- the actual classroom delivery
- time taken to train our trainers (who are line staff) and rehearse with them to prepare for the trainings
- administrative overhead (classroom setup, coordination and reminder emails)

High Administrative/ Logistics Overhead

The 'Go-and-See' segment in the training requires learners to go down to an existing work site to conduct Waste Walk. This segment requires a lot of administrative effort back-end to identify and coordinate with the owners of the sites. This is needed for every run of the programme. This is compounded by the fact that we cannot have a fixed site for 'Go-and-See' as the learning scenario needs to be different to cater to the different family groups to make learning relevant.

Plateaued Development Opportunities for Existing Frontline Trainers

The frontline trainers are experienced staff and trainers. With the transition to a new model of training DOWNTIME and 6S, there is an opportunity to redesign the trainer role for the professional development. Coaching of project teams is one of the development pathways currently being explored.

Consequently, Kaizen Office's plan was to:

- Convert the "MyCare: Identifying Waste, Improving Through 6S" classroom teaching into Microlearning (augmented with VR in future) so that staff can learn anytime, anywhere and at their own pace.
- Job redesign for existing trainers to become coaches on the ground. They will coach staff who require support for 6S projects. There will be further opportunities for the trainers to be developed in other quality tools beyond 6S as well.

PROJECT GOALS

Higher Penetration Rate

More staff can be trained in a shorter time. Trained staff can continue to access Microlearning content and key resources which would be useful for application in real projects.

Productivity Savings

Trainers are freed up from the training role to take on other value-added activities such as coaching on the ground.

Scalability

Training can be easily extended to our community partners in Central Health.

IMPLEMENTATION APPROACH

The Microlearning module was planned with much thought given to the andragogy of the course to enhance staff learning experience and effectiveness through the following:

- course content delivered in bite-size manner
- ample use of real-life workplace examples
- interactive and experiential learning
- formative assessments at key intervals to ensure reflection and understanding of concepts
- summative reflection and learning feedback

Moving forward, learners can augment their learning with VR:

Certificate of Completion (Went Live on 1 Jul 2020)

Learners to complete Instructional Content

- DOWNTIME
- 6S
- Summative Quiz (assessment, Pass - 80%)

Staff to complete mobile learning through their mobile devices

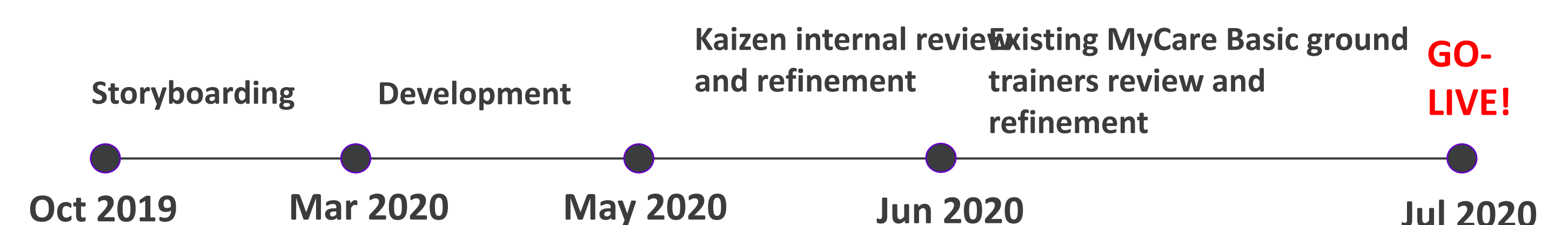
Certificate of Achievement (Future Plan)

Virtual Reality (VR)

