Dr Saib (Seb) Dianati

Ms Marcia Schubert
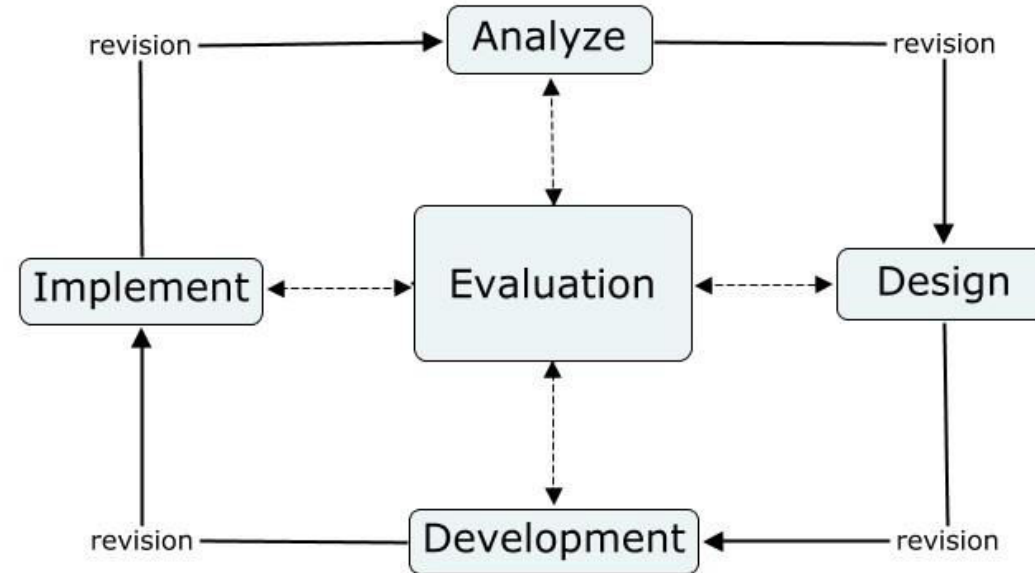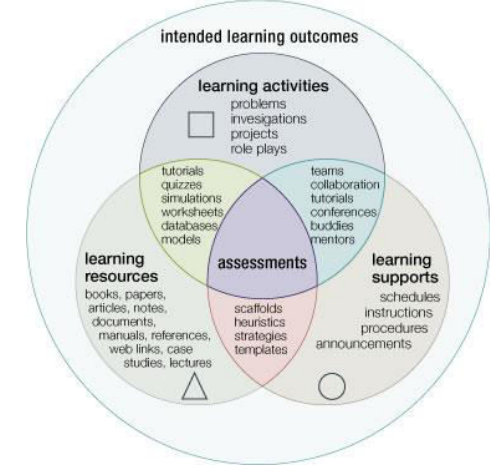
**Synchronous and asynchronous academic support for online students:
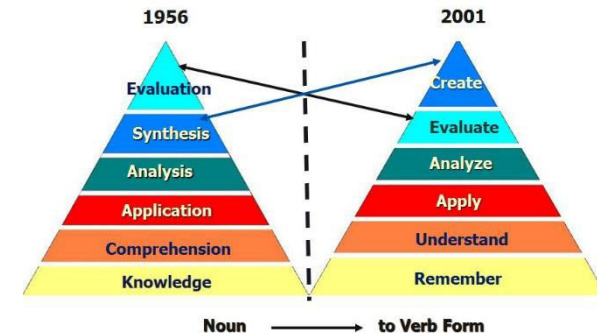a review of technological tools**

Diagram 1: Components of a learning design Oliver and Herrington (2001)

AIDDE

Morrison, Gary R. (2010) Designing Effective Instruction

David R. Krathwohl A Revision of Bloom's Taxonomy: An Overview. THEORY INTO PRACTICE, Volume 41, Number

Send a link

- https://au.bbcollab.com/guest/a8d4725e15264cc0bf31ab053de99d2b

Research Objective

- The potential of an effective in-sourcing solution to a current institutional, and to some extent, nation-wide need to support online students.

- BC and AC for academic skills support and development to 1) embed discipline specific academic skills within online courses and 2) embed generic academic skills programs across online courses, or 3) as an online "Virtual Drop-In Centre".

Distance Education Student Numbers by Australian Universities

Figure 1: Distance Education Student Numbers in Australian Universities
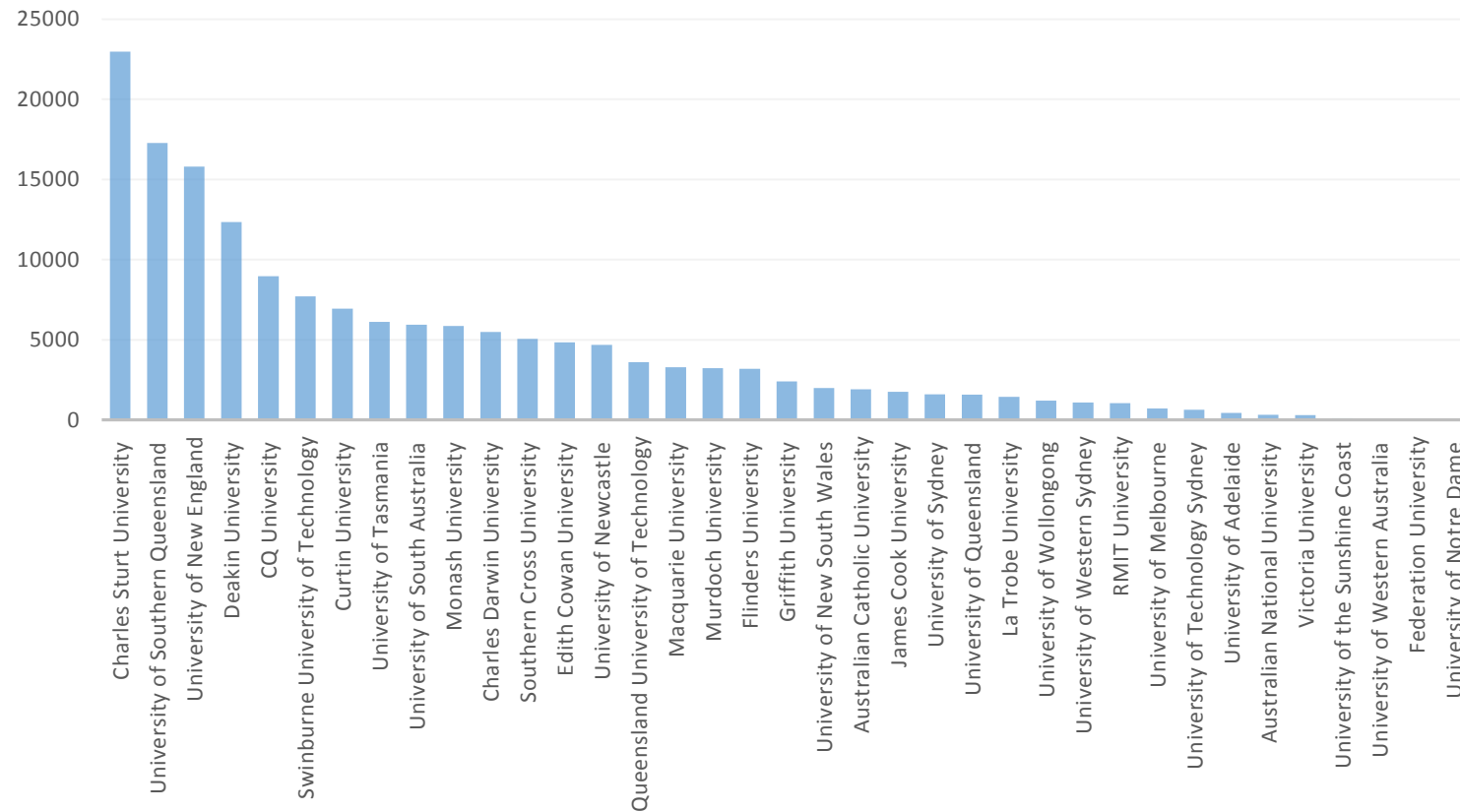
Dianati & Schubert (2017) Synchronous and asynchronous academic support for online students: a review of technological tools

Literature review

- From the 'fringes' into a core part of the curriculum
- Transforms a deficit, remedial, and reactive service into a proactive, strength-based approach.

