Implementing Team-based learning ("TBL") to provide continuing professional education for practicing accountants.

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LICENSEE OF DUKE-NUS OPTIMIZED LEARNING METHODS

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INTRODUCTION

- The author was approached by a partner from a big four accounting firm about using Team-based learning ("TBL") to provide training to practicing accountants. The accounting firm requires each accountant to complete 40 hours of continuing professional education per year.
- The accounting firm selected a 3.5-hour training session for newly promoted audit managers in the very technical area of the Financial Reporting Standard 36 ("FRS 36") which covers impairment valuation.
- The accounting firm had a set of existing materials which could be adopted to TBL format which included:
  - — Learning objectives
  - — Pre-work (accounting firm training presentation and the full text of the specific accounting standard)
  - — Review questions
  - — Review cases
- The author and the learning and development team at the accounting firm met on four occasions for approximately two hours per session to prepare for the workshops.
- There was a total of three weeks from the start of the project to the training workshop

TBL Training Adaption Process

Total process: four weeks (including evaluation)

- **Meeting 1: Review existing materials**
- **Meeting 2: Revise learning objectives**
- **Meeting 3: Revise questions and cases**
- **Meeting 4: Dry-run of workshop**
- **Meeting 5: Actual training workshop**
- **Meeting 6: Evaluation of workshop**

Learning Objectives

At the end of the training participants should be able to:

1. Identify when FRS36 testing is required
2. Determine the level and sequence of impairment testing
3. Determine recoverable amount and Value-in-Use ("VIU")
4. Determine the discount rate for VIU calculations
5. Determine sufficiency of disclosure

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METHOD

- The author and KPMG spent about 20 hours over a three-week period to adapt the existing lecture style materials. The existing materials had multiple choice questions and cases.
- The training was planned with an overview of TBL and why FRS 36 was important to KPMG. It was intended that an Individual Readiness Assurance Test ("IRAT"), Team Readiness Assurance Test ("TRAT"), Clarification Session and Application exercises would follow the overview.
- After the TRAT, teams were asked to reflect on their performance and identity questions that required clarification. Teams that didn't request clarification were asked to provide an explanation to teams that requested clarification.
- At the end of the training, the 53 learners were given a feedback survey using a five-point Likert scale.

Workshop Agenda (with actual time)

Overview:	18 minutes
IRAT:	18 minutes for 11 individual questions
TRAT:	15 minutes for 11 team questions
Clarification:	2 hours 38 minutes (including break)
Application exercises:	Did not use because clarification process took longer than expected

Clarification Process

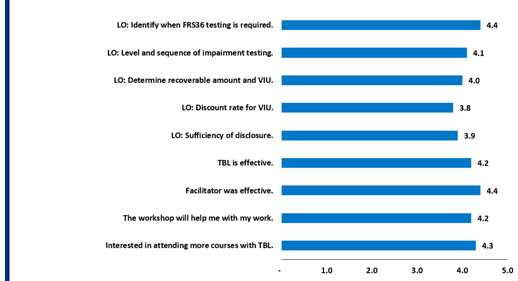
Question	Class mean score	Team requesting clarification	Explanation assignments
1.FRS 36 applies to……	82%	1	8
2. Which of the followings are examples of indicators of impairment? i) significant decrease in market interest rates ii) Market capitalization exceeding the carrying amounts of net assets iii) net cash flows or operating profits that are lower than originally budgeted iv) Cash flows for acquiring the asset, operating or maintaining it that are significantly higher than originally budgeted	88%	None	None
3. Impairment testing is required …… i) Annually for intangible assets with indefinite useful lives, even if there is no indication of impairment ii) Annually for intangible assets not yet available for use, even if there is no indication of impairment iii) Annually for goodwill, when there is indication only iv) (for) intangible assets with definite useful lives when there is indication only	80%	None	None
4. The annual impairment test for goodwill may be performed at any time within an annual reporting period, provided that the test is performed at the same time every year.	92%	4	3 6
5. Which of the following statements regarding forecast cash flows in a discounted cash flow used to estimate value in use are True? i) Forecast cash flows are limited to a maximum of 5 years at all times ii) Forecast cash flows are those which are specific to the entity iii) Forecast cash flows include those relating to financing iv) Forecast cash flows include capital expenditure related to maintaining the asset in its current condition.	96%	5	5
6. Which of the following statements are true? (i) In determining VIU, future cash flows are discounted using a pre-tax discount rate ii) WACC is a common approach in estimating the discount rate. WACC is a pre-tax discount rate. iii) The discount rate used should reflect risks specific to the entity as a whole iv) The cost of debt is based on long-term rates being incurred at the date of valuation for new borrowings, rather than the rates negotiated historically in the debt market for existing borrowings v) In calculating cost of equity, the risk-free rate is generally obtained from the yield on government bonds	72%	1 2 4 6	7

