

# Stories from the coal face

A case study in improving teaching

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# It's a numbers game...

302

Total weekly face-to-face hours  
required to deliver CFS subjects  
(Spring 2013)

1226.3

ACTUAL

weekly face-to-face hours delivered by  
continuing FT CFS academics

11.5

Number of continuing FT  
CFS academics



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95% of first year  
CFS teaching is  
delivered by casual  
academics



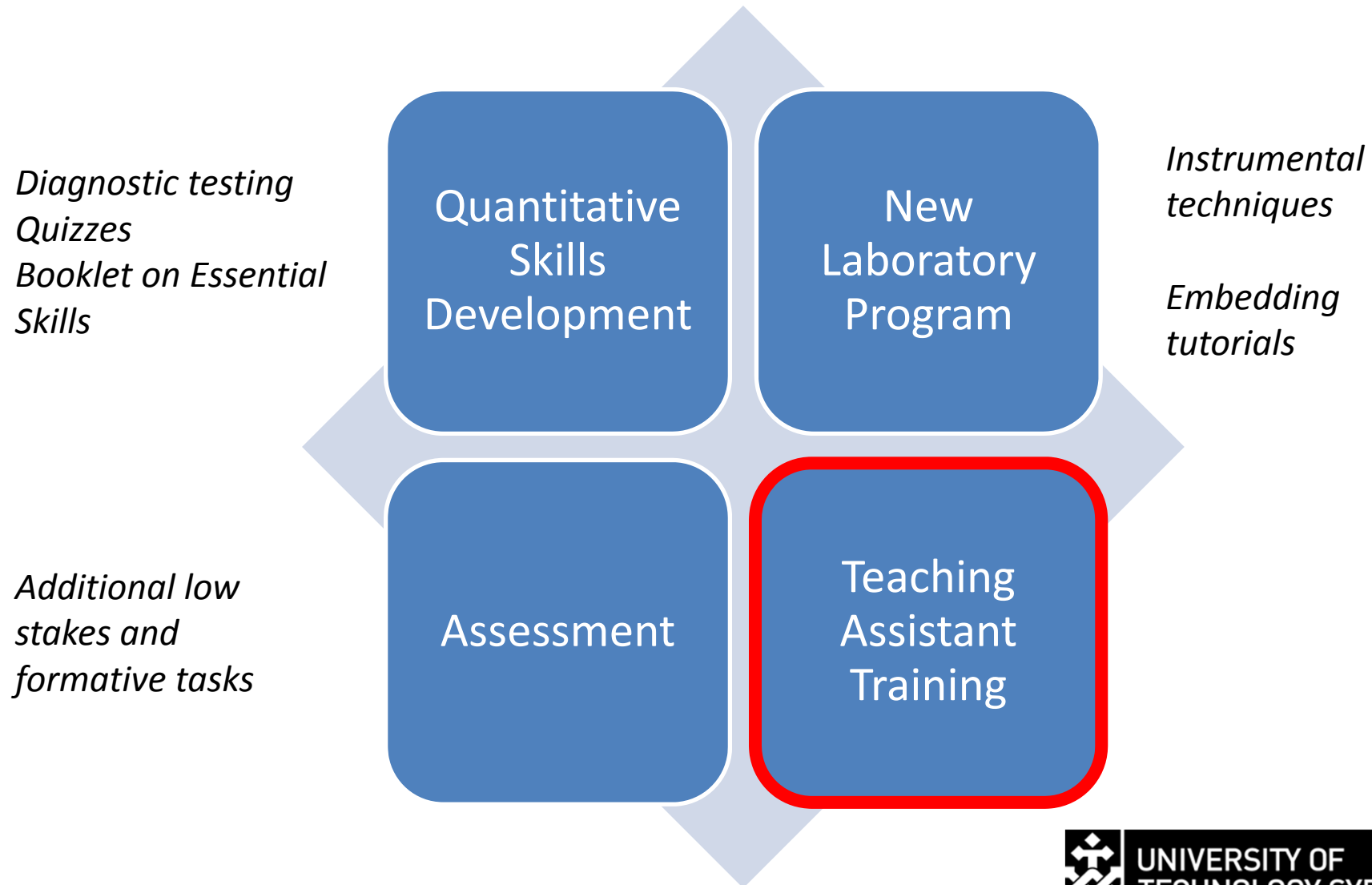
41%

2011 fail rate in Chemistry 1

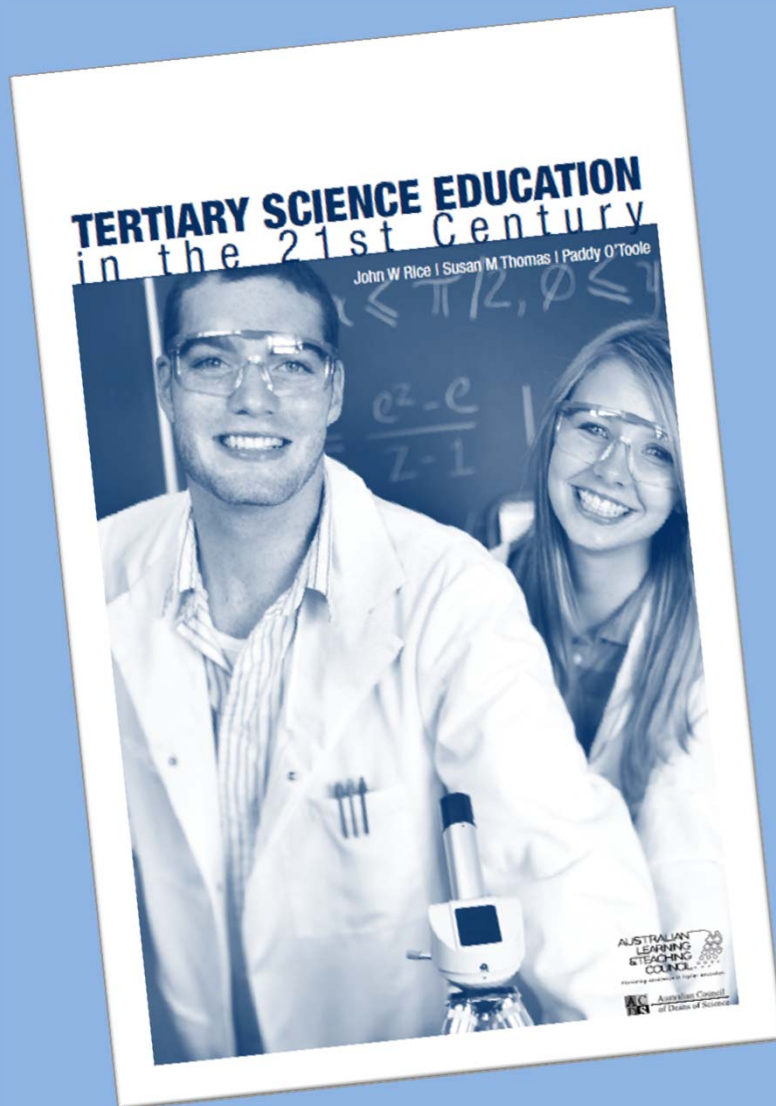


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# Strategies to improve teaching



# Teaching Assistant Training



require levels of **discipline**  
**expertise** and experience

staff **development**

...informed about the  
**curriculum**...

management structures... providing  
**continuity** and  
**experience**



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Level	Nature of support and training	Description
1	Laissez-faire approach	Occurs when no formal training is offered by the university or specific science departments. Teaching assistants rely on their own prior experiences along with the examples set by colleagues. This practice leads to a widespread belief that anyone can teach as long as they "know their content".
2	Generic workshops for new teaching assistants	Provision of an introductory workshop at the beginning of the academic year or semester that does not address the specific needs of a discipline area.
3	<b>Discipline-specific workshops for new teaching assistants</b>	<b>Provision of a series of workshops within an individual department (e.g., biological or physical sciences) with a focus around specific procedures and expectations. They may address issues around laboratory safety, how to deliver instruction, and aspects related to the content.</b>
4	Professor-specific mentoring (apprenticeships)	Based on an apprenticeship model with demonstrators working closely with an individual professor in the department.
5	Partnerships with discipline-specific educators (such as science, mathematics) for support and mentoring	Establishment of formal partnerships between demonstrators and science education graduate students with experience of science methods.