- learner-to-content, learner-to-learner, learner-to-instructor and learner-to-interface interaction

- Prior knowledge, cultural background, and academic support were not well-considered.

Literature review

- One key recommendation from the literature was the need to adapt content, communication style and method of interaction for online delivery

- Barnhart and Stanfield (2011) advised on cutting content down compared to what they would normally deliver in a traditional lecture

- Send email to connect students 2) don't do too much 3) make them collaborative 4) get feedback and 5) be prepared
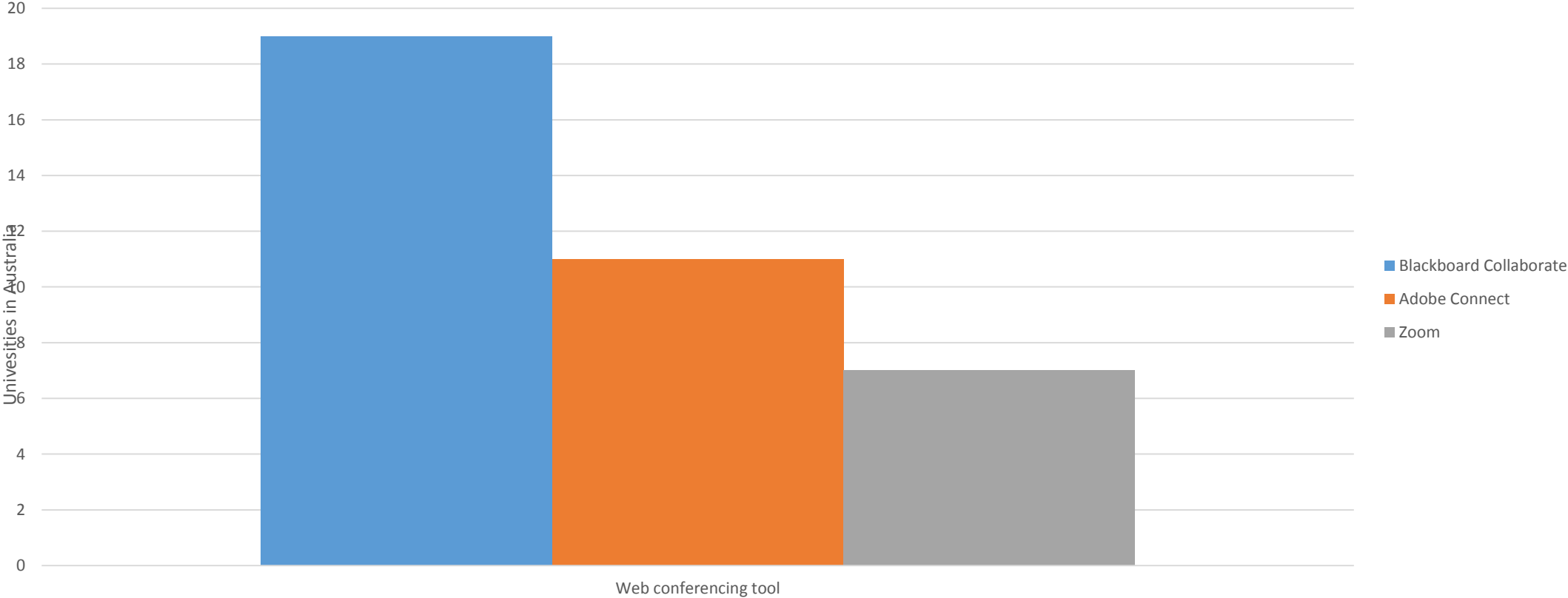
Recommendations
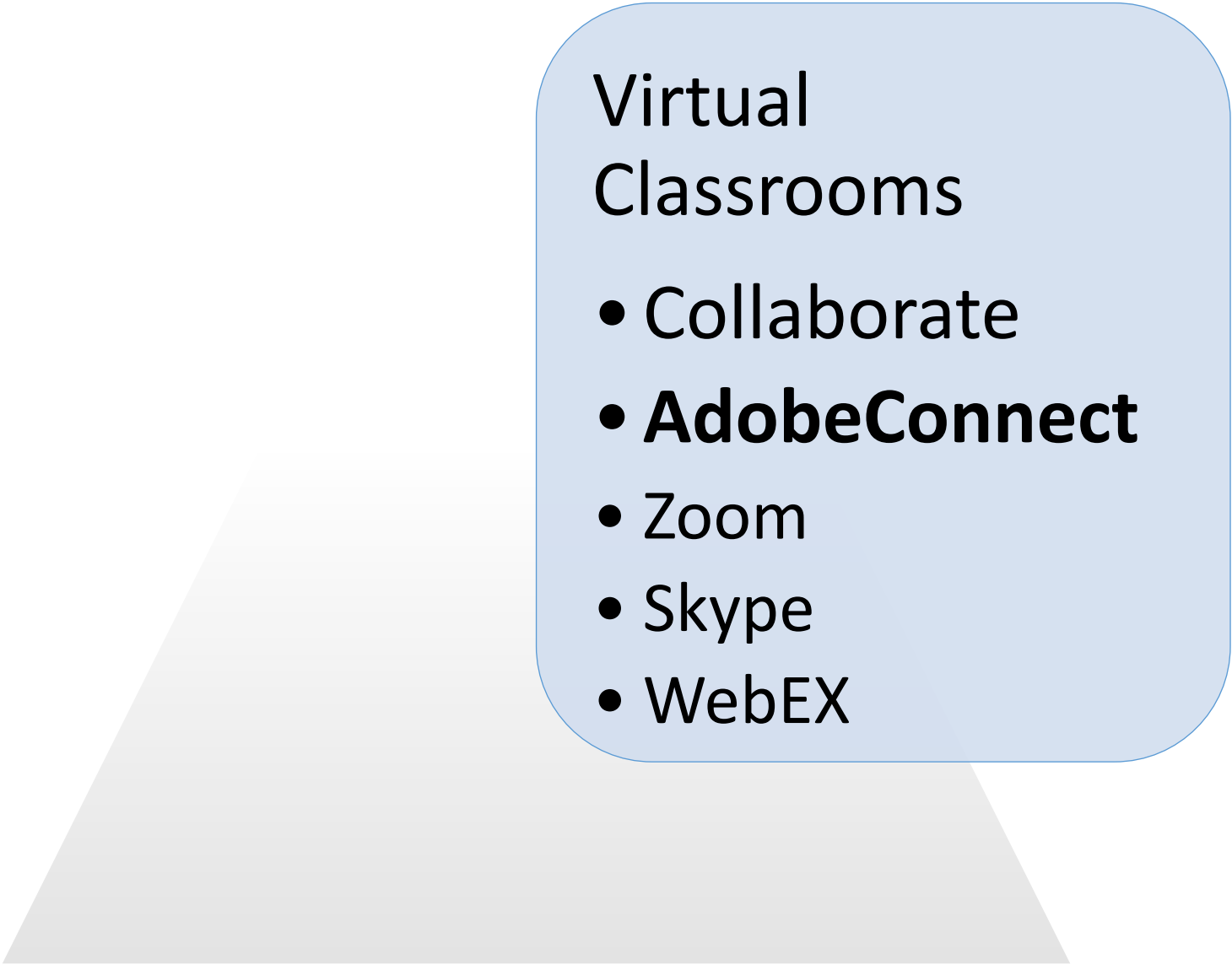
- 1) to schedule a practice run meeting for familiarity;
- 2) multiple channels to remind students of meeting date and time;
- 3) send meeting announcements and changes well ahead of time;
- 4) select the best layout for students depending on the number of students (i.e. class presentation vs small group discussion;
- 5) upload lecture material ahead of time to AC;
- 6) have a plan B if communication breaks down.

