



# Teaching with Technology

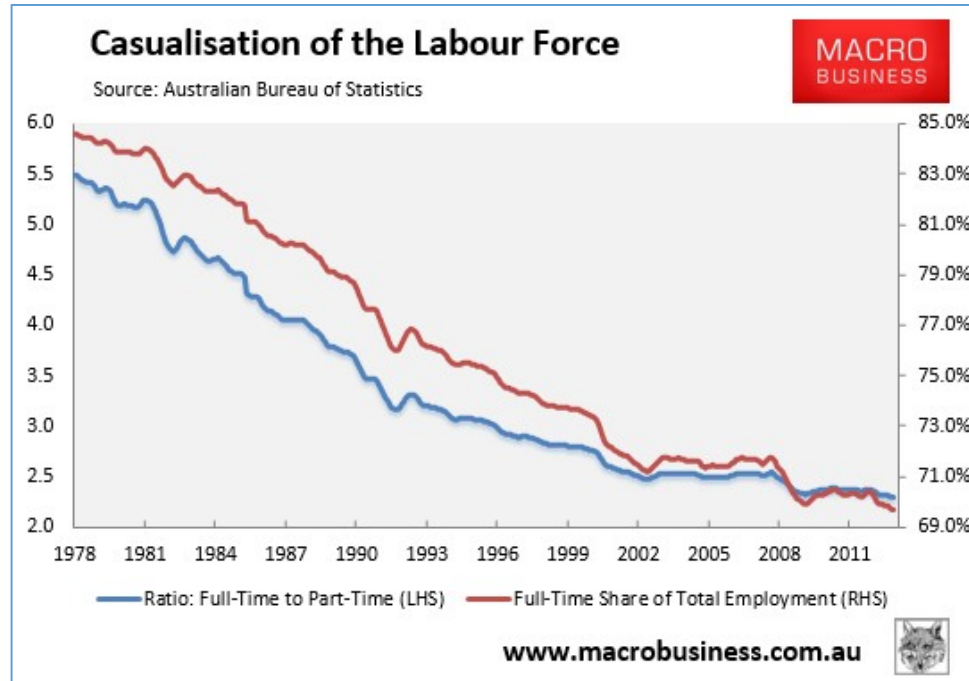
**David Bond**

UTS Business School

 @drdavebond

Context

# Context – Workforce



**Increasingly casualised workforce**

**“...47% of total US employment is at risk”**

**The Future of Employment**  
Carl Benedikt Frey & Michael Osborne

# Context – Workforce

## **Top 10 skills required by students in 2020:**

- 1) Complex problem solving
- 2) Critical thinking
- 3) Creativity
- 4) People management
- 5) Coordinating with others
- 6) Emotional intelligence
- 7) Judgement and decision making
- 8) Service orientation
- 9) Negotiation
- 10) Cognitive flexibility



# Context – Universities

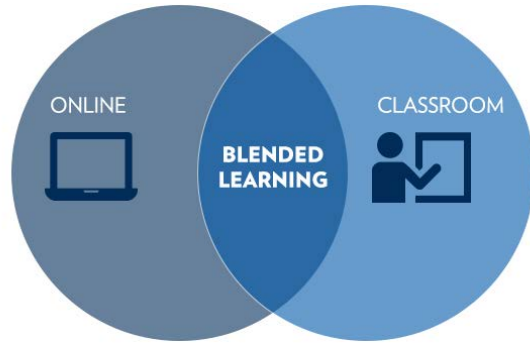
## **Universities' league table obsession triggers mental health crisis fears**

Academics urged to open up about stress and anxiety over high-stakes research audit

“The REF (research excellence framework) values research that drives forward the cutting edge of the discipline, or research that makes a difference to public policy or the economy. But a lot of our research and writing is directed towards students – the next generation that we are meant to be nurturing. The REF doesn't care about them at all.”

