

Impact of tailoring team-based learning (“TBL”) train-the-trainer workshops from academic to training environments

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INTRODUCTION

- Duke-NUS routinely offers training programs on TBL. The audience is usually university educators across many disciplines. Given the diversity of the audiences, the materials used are more generic.
- In 2016, the Public Utilities Board (“PUB”) in Singapore requested Duke-NUS to teach their trainers to use TBL to train employees in project management.
- Later the Australian Employment Training Solutions (“AETS”) asked Duke-NUS to teach trainers how to develop TBL modules to provide employability skills training to disadvantaged youth using TBL.
- The question was would the training be more effective if the more TBL training material was tailored specifically to the audience requesting the training.
- Note: Duke-NUS conducted both training programs through CognaLearn which is a separate entity setup by Duke-NUS with the purpose of commercializing some of the TBL-related technology and techniques developed by Duke-NUS

METHOD

- There were 28 trainers from PUB and 20 trainers from AETS.
- Average IRAT, TRAT scores and “recommend course” from programs were compared.
- Feedback forms were distributed to participants to find out amongst others, the efficacy of pre-work, and whether learning objectives for each module were met.
- There were five response options and each response was assigned a value:
 - 5.0 for Strongly Agree
 - 4.0 for Agree
 - 3.0 for Neutral
 - 2.0 for Disagree
 - 1.0 for Strongly Disagree.
- The total value of all responses was tallied and divided by the total number of responses to derive the average value of each response to the question ‘the pre-work was effective’.

PUB

- Average value of response was 3.8 points.

AETS

- Average value of response was 4.4 points.

Pre-work

PUB

14 education research articles or voice annotated presentations

AETS

113-page PowerPoint slide deck covering the six modules

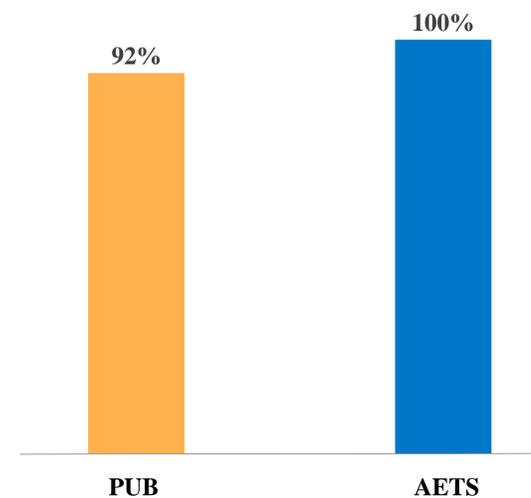


Workshop Agenda

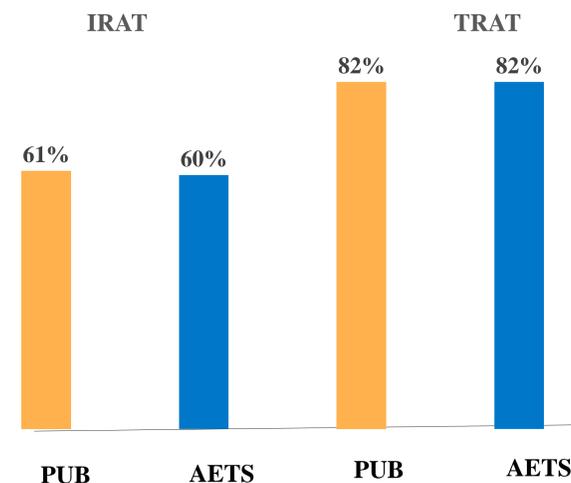
- Module 1: Introduction to TBL
- Module 2: Backwards Design and Learning Objectives
- Module 3: Application Exercises
- Module 4: Multiple-Choice Question Writing
- Module 5: Facilitation for TBL
- Module 6: Best Practices for TBL

RESULTS

Overall recommendation



IRAT and TRAT scores



DISCUSSION

We wanted to explore if there would be any impact on learning if the pre-work material was presented in a more easily digestible PowerPoint format than the typical academic format of articles and recorded lectures. We found that the IRAT/ TRAT results were essentially identical, so specifically tailoring the material to the audience did not interfere with performance. Further, 100% of the AETC participants recommended the course, compared to only 92% from PUB. Thus, one hypothesis for this difference might be that the longer program and the more easily digestible PowerPoint format appealed to the corporate audience better, although further analysis would be required to determine that.

CONCLUSION

We found that easily digestible PowerPoint format did not interfere with learning, thus it might be a better strategy for corporate audiences. It would be good to follow-up with the groups to see quality and impact of the programs they each develop.

ACKNOWLEDGEMENTS



The Australian Employment Training Solutions (AETS) is a training vendor and handles training for the Department of Employment of the Australian government.



The Public Utilities Board (PUB) is the Singapore statutory board of the Ministry of the Environment and Water Resources. It is responsible for ensuring a sustainable and efficient water supply by regulating the country's entire water supply system.

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One author is the Commercial Founder of has a financial interest in CognaLearn™. CognaLearn™ developed TBL software InteDashboard™ www.intedashboard.com in with Duke- NUS (National University of Singapore) Medical School. InteDashboard™ is the technology tool used to deliver the training sessions in this poster.

AUTHORS



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Agenda

PUB

Four modules over two days:

- Introduction to TBL
- Setting Objectives & MCQs
- Creating Applications
- Facilitating TBL

AETS

Six modules over 2 days:

- Introduction to TBL
- Backwards Design and Learning Objectives
- Application Exercises
- MCQ Writing
- Facilitating for TBL,
- Best Practices for TBL



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