Ground rules were recommended to be adhered

1) mutual respect
2) everyone contributes
3) no criticism of speaker while speaking
4) communicate clearly
5) no interruptions
6) only one person speaking at a time (Armstrong and Thornton 2012

Literature Review

- The benefit of BC over AC is that it provides a phone conferencing feature so if students experience internet issues, they can call the session phone number and enter a unique pin to still participate in class (Jones & Hansen 2014).

- Vu and Fadde (2013) who found that in AC, students were more likely, and preferred to chat more often, using the keyboard function, more so than video or audio discussion

- Hudson, Knight, & Collins (2012, p. 37) "further studies are warranted to determine what features can enhance student participation, motivation, and achievement in real time, synchronous environments".

Research Methodology

Identify Problem

Identify Research

Interact with Subject

Monitoring & Compiling

Reflection and Solutions
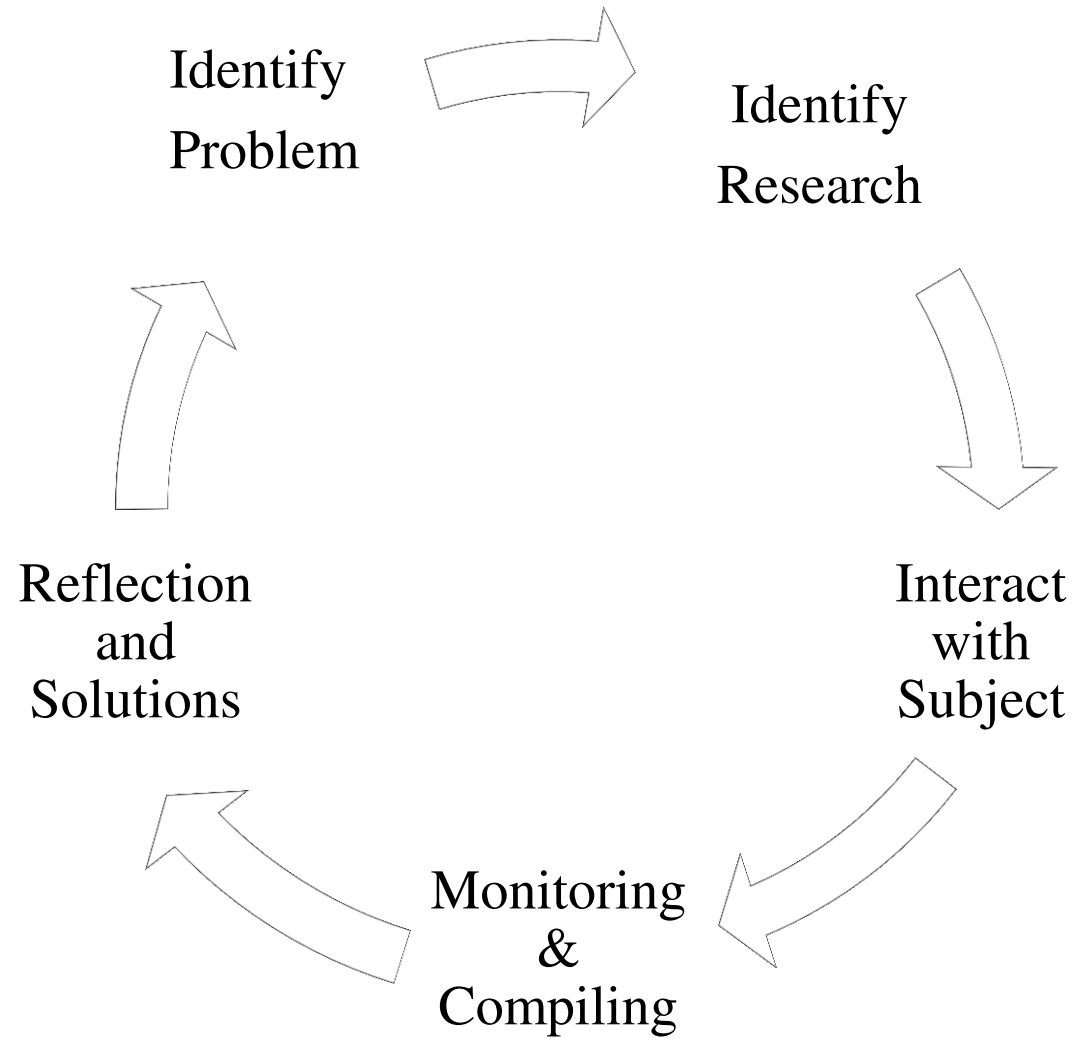
Technology Acceptance Model
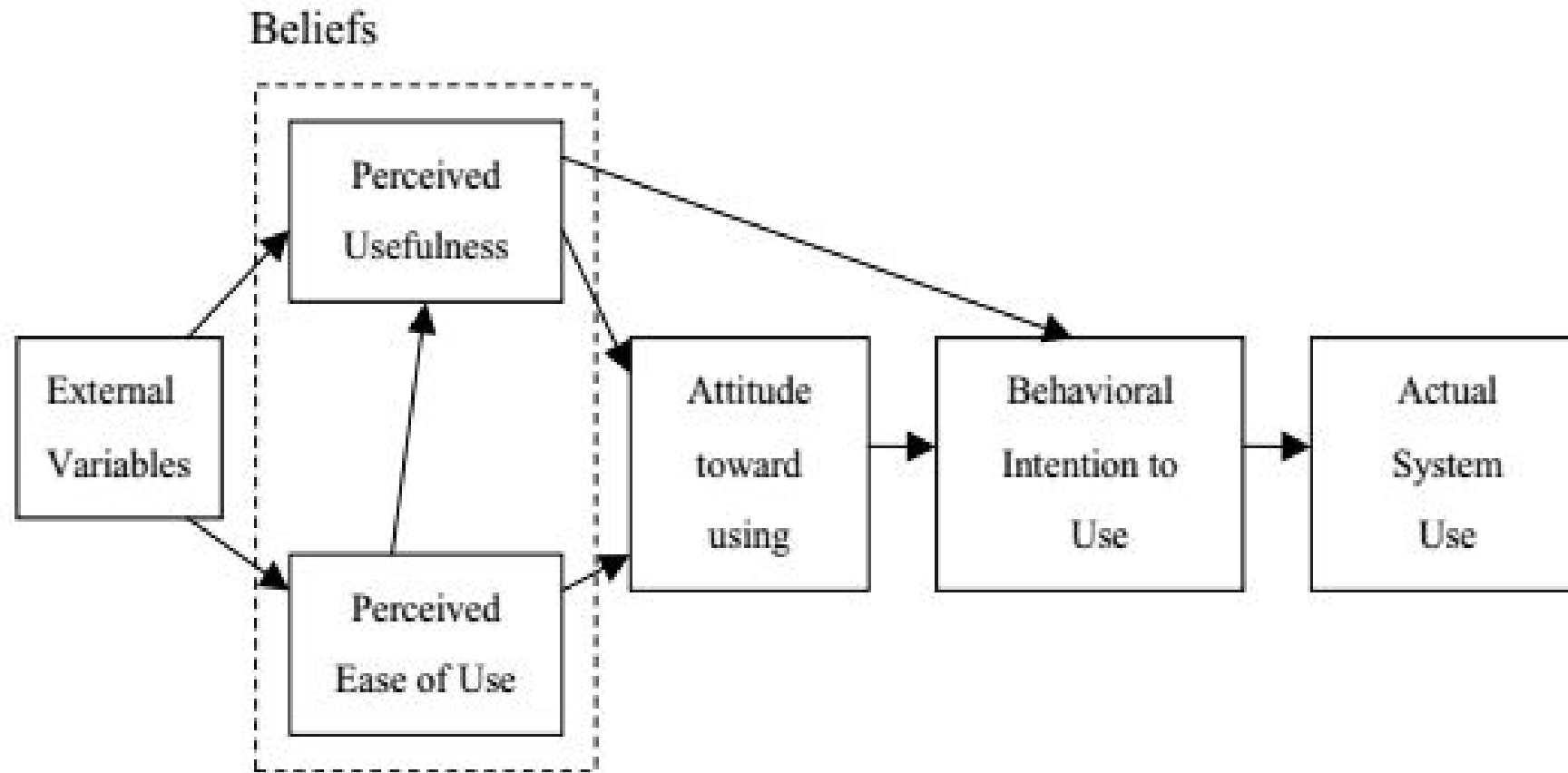
Adobe Connect
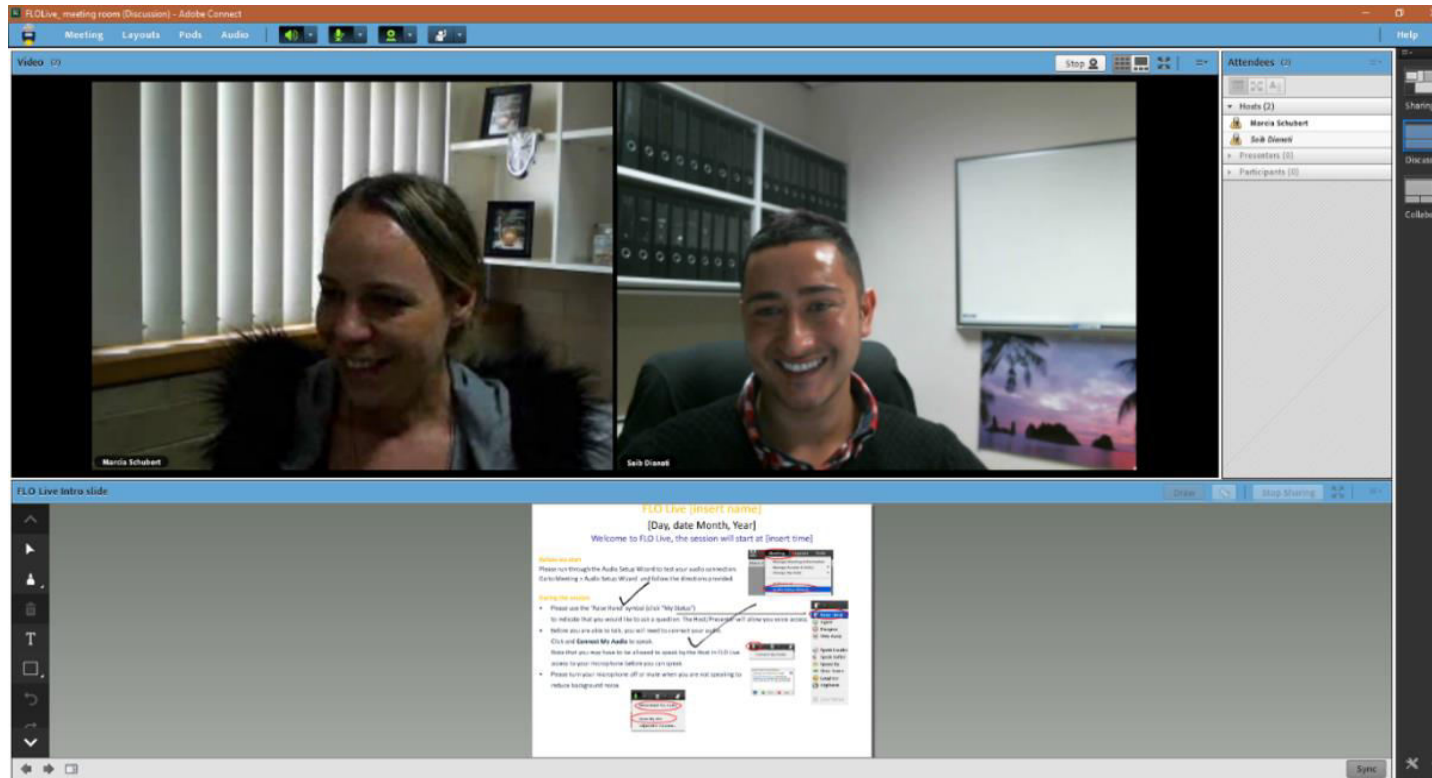
- While both BC and AC offer similar features (see Appendix B), BC is more predominantly used in a learning environment.