Dr Scott-Warren, Cambridge University

# Context – Universities



**Blended learning**

**Large student cohorts**



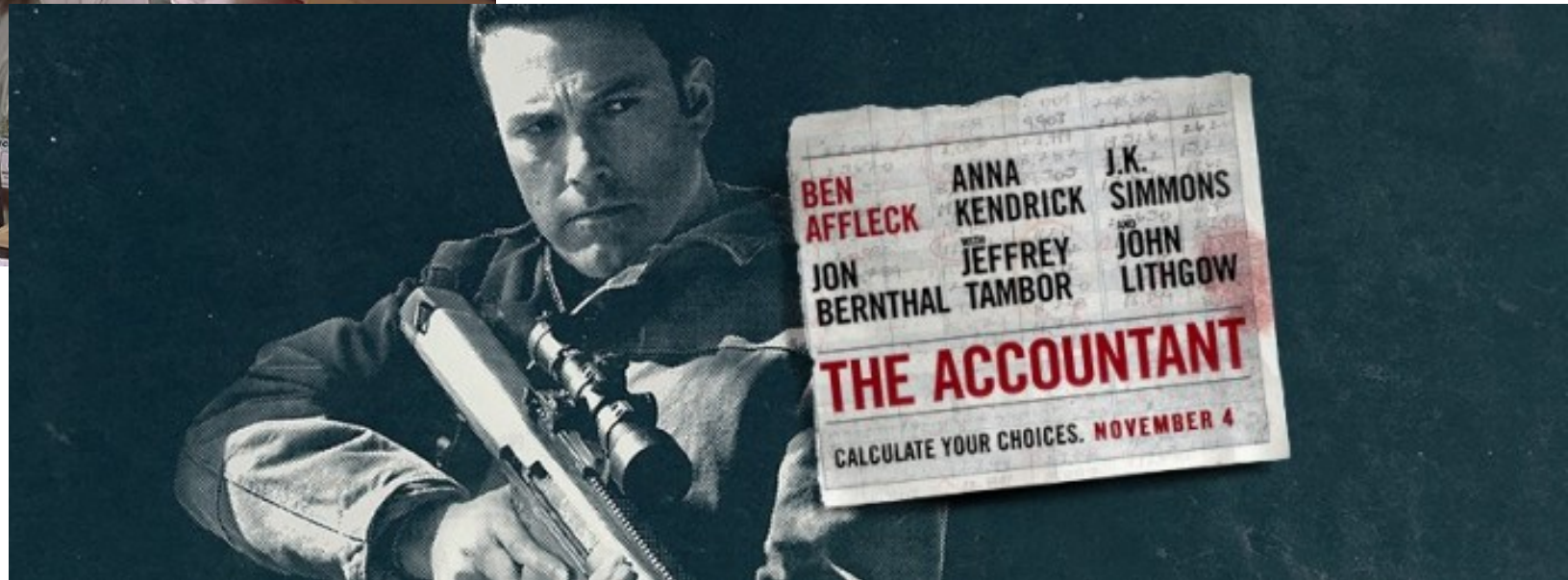
**Modular learning**

# Context – Accounting



Issues regarding perception

Improving?