Question	Class mean score	Team requesting clarification	Explanation assignments
7. The cash flows used in determining VIU include… i) Cash inflows from continuing use ii) Net cash flows from the ultimate disposal of the asset iii) Non cash items such as depreciation and amortization iv) Future restructuring plans that is approved by the BOD	72%	3 6	4
8. • Entity X has machine with a carrying amount of $280,000. • The entity is loss making and missed its budget by 50%. There were indicators of impairment • The fair value of the machine is $250,000 and the following costs of disposal have been identified: o Incremental cost in bringing the machines into sale condition $1,500 o Disposal costs $2,000 • Post tax future cash flow forecasts derived from the most recent budgets approved by management are: □ Year 1 $60,000 □ Year 2 $62,000 □ Year 3 $64,000 □ Year 4 $66,000 □ Year 5 $68,000 • WACC = 10% What is the amount of the impairment loss to be recognised, if any?	96%	None	None
9. • On 1 January 20X6, entity X acquires an 80% interest in a subsidiary for $ 2 mil • The identifiable net assets of the subsidiary are $ 2 mil • The NCI is measured as a proportion of the net assets of the subsidiary • The subsidiary is a cash-generating unit. • You are reviewing goodwill impairment • At 31 December 20X6, the recoverable amount of the subsidiary is $ 1.2 mil based on VIU approach. • The carrying amount of the subsidiary is $ 1.3 mil • Calculate the impairment loss for 20X6, if any.	56%	1 8 9	2
10. Which of the following are disclosure requirements under FRS 36? i) Fair value hierarchy when FV less cost to sell approach is adopted ii) Valuation techniques for those classified under level 1,2 and 3 iii) Key assumptions for those classified under level 3 only iv) Post tax discount rates when VIU approach is adopted	22%	4 5 6 7	9
11. Company Z allocates goodwill to the group of CGUs A, B and C. Z uses the same IT system (corporate asset) for all its CGUs, A, B, C and D. Management concludes that the corporate asset's carrying amount cannot be allocated to each CGU on a reasonable and consistent basis. There is an indication of impairment for CGU B. Explain how you would carry out the impairment testing. i) Test CGU B without goodwill and corporate assets ii) Test CGU B and goodwill but w/o corporate assets iii) Test CGU A,B,C and goodwill together but w/o corporate assets iv) Test all CGU and corporate assets but w/o goodwill v) Test all CGU, together with goodwill and corporate assets	52%	10 2 5 6 8 9	1

RESULTS

- **Learning Objectives:** From a learning objectives perspective, 83% of participants reported that the five learning objectives for the training had been met.
- **TBL Format:** Learner survey results showed 94% of learners felt that the TBL approach was effective and 98% were interested in other training events with TBL.
- **Deviation From Planned Agenda:** During the training session, the IRAT and TRAT were conducted as planned. However, the Clarification Session after the TRAT took longer than planned and the intended mini-lecture evolved into a two-hour lecture. There was insufficient time to conduct the application exercises.

Learner Reaction Survey



Source: Impairment Training for New Audit Managers; n=49; Rating based on 5 point Likert scale (Strongly Agree = 5.0; Agree = 4.0; Neither agree or disagree = 3.0; Disagree = 2.0; Strongly Disagree = 1.0).

Learner Comments: what went well…

Testing

- ***Having an individual and group test before providing theories. Understand the topic better.***
- *IRAT and TRAT are interactive and engaging*
- ***There were individual assessment prior to a team based learning so that I am aware from the start on what I am lacking.***
- ***Good to do a test to know the gaps in our knowledge. This encouraged me to be more attentive to find out the answers.***
- ***The training is interactive. It allows us to do a self-knowledge check as well as to discuss with other managers.***
- *The individual test and team test is excellent.*
- ***Having the assessment first let us understand where we are at our level of understanding and subsequently having the team discussion to share our knowledge helps to strengthen the understanding and how others understand***

Team

- *Team discussion was more structured. Training matched the discussion questions.*
- *Team interaction was* ***new and interesting***
- *Team discussions*
- *Group discussions*
- *the team discussion part*
- *team effort*
- *Team effort*
- *The team discussion*
- ***The approach makes the team share their working experiences.***
- ***Team based learning is a more interactive way of learning, encourage team discussion.***

Facilitator

- *clarification of questions*
- *Detailed explanation with illustrative examples*
- *The facilitator would go to the details and would repeat when unclear.*
- *Specific examples provides more insight in application of impairment*
- *discussion with experts*
- *Facilitator was good to engage the crowd*
- *Adnan explained the underlying concept and rationale simply and clearly. This helped in understanding and remembering the key items.*
- *The facilitator is very patient. Information was articulated clearly.*
- *The guidance and sharing session was comprehensive. We are more clear on the impairment testing which is often took very long time to resolve*
- *Facilitator. very good*
- *The presentation is clear and informative.*
- *Examples from ASG team*