- BC has the benefit of developing reoccurring appointments, beneficial for institutions considering a 'Virtual Drop-In Centre'

- Extremely beneficial, particularly when e-Learning sessions were scheduled before assignment due dates

Blackboard Collaborate
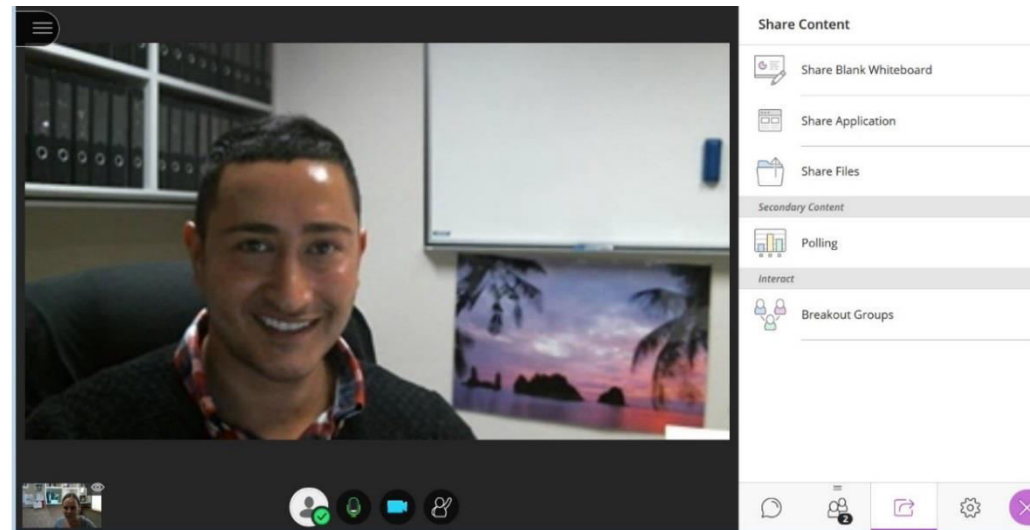
Breakout Rooms

- For ALL lecturers, 'breakout rooms' in AC and BC provide an avenue to foster greater peer-to-peer interaction. The purpose here is to decrease social isolation, which is often felt in online environments.

Recommendations

- 1) *Provide technical support.* It is helpful to have a technical person to sit in on the first session to support staff and students;

- 2) *Set protocols in the first session.* For example, if there is more than one participant, ask participants to mute their microphone when they are not talking to reduce background noise;

- 3) *Make the session interactive by using the various sharing functions.*

- and 4) *Remind students of the upcoming session* by sending the link to the prior to the session

- little attention has been paid to student training of web-conference virtual classroom software (Heiser, Stickler, & Furnborough, 2013).