# Context – Accounting

The Future of Employment  
Carl Benedikt Frey & Michael Osborne

**Auditors and accountants  
have a 94% probability of  
computerisation**

**What are the impacts of  
technologies like block  
chain on accounting and  
auditing?**





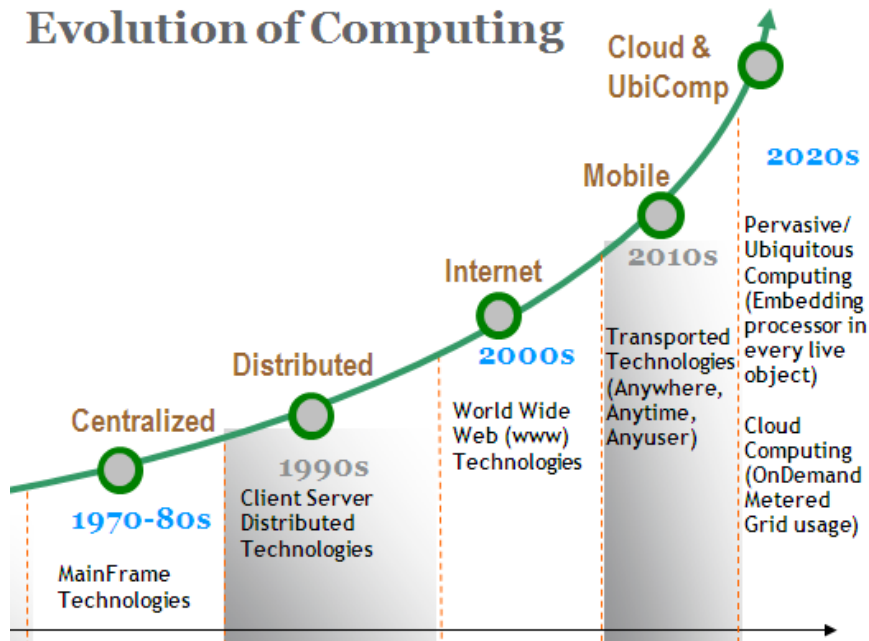
Context – Technology

## **Technology**

*A manner of accomplishing a task especially using technical processes, methods, or knowledge*

Merriam-Webster Dictionary

# Context – Technology



**Substantial (and recent) increases in computing power and connectivity**

**Massive increases in the amount of data and our ability to use it**



# Context – Technology



# Context – People



# Accounting for Managerial Decisions

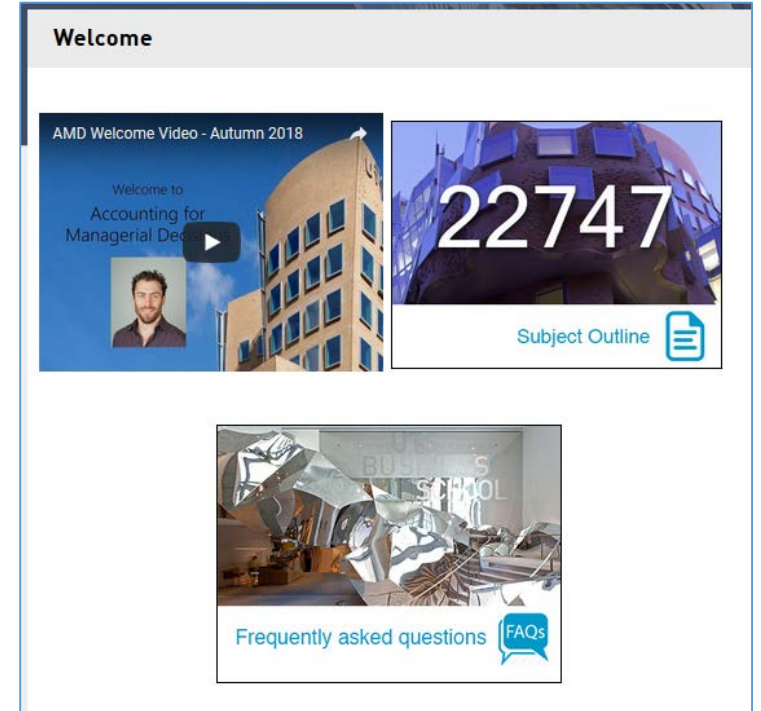
Autumn 2018

# AMD

- Welcome – Camtasia/Canva/YouTube
- Class – Mentimeter/iPad
- Home – Videos/Smart Sparrow
- Support – Zoom/Survey Monkey
- Admin – Google Docs/Genius Scan+