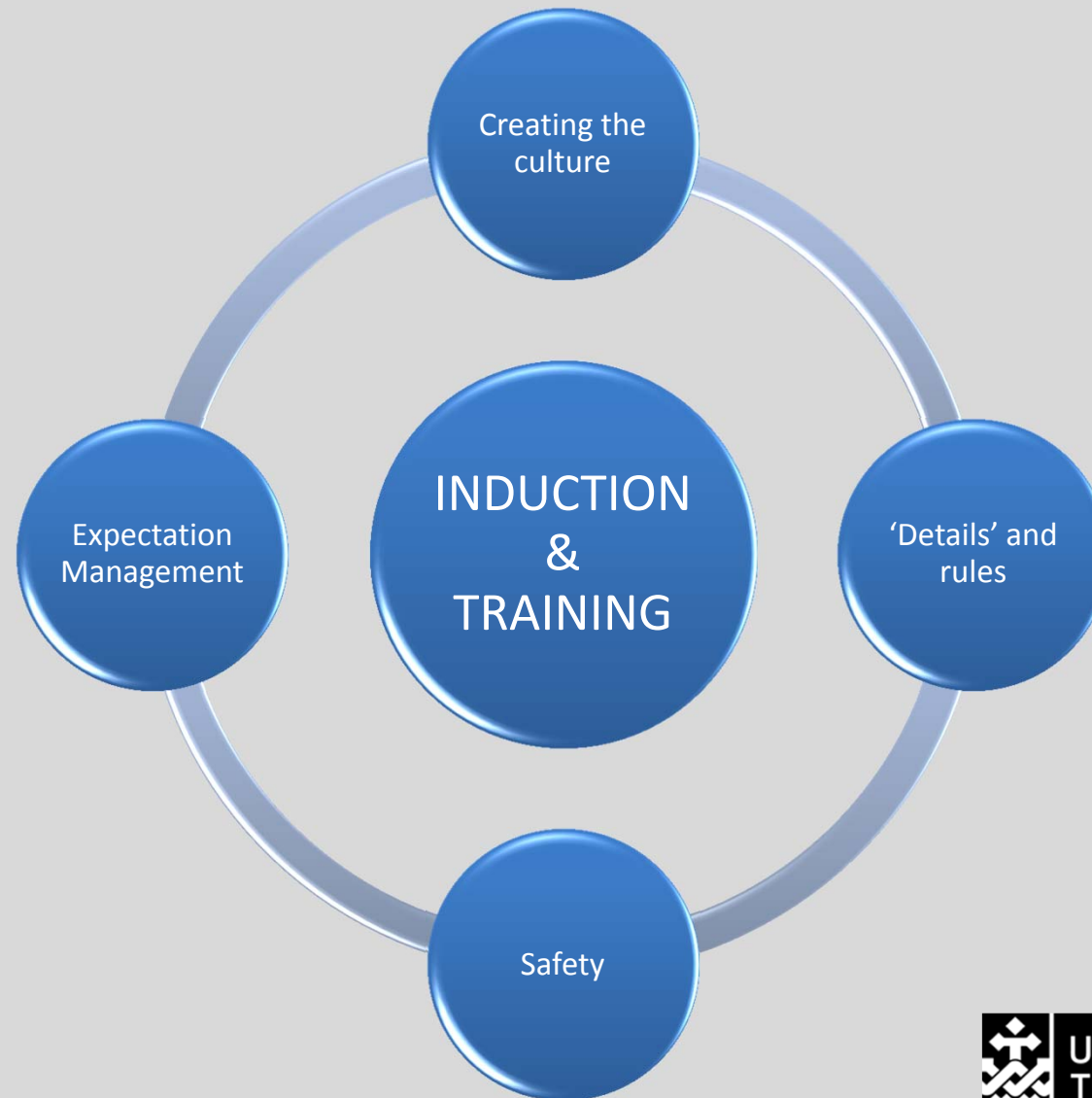
 **Level 2.5**

(Source: derived from McCormas & Cox, 1999)



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# CFS Teaching Assistant Induction





16%

2012 fail rate in Chemistry 1



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# Evaluation

## Assessment of TA's

- SFS Feedback
- Self Assessment & Reflection

## De-brief Session

- End of semester
- Recommendations

## Student Performance in Chemistry 2

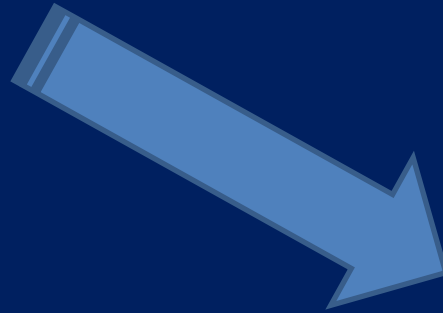
- Improved pass rates
- Few structural changes



# Challenges

\$4 900

*Cost to deliver  
induction program*



\$89 830

*TA salaries to deliver laboratory  
program*

5%



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