- A multi-literacies approach that explicitly addresses digital literacies should be included to ensure that students can effectively use the program (Miller, 2015; Miller & Schulz, 2014; Roche, 2017).

Which one?

- A benefit of BC over AC is that participants can enable their own webcam and microphone, instead of relying on the host to enable the participant's microphone or webcam first.

- Academic staff found that BC's most useful function was the phone conferencing feature which provided students with the option to phone in and join the session if they were having trouble with their microphone, webcam or internet connection.

- Due to bandwidth saturation, both tools worked best when the number of webcams was limited to a maximum of five at a time.

- . Another benefit of BC over AC is that students can use the subject 'course room' at any time to meet with other students or to test their equipment, without the need for the moderator or host to be present

Recommendations

- 1) *Provide technical support*. It is helpful to have a technical person to sit in on the first session to support staff and students;

- 2) *Set protocols in the first session*. For example, if there is more than one participant, ask participants to mute their microphone when they are not talking to reduce background noise;

- 3) *Make the session interactive by using the various sharing functions*.

- 4) *Remind students of the upcoming session*. Post an announcement in the LMS or use an appointment-booking tool such as Moodle's Scheduler tool for students to book appointments for one-on-one academic support

- The consensus of feedback received from academic staff, after receiving training in both BC and AC, was that BC was easier to use and more useful due to its simplicity of design.

- While there has been a rapid move to introduce commercial outsourcing services, two effective, no-cost, in-house asynchronous and synchronous solutions that involve minimal training have been offered in this paper as practical solutions to compliment the important work of ALL in academia.

Drawbacks	Benefits
Digital privacy	Engaging
Reliance	Interactive
Distraction	accessible
Role of teacher	Collaborative

Herrington, J., Reeves, T.C. and Oliver, R. (2010) A Guide to Authentic eLearning. Routledge, New York.

Language Learning Activities

e-scenarios, e-problems

E-inquiry based, e-teams

Online participation
Simulations,
worksheets

e-PASS teams
Virtual Classrooms
Breakouts rooms

Learning Learning
Support

Language Learning
Resources, e-books,
endnote, Padlet, Office
Mix, Trello, Audio PDFs

Scaffold
Strategies

Virtual Online, Support,
instructions, subject
guides, support services

Monitoring, feedback

Barriers to online academic support	Suggestions to overcome barriers
Learners require the necessary technological skills and may lack access to technical information and support	Provide learners with information on technical requirements and refer learners to the helpdesk for technical support
Learners require access to the hardware, software and internet connectivity for online learning	Get to know learners to determine what supports are most critical. Dedicate time aside to increase student comfortableness
Learners may lack the institutional, digital and academic literacies needed for online instruction	Provide digital, academic and institutional literacies and resources via web-conferencing synchronous
Learners may not be aware of online protocols or how to enter a virtual classroom	Provide online administrative supports and services, a good practice guide that includes online pedagogical considerations
Learners may lack access to other support services such as careers, health and counselling services	Provide 'Virtual Counsellor' or 'Virtual Adovcacy" synchronous support inside Moodle Activity Resources
Learners may lack, or may need to be made aware of their ethical, privacy, data and confidentiality rights online	Provide learners with information on what is recorded, shared, stored and analysed in the Virtual Classroom.
Learners need to self assess whether they have the skills to be successful in their chosen program	Provide learners with advice for making specific program and career related decisions
Learners require access to individualized disability-specific support services or suitable assistive technology	Provide learners with flexible, continously available, easily accessible support services
Learners may require additional academic resources to assist in their academic writing skills	Provide online resources in referencing, academic writing and other resources linked from Moodle course page
Learners may lack a peer support group online	Provide opportunities for students to develop peer to peer relations through breakout rooms, or social spaces online

Real-time collaborative streaming

- [Padlet](#)
- Wordcloud
- UQ wordstream
- [LearnSpace TesTeach](#)
- [Sketchboard](#)
- Tag Crowd

Asynchronous e-learning scenarios

- [Office Mix](#)
- i-Spring
- Adobe Presenter
- Adobe Captivate

Design

Authoring & Editing Tools

- [Office Mix](#)
- i-Spring
- Camtasia
- Kaltura
- Echo360 Personal Capture

Figure 1. Different Web Conferencing "Virtual Classroom" Software usage by Australian Universities (Dianati & Schubert, 2017).