zoom



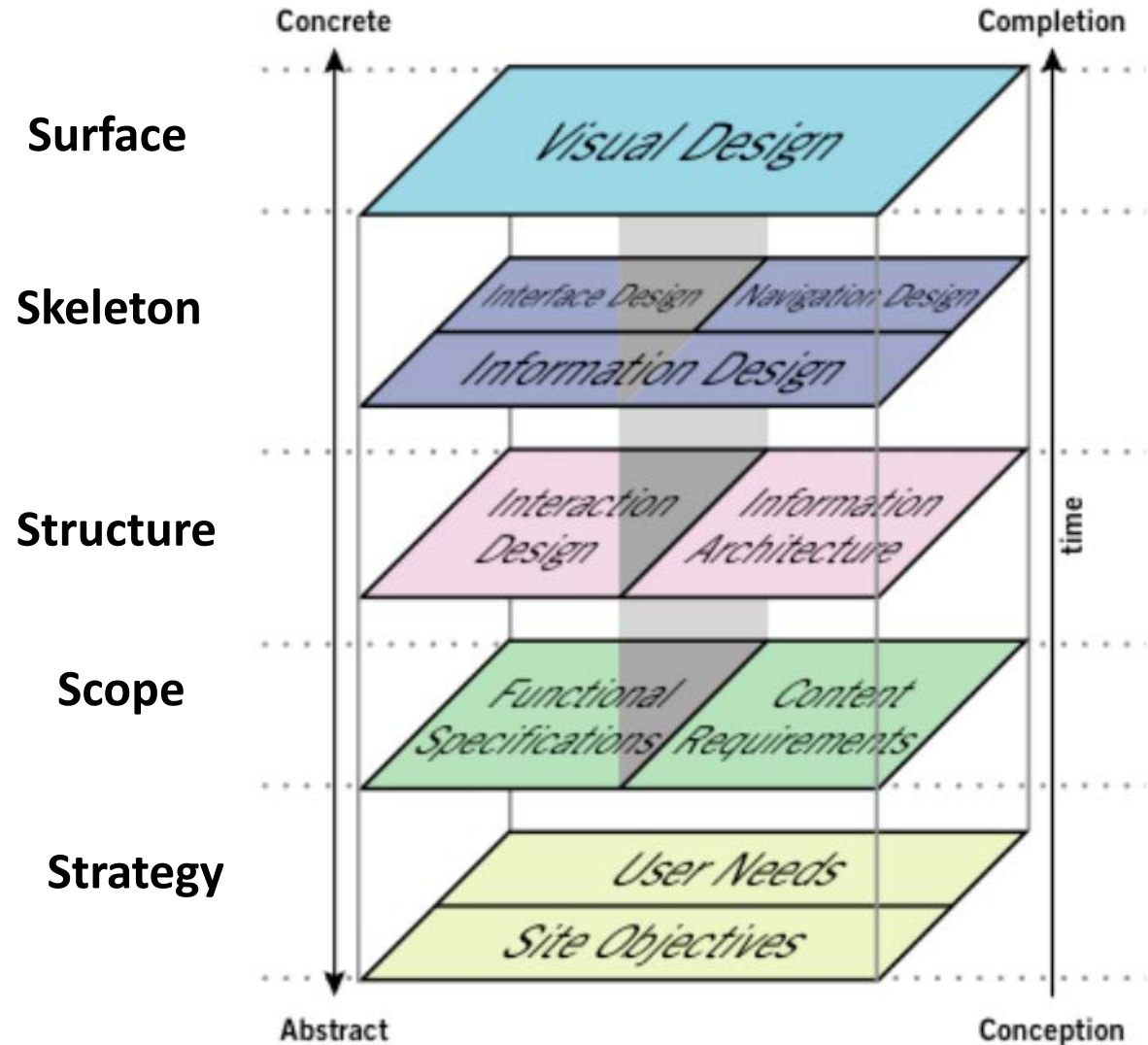
# Design Principles

# Design principles – UX

- “The practice of creating engaging, efficient user experiences is called **user-centred design**.”
- “Take the user into account every step of the way as you develop your product.”
  - Simple concept
  - Complex implications