- 6S application

Staff to experience Waste Walk and 6S application in VR environment

IMPLEMENTATION TIMELINE

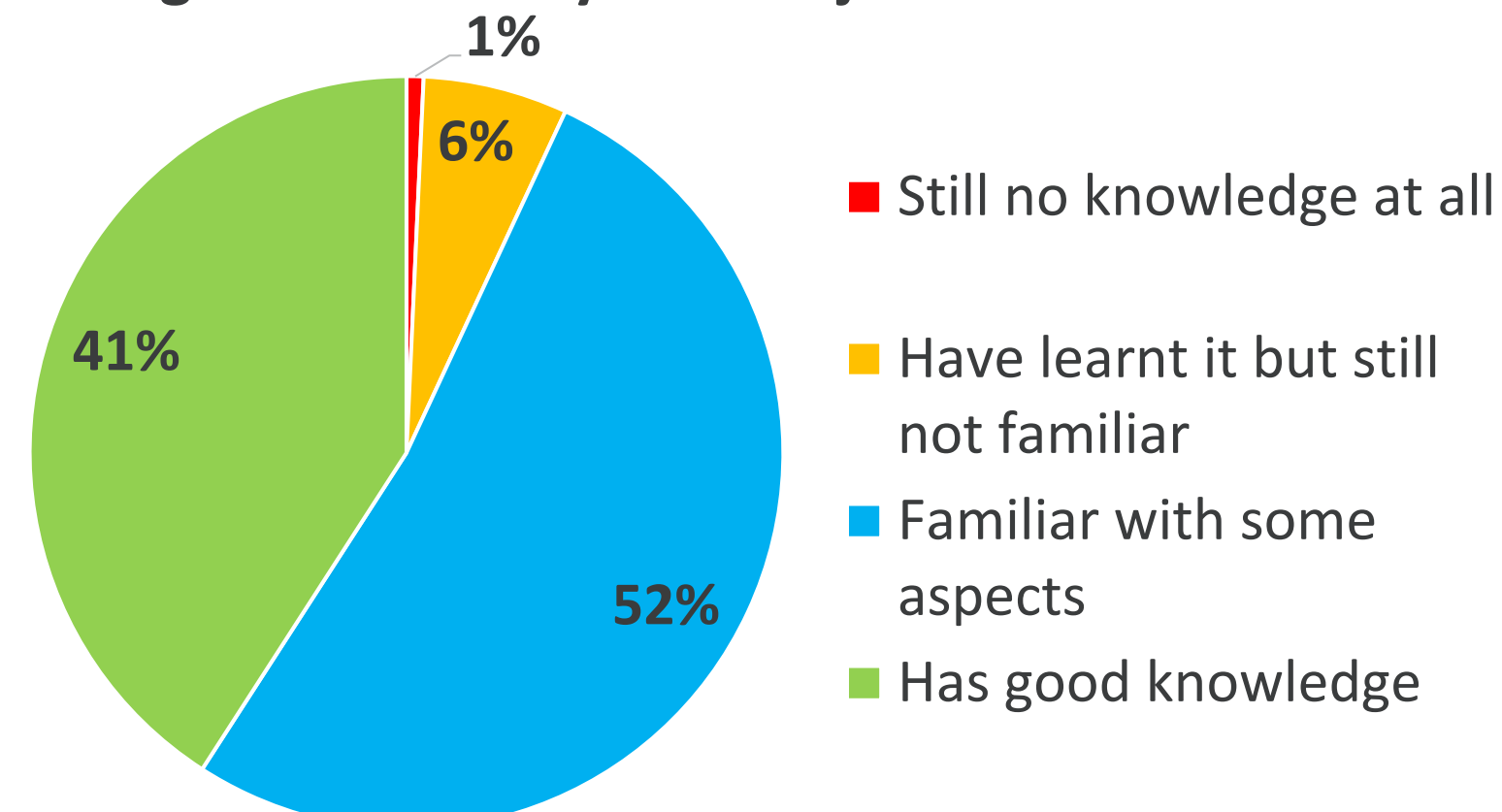


OUTCOME

All learners who have completed the module were able to respond to all 3 questions. They each have found something they have learnt and can apply to their workplace.