Different Web Conferencing "Virtual Classroom" Software usage

Development

Rubric for Online Instruction, CSU, Chico, Creative Commons Version 3

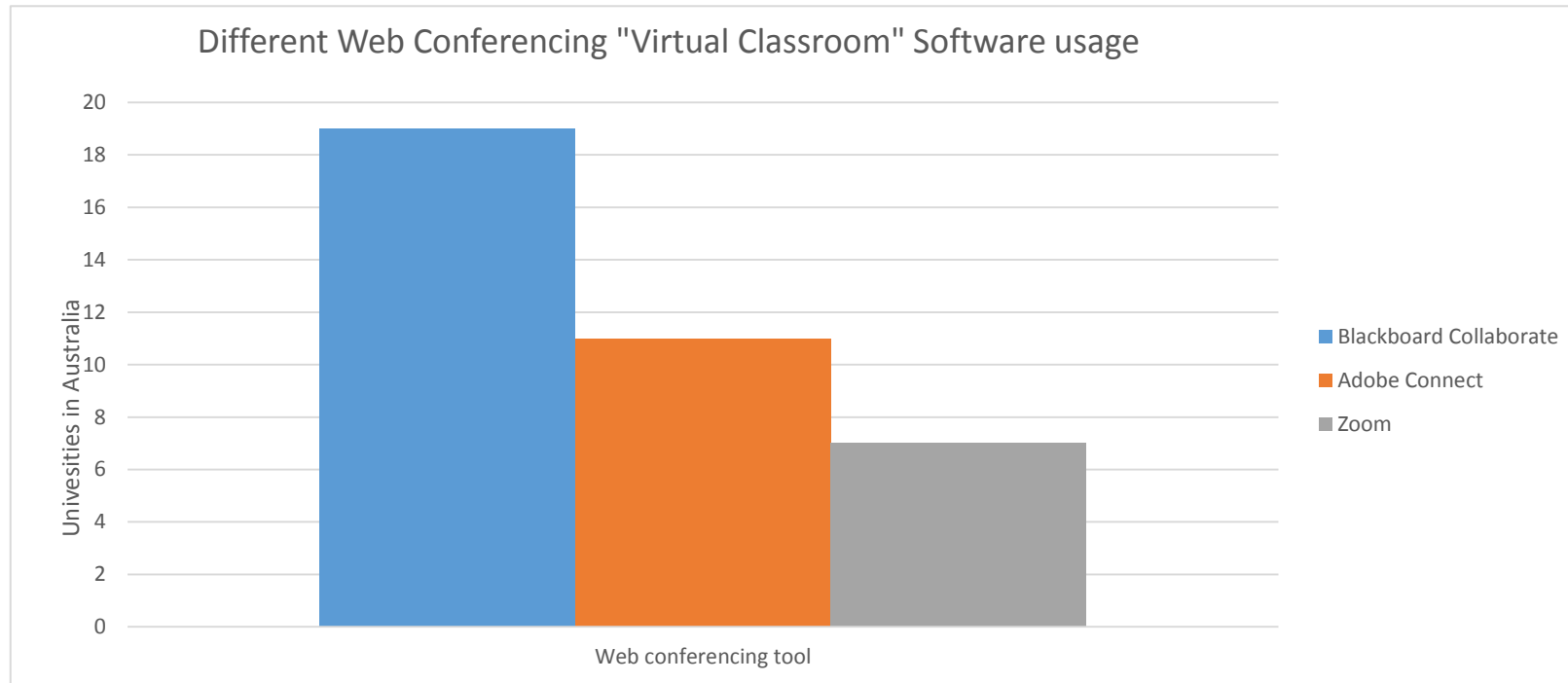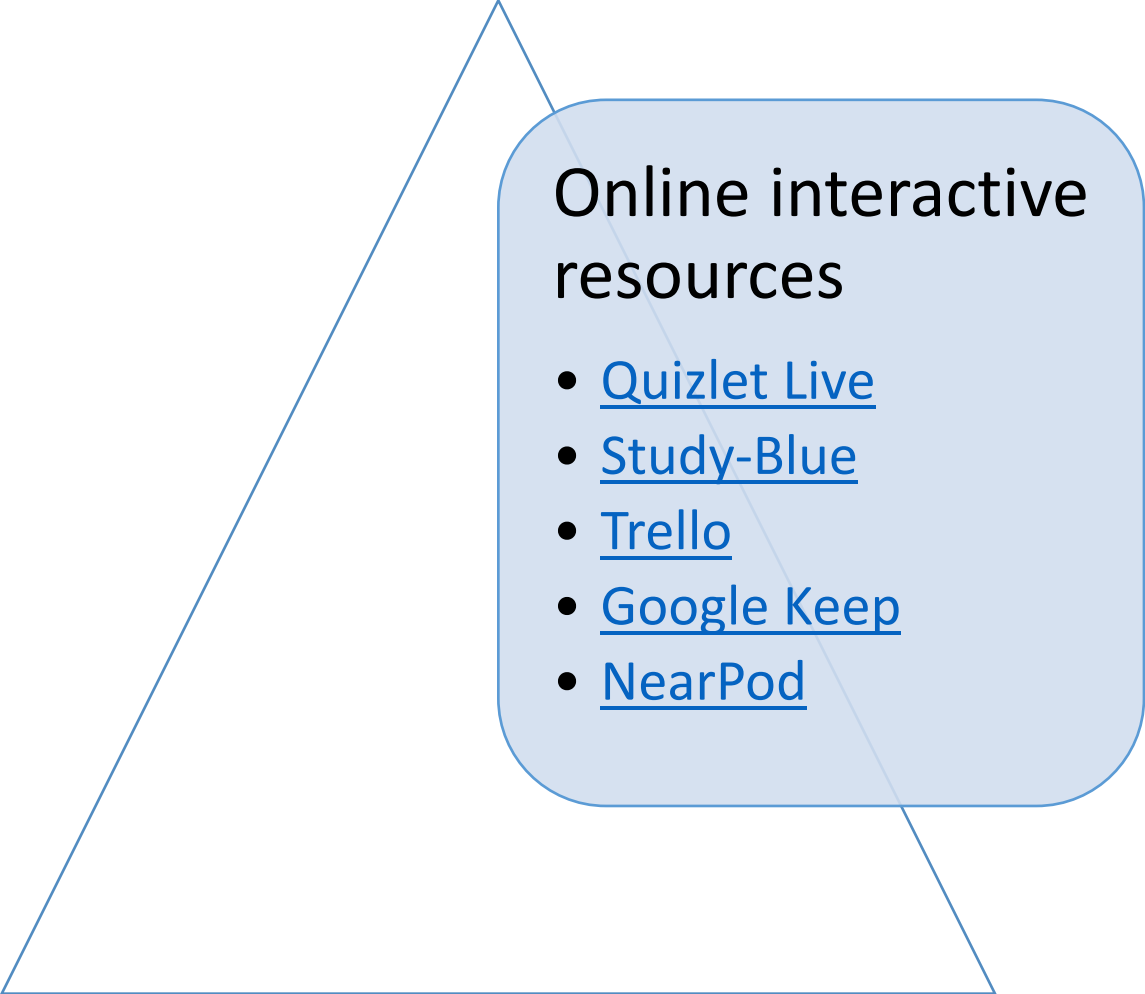| Category 1	Baseline	Effective	Exemplary
Learner Support & Resources	A. Course contains limited information for online learner support and links to campus resources.	A. Course contains adequate information for online learner support and links to campus resources.	A. Course contains extensive information about being an online learner and links to campus resources.
	B. Course provides limited course-specific resources, limited contact information for instructor, department, and/or program.	B. Course provides adequate course-specific resources, some contact information for instructor, department, and program.	B. Course provides a variety of course-specific resources, contact information for instructor, department, and program.
	C. Course offers limited	C. Course offers access to	C. Course offers access to

Category 2	Baseline	Effective	Exemplary
Online Organization & Design	A. Much of the course is under construction, with some key components identified such as the syllabus.	A. Course is organized and navigable. Students can understand the key components and structure of the course.	A. Course is well-organized and easy to navigate. Students can clearly understand all components and structure of the course.
	B. Course syllabus is unclear about what is expected of students.	B. Course syllabus identifies and delineates the role the online environment will play in the course.	B. Course syllabus identifies and clearly delineates the role the online environment will play in the total course.
	C. Aesthetic design does not present and communicate course information clearly.	C. Aesthetic design presents and communicates course information clearly.	C. Aesthetic design presents and communicates course information clearly through-out the course.

e-Portfolios

- [Wix](#)
- Bb Blog
- [Mahara](#)
- [Google Keep](#)
- PebblePad
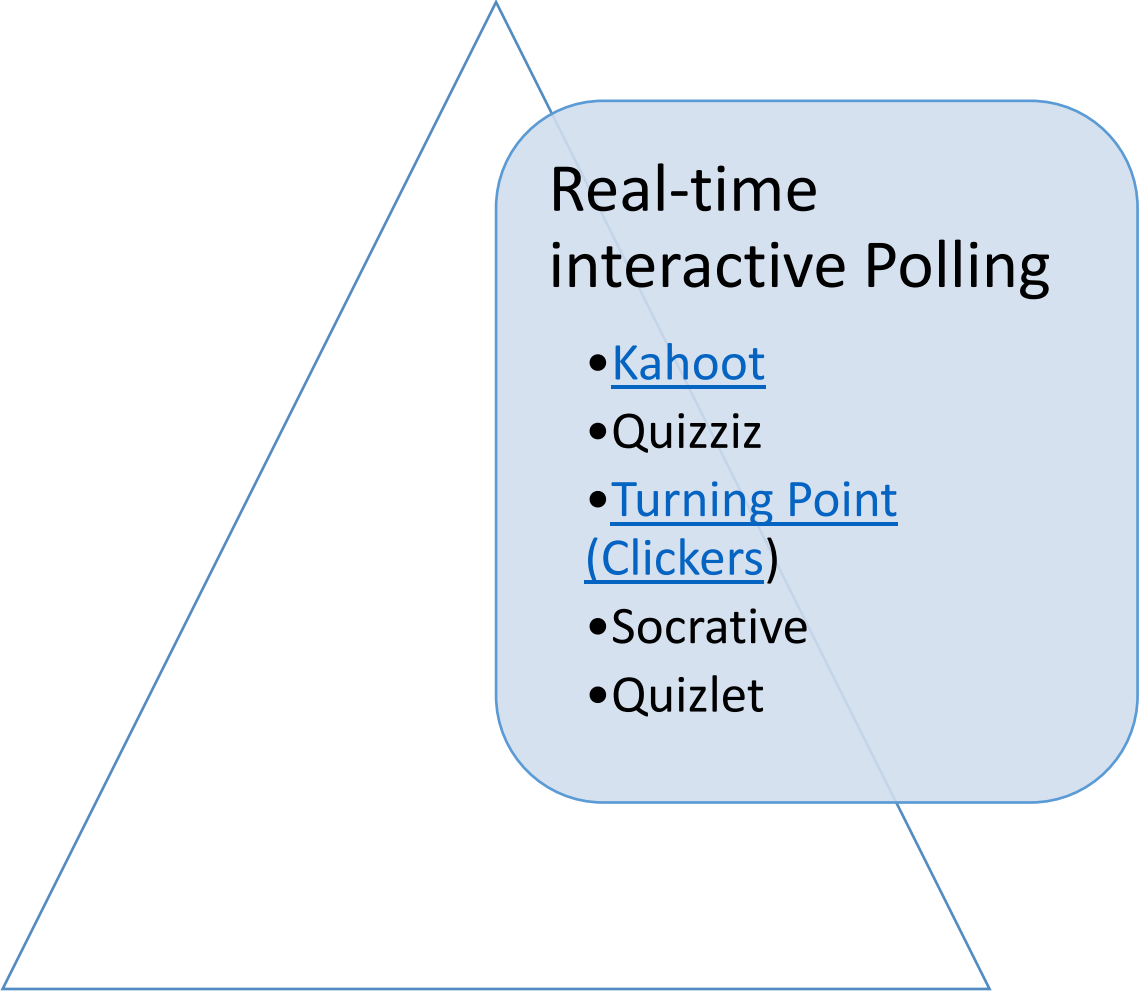
Online interactive resources