## Elements of User Experience

Jesse James Garrett, 2000





# UX Design – User needs – Personas

- “A persona represents a cluster of users who exhibit similar behavioural patterns in their purchasing decisions, use of technology or products, customer service preferences, lifestyle choices, and the like. Behaviours, attitudes, and motivations are common to a "type" regardless of age, gender, education, and other typical demographics. In fact, personas vastly span demographics.”
  - Kevin O’Connor (2011)



# UX Design – User needs – Personas

- Have their foundation in real people and are derived from quality research
- Never based on one individual. Created to represent a set of characteristics found across many.
- Employed to better understand what users want to accomplish
- Multiple personas required
  - Primary, secondary, negative



# UX Design – User needs – Scenarios

- A scenario describes the situation that brings the **persona** to the **product**, their **interaction** with that product and lead to how they **perform a specific task**



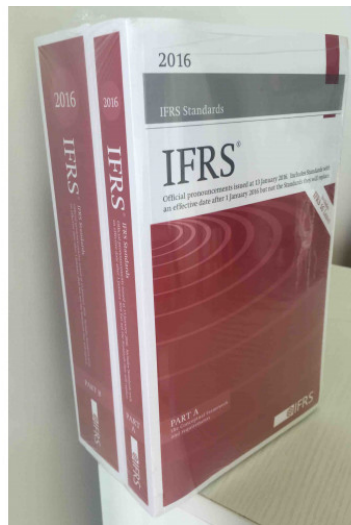
# Task

## Develop a persona for one of your classes

- Give them a name, age, gender, location
- What is their motivation for studying accounting
- What is their background (i.e. backstory)
- Any prior accounting experience?

# UX Design – Information Design

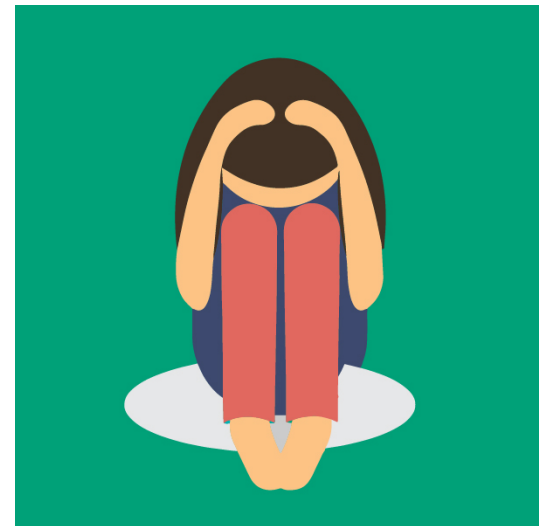
*Data are facts; information is the meaning that human beings assign to these facts. Individual elements of data, by themselves, have little meaning; it's only when these facts are in some way put together or processed that the meaning begins to become clear.*



Wurman (1989)

# UX Design – Information Design

- Information anxiety is caused when:
  - We don't understand the information
  - Feel overwhelmed by the amount of information
  - Don't know if certain information exists
  - Don't know where to find information
  - Know where to find it, but don't have the key to access it
    - Girard and Allison (2008)



# UX Design – Information Design

- Information anxiety can be avoided if information is organised so that:
  - Easy to understand and interpret
  - Not overwhelming
  - Easy to locate / find and evident to users
  - Easily found (if user feels lost)
  - Clearly structured for ease of navigation
  - Accessible
  - Usable
    - Wurman (1989)



# Creating content

Audio / Video / Infographics



# Audio

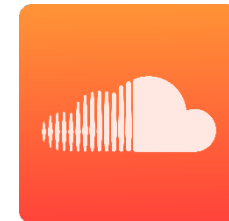
**Audacity** is a good means to record and edit audio

- <https://www.audacityteam.org/>
- Free
- Download and install software
- Export output in a variety of file formats



**SoundCloud** is a good means to distribute audio

- <https://soundcloud.com/>
- Free (basic); \$16/month (Pro)
- Online account
- Can make links public or private