Technology

- *The use of the new tool*
- *Very efficient platform for us to test ourselves.*
- *Interesting system*

Overall

- *Overall*
- *overall course went well*
- *Interactive*
- *Good job*
- ***"The learning approach is more interesting than usual classroom training.***
- *interactive*
- *Overall was good.*
- *Class was interactive and provided us a refresher to us all about impairment.*
- *most things*
- *everything went good!*
- ***the structure of the course as it provides a more in-depth discussion rather than just listening to standard materials.***
- *The approach is new and interesting*
- *Better understanding of the topic*
- *The course provided the very detailed knowledge on FRS 36*
- *The training is effective and the facilitators have clearly explain/elaborate the context of the course.*

Learn Comments: even better if…

Pre-work

- *Send us the* ***material earlier so we have time to look through***
- *The notification received for this training was rather last minute. Also, as it has only 1 run, not everyone can make it. Would have been good to know the agenda of the training beforehand too.*
- ***To provide the presentation slides as well as part of the course material before the training.***
- ***To have the slides being shared before the workshop***

Testing

- ***Know our own assessment results***
- ***It might be more useful if we can access our assessment results prior to the clarification/debrief.***
- ***To inform us of the individual results***
- *test was rushed*

Clarifications / facilitation

- ***The debrief session could be further streamlined***
- *Solutions especially for the calculations to be flashed in the slides instead of written on the board, can't really see from the room.*
- *Better explanation.*

Content

- ***include some real audit working paper and example would be better and how regulatory review the file***
- ***To provide further examples***
- *More elaboration on how VIU is computed*
- *More in depth information could be provided.*

Food

- *tea break with food*
- *no food*
- *No food and coffee. Needed for break.*
- *No food/snacks during break*
- *To provide food/coffee?*

Other

- *perhaps smaller class sizes*
- *Respond from class*
- *Sitting people with their own peers before getting us to sit with unfamiliar faces. It would enhance more participation.*

Nothing to improve

- *all is good*
- *everything is good.*
- *n/a*
- *N/A*
- *NA*
- *NA*
- *NA*
- *NA*
- *NA*
- *Nil*
- *Nil*
- *Nil*
- *No comment*
- *No comments.*
- *No comments.*
- *None*
- *none*
- *None*
- *None*
- *None*
- *Nothing*
- *Nothing*

DISCUSSION

- The learner reaction results appear to be quite positive. However, the accounting firm did not have a readily available comparison group so the results could not be easily compared to a control group. The response rate (n=49) of over 90% was considered extremely high by the firm.
- The accounting firm's learning and development team described the ***positives*** of the experience as: very interactive, lots of talking, high energy, clarifications in the right areas, smooth login process, lots of support and effective use of two laptops (one for the presentation and one for the real-time data analysis).
- The accounting firm's learning and development team described the ***opportunities to improve*** as: how to know if the learners really understood, make the process easier for trainers, limiting clarification time or intersperse clarifications with cases, adding some more easy questions.
- From an implementation process standpoint, the accounting firm's learning and development team was able to later adapt existing materials to TBL in business writing and cash flow forecasting. The accounting firm trainers utilized approximately 12 hours of consulting time from the author who was well versed in TBL as well as accounting given his background as a former Chief Financial Officer. The author estimates the accounting firm spent approximately 20 hours adapting the workshop.
- Follow this pilot, the accounting firm team adapted two other training workshops to TBL format without external assistance.

CONCLUSION

- TBL can be an effective way to train practicing accountants. Even with only using some elements of TBL (IRAT, TRAT and Clarification) the participants perception of the session and the accomplishment of learning objectives was positive.
- However, more detailed work could be done to understand the impact of the training on learner knowledge, learner behavior and return on investment (level two, three and four of the Kirkpatrick framework for training evaluation).

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AUTHOR

Brian O'Dwyer is a Team-based learning ("TBL") educator, enthusiast and entrepreneur. He teaches Aeronautical Science for Management, Airline Management and Airport Administration & Finance at Embry-Riddle Aeronautical University in Singapore. He has presented at 28 conferences and workshops on TBL and education technology in Asia, Australia, Latin America and the United States. He worked with a team from Duke-NUS Medical School ("Duke-NUS") to create www.intedashboard.com specifically for TBL. Previously, he was an Entrepreneur-in-Residence, Learning Technologies at Duke-NUS, CFO of ASX/LSE listed Skywest Airlines, a Credit Suisse investment banker and an A.T. Kearney management consultant. He has a BS from Columbia and an MBA from Duke. Email: odwyerb@erau.edu.