- [Quizlet Live](#)
- [Study-Blue](#)
- [Trello](#)
- [Google Keep](#)
- [NearPod](#)

E-marking

- Turn it in Grade-Mark
- Blackboard Grade Centre
- Adobe/Microsoft Digital inking
- Grammarly/ Grammark
- Semant
- Adobe PDF voice comments
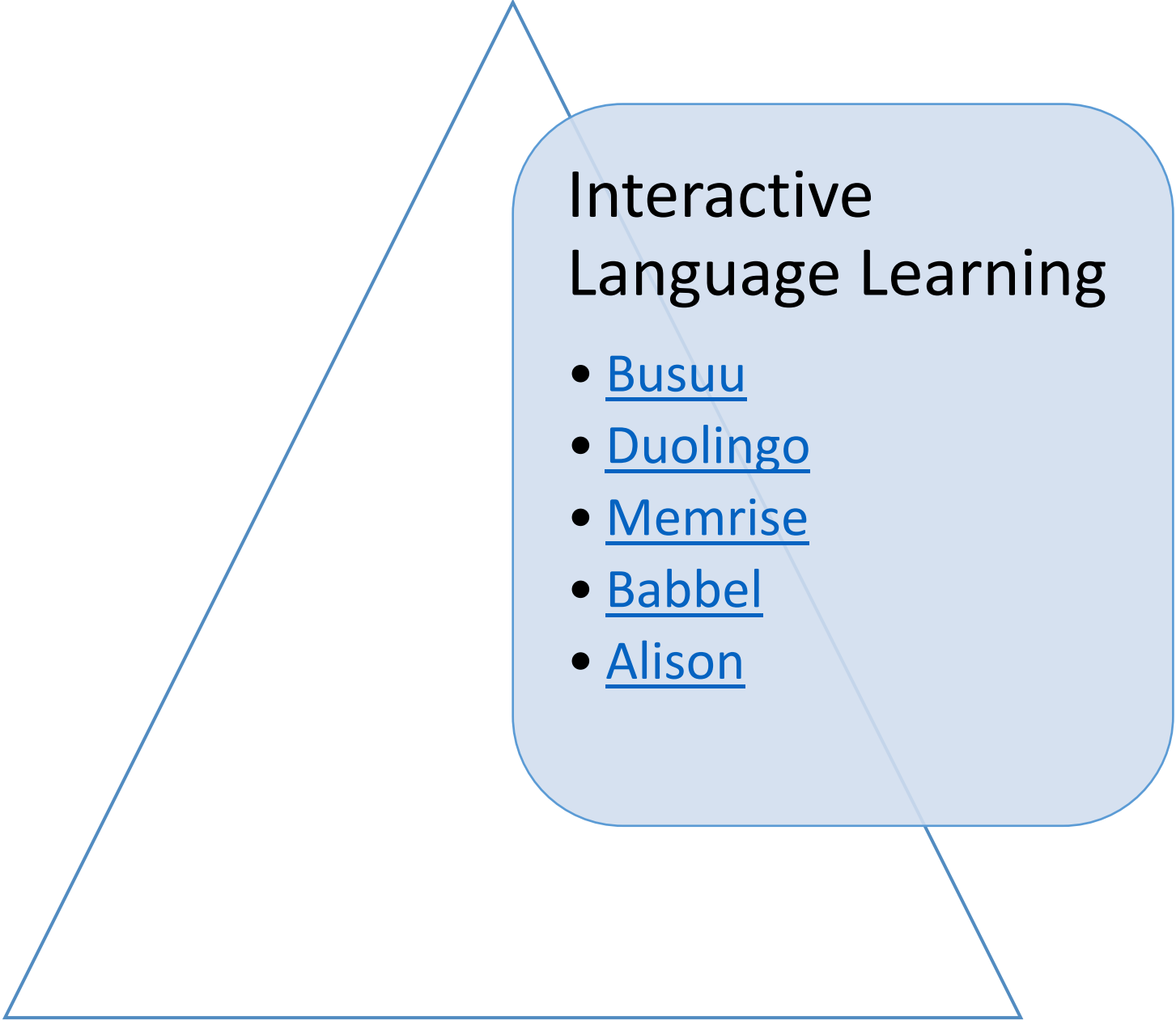
Real-time interactive Polling

- [Kahoot](#)
- Quizziz
- [Turning Point (Clickers](#))
- Socrative
- Quizlet
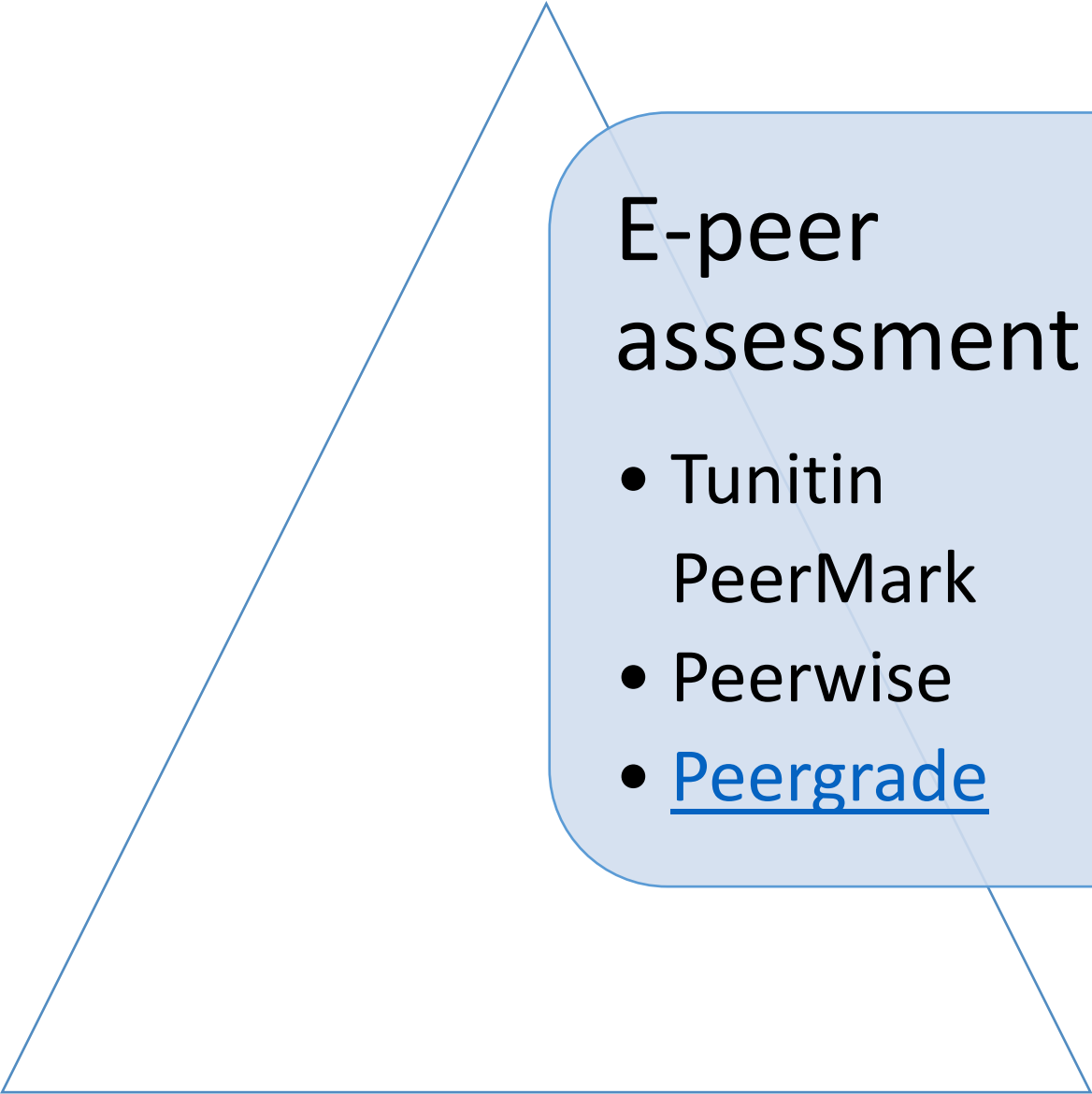
E-Digital Story Telling