# Audio

- Resurgence in podcasts/radio in recent years
- Think about when users are likely listening to it
- Consider an interview style recording
- Have a plan before starting
- Smile when talking
- Mistakes are fine
- Be authentic



# Video

**Camtasia** is a good means to record and edit video

- <https://www.techsmith.com/video-editor.html>
- \$249 single user license
- Download and install software



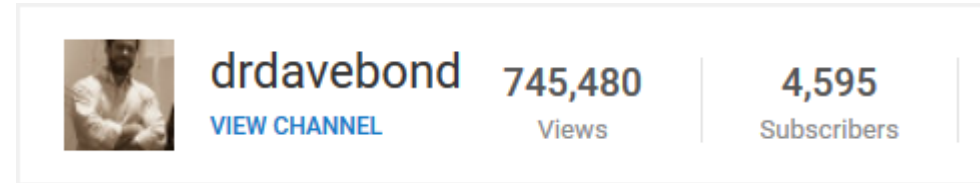
• **Youtube** is a good means to distribute video

- <https://www.youtube.com/>
- Free
- Online account – links to your Google account
- Can make links public, unlisted or private



# Video

- Powerful instruction method
- Keep things short (5 – 10 minutes)
- Personal or professional Google account
- Have a plan (storyboard / script)
- Smile when talking
- Mistakes are fine
- Be authentic



A screenshot of a YouTube channel banner for 'drdavebond'. On the left is a profile picture of a man in a white shirt. To the right of the picture, the channel name 'drdavebond' is displayed in bold black text, with a blue 'VIEW CHANNEL' link below it. Further right, the view count '745,480' is shown in black text with 'Views' in smaller grey text below it. On the far right, the subscriber count '4,595' is shown in black text with 'Subscribers' in smaller grey text below it. The entire banner is enclosed in a thin grey border.



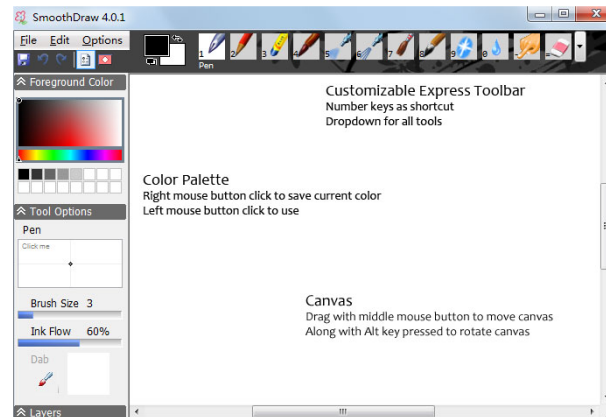
# Audio / Video – additional



**Microphone:  
Logitech USB  
Desktop.  
Approx. \$30**



**Tablet: Wacom  
Intuos Pro. Large  
Approx. \$500**



**Drawing:**

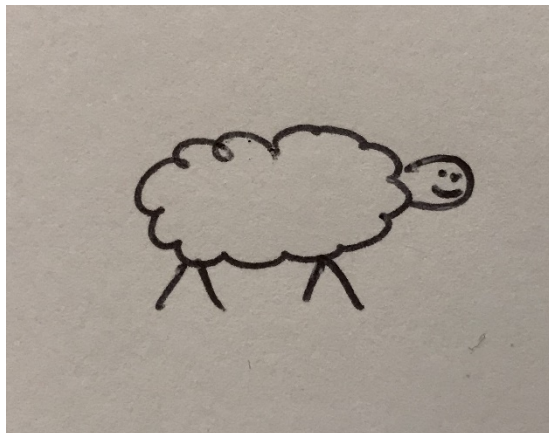
**[www.smoothdraw.com](http://www.smoothdraw.com)**

**Free**

# Infographics

**Canva** is a great way to create designs and documents

- <https://www.canva.com/>
- Free
- Online account
- Lots of templates to work from
- Lots of free images



# Task

## Create an infographic

- Create a Canva account (<https://www.canva.com/>)
- Find a template you want to use
- Use a basic accounting concept or principle
- Adjust the template as required
  - Add imagery as/if appropriate