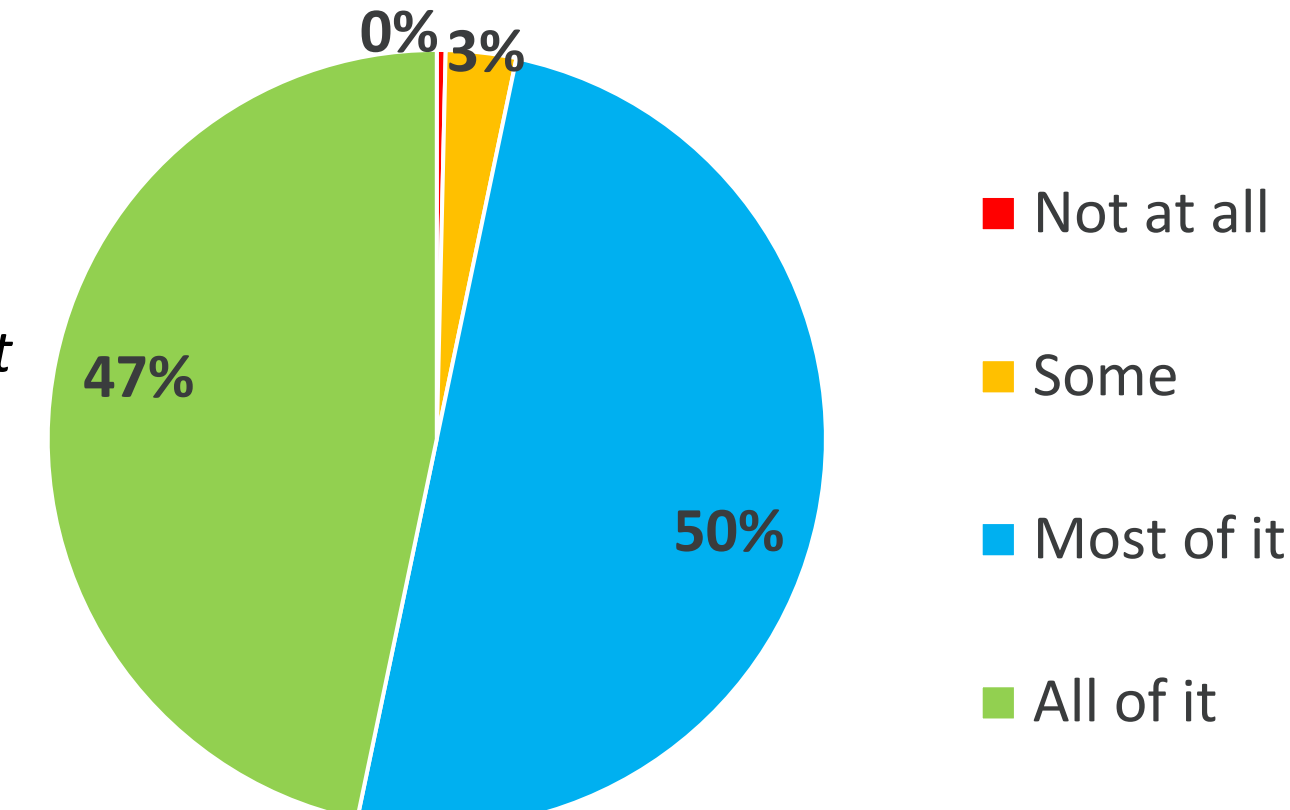
How would you rate your understanding of the knowledge or skill that you have just learnt?

93% of staff rated 'Familiar with some aspects' or 'Has good knowledge' (top 2 ratings)



The course covered the content that I expected to learn.

97% of staff rated 'Most of it' or 'All of it' (top 2 ratings)



Additionally, many had given positive feedback that reflect the receptiveness of the change. Below are some of the feedback received:

"Course was clear and easy enough to follow. Thank you for keeping the quizzes short and sweet as these truly facilitate quick learning of the take home message."

"Really enjoyed the course - very interactive, and not the regular boring PowerPoint slides :) thumbs up."

"Generally a great course to know the key information."

"Have more understanding after play the games! Keep the good job! Thank you :)"

Higher take-up rate

As of 31 Dec 2020, 299 active staff have either completed the course or are in-progress since the launch on 1 July 2020.

It is projected that 546 active staff (based on sign-ups) will complete the course by 30 Jun 2021 – which is higher than annual enrolment of 400 staff through classroom training.

Productivity savings

There is a reduction of over 90% in terms of class preparation efforts (trainers' preparation and logistics) required as compared to face-to-face training. Productivity savings of minimally 80 man days.

Wider outreach to community partners

In Feb 2021, the module was offered beyond TTSH, through the Agency for Integrated Care Learning Institute LMS (AIC LI). Training statistics of our outreach to community partners e.g. enrolment and completion would be tracked henceforth.

Being the **one and only** DOWNTIME and 6S bite-sized module in the market (truly micro-learning; not just PowerPoint slides and videos which we often see), this step to introduce basic Lean concepts through Microlearning was first of its kind.