# Engaging students

Interactive presentations / social media



# Interactive presentations

## Mentimeter

- <https://www.mentimeter.com>
- Free (basic); \$8/month (Standard)
- Anonymous
- Neat functionality



## Socrative

- <https://www.socrative.com/>
- Free (basic); \$60/year (Pro)
- Anonymous
- Not as large a range of functionality



# Interactive presentations

## Kahoot

- <https://kahoot.com/>
- Free
- Quick, fun game
- Neat functionality re leaderboards



# Social media

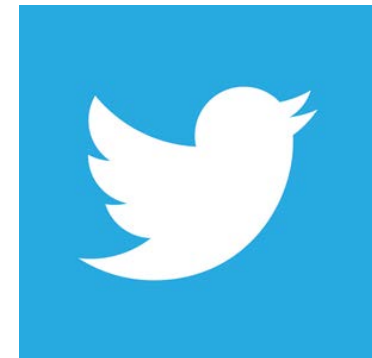
## Facebook

- <https://www.facebook.com/amandalovestoaudit>
- Free (well...)
- Facebook penetration 18-24 year olds (US): 89%



## Twitter

- <https://www.facebook.com/amandalovestoaudit>
- Free
- Students don't need an account to view
- Can include a widget in your LMS



# Supporting students

Online video classes

# Supporting students

**SurveyMonkey** is a good means to elicit areas of concern

- <https://www.surveymonkey.com/>
- Free (basic account) or \$37/month (standard)
- Online account



**Zoom** is a good web conferencing system

- <https://zoom.us/>
- Free (basic account) or USD 14.99/month Pro
- Up to 100 participants
- Can record session for upload afterwards



# Supporting students – impact

## Zoom

- First time use in Autumn 2018
- One session – 95 enrolled, 67 attend, 88 minutes long, average attend 65 minutes
- 93 posts on chat
- YouTube – in the 8 days available = 537 views, average time 14 minutes (25-40% watched nearly all)

## GoToTraining

- <https://www.gotomeeting.com/en-au/training>
- Started using in an undergraduate subject
- Maximum 50 participants – 4 sessions: 200 enrolments – 140 attend (70%), 88 minutes long (avg), average attend 61 minutes
- YouTube – 1,371 views, average time 13 minutes

# Student tasks

Screencast assignment / Video interviews

# Student tasks

## **Screencast assignment** in introductory accounting

- Wakefield et al. (2017)
- Extra credit assignment
- Students required to make and upload 3 minute video
- <https://youtu.be/8BwPrFWpCjQ>

**SCREENCAST ASSIGNMENT  
ACCOUNTS RECEIVABLE**





# Student tasks

## **Video interviews** in auditing & assurance

- White and Ma (2016)
- “It [KPMG] also screens candidates' "level of personal impact" by getting them to film a four-minute "selfie" video.” (King and Tadros, 2015)
- Students provided 3 questions and then had to 2 minutes to record answers



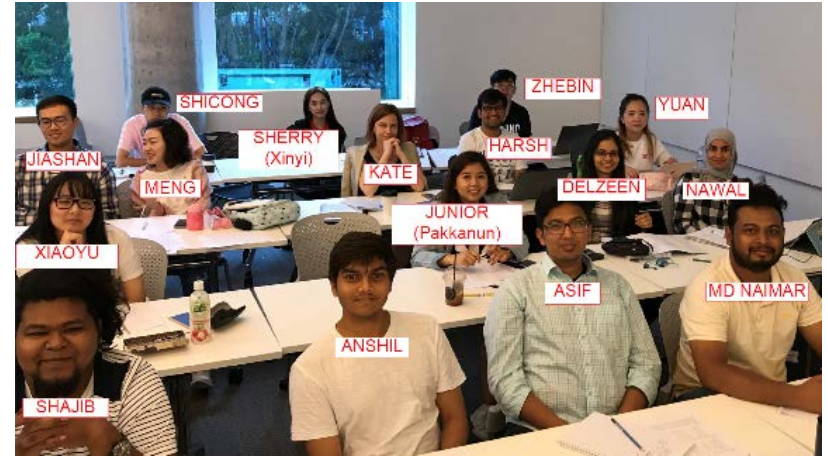
# Productivity tools

Tablets / Google Drive / Genius Scan + / Spark Plus / Trello

# Productivity / admin tools

Use **tablet/phone** for class photos

- Annotate with student names
- **Google Drive** is great for distributed work
  - <https://www.google.com/drive/>
  - Great if working with a large teaching team
  - Can provide real time data



# Productivity / admin tools

## Genius Scan +

- A great tool for organising news articles
- <https://www.thegrizzlylabs.com/genius-scan/>
- Approximately \$13

## SPARK Plus

- <http://sparkplus.com.au/>
- Allows for student self and peer rating
- Pricing unknown

## Trello

- <https://trello.com/>
- Project management tool
- Free (basic)



# Additional resources

## Embracing Digital Technologies in Accounting Education

- Deakin University, Australia
- <https://blogs.deakin.edu.au/learning-innovations/2015/08/05/embracing-digital-technologies-in-accounting-education/>
- YouTube – “Deakin Accounting Education”

Talking Accounting – [www.talkingaccounting.com](http://www.talkingaccounting.com)

AFAANZ Accounting Ed SIG - <https://www.afaanz.org/news/afaanz-accounting-education-special-interest-group>

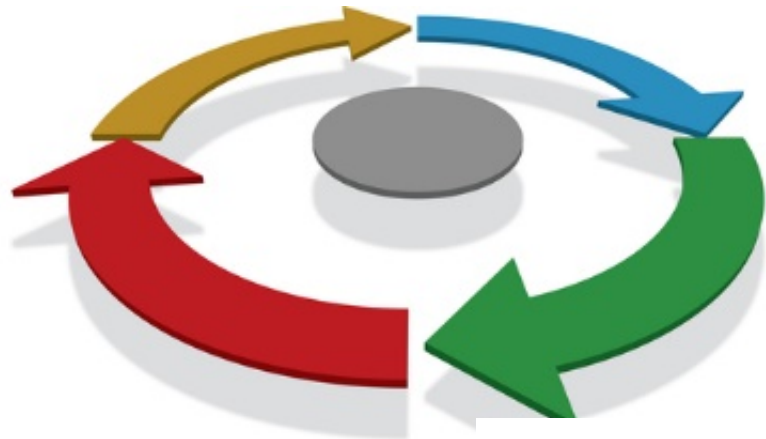


# Lessons learned

**Collaborate**

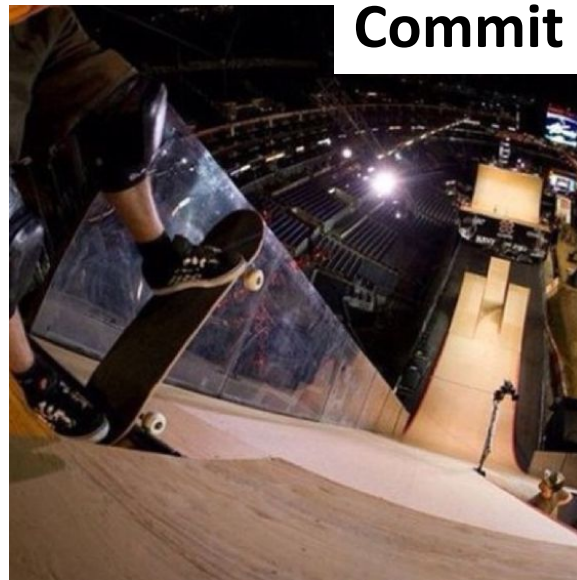


**It takes time**



**Iterate**

**Commit**



**People**



[www.slideshare.net](http://www.slideshare.net)

“David Bond”

Thank  
you!!

# References and links

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