- Piktochart
- Visme
- Canva
- Buncee
- Prezi

Interactive Language Learning

- [Busuu](#)
- [Duolingo](#)
- [Memrise](#)
- [Babbel](#)
- [Alison](#)

E-peer assessment

- Tunitin PeerMark
- Peerwise
- Peergrade

Social Media

- Twitter
- Fb Page
- Google + hangs
- Pinterest
- Newsela

STUDENT SUPPORT

Peer-mentoring support (PASS)

Turn-it-in support

Academic Writing Centre Support

Health and Well Being Support

International Student Support

Disability Support

Technology and ITS Support

Library Support

Thank you

- Cornelius, S., & Gordon, C. (2013). Facilitating learning with web conferencing recommendations based on learners' experiences. *Education and Information Technologies, 18*(2), 275-285.

- Davies, E. B., Morriss, R., & Glazebrook, C. (2014). Computer-delivered and web-based interventions to improve depression, anxiety, and psychological well-being of university students: a systematic review and meta-analysis. *Journal of medical Internet research, 16*(5).

- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management science, 35*(8), 982-1003.

- De Fazio, T., & Crock, M. (2008). *Enabling learning, addressing retention: Supporting students via online tutorials with Smarthinking*. Paper presented at the ASCILITE conference, Melbourne, Nov.

- Edwards, J. T., & Helvie-Mason, L. (2010). Technology and instructional communication: Student usage and perceptions of Virtual Office Hours. *Journal of Online Learning and Teaching, 6*(1), 174.

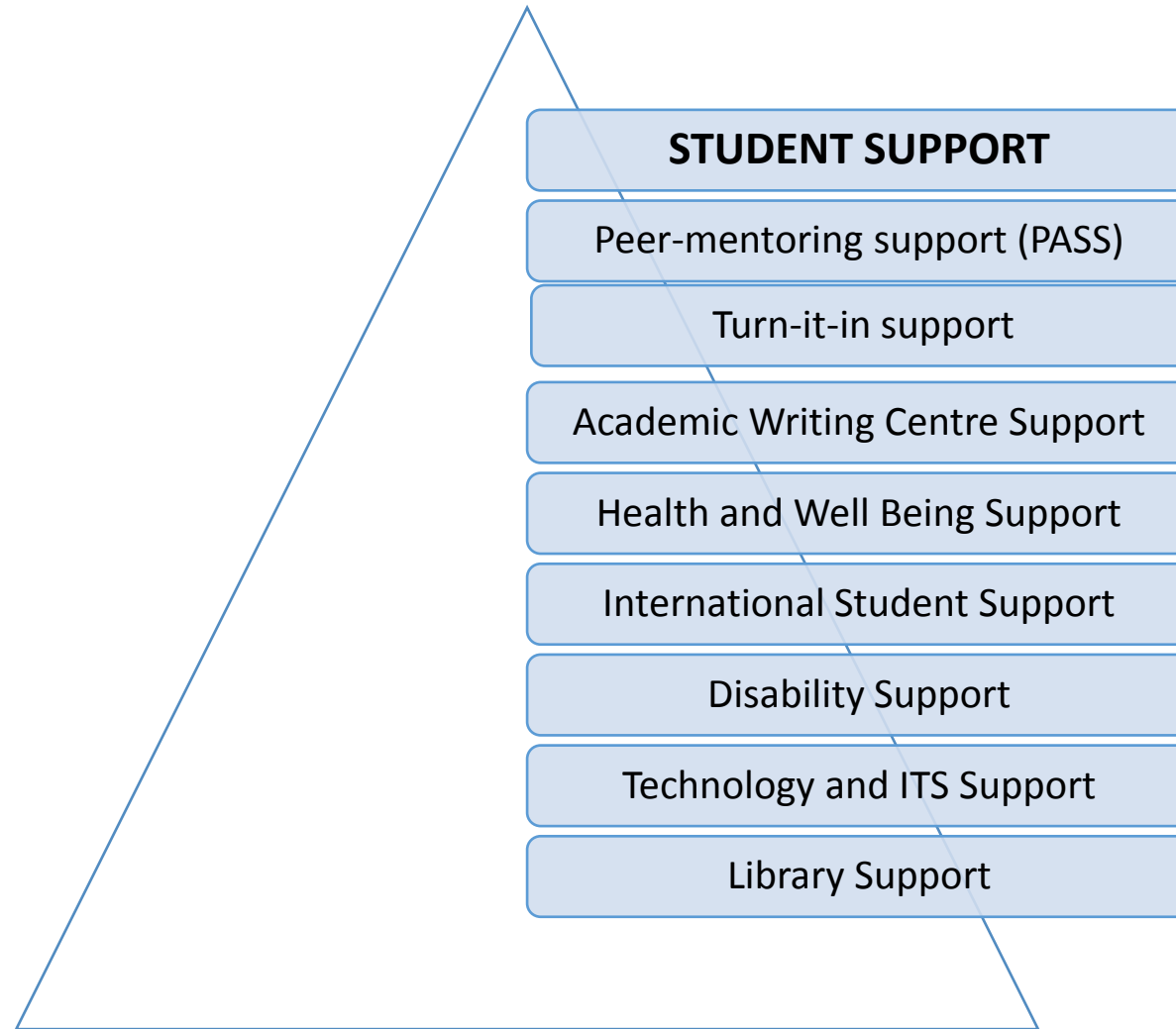- Ellingson, D. A., & Notbohm, M. (2012). Synchronous Distance Education: Using Web-Conferencing In An MBA Accounting Course. *American Journal of Business Education (Online), 5*(5), 555.

- Everly, M. C. (2013). Are students' impressions of improved learning through active learning methods reflected by improved test scores? *Nurse Education Today, 33*(2), 148-151.

- Graphiq Inc., *Software Insider*, retrieved 25 August, 2017, from http://web-conferencing.softwareinsider.com/compare/14-16/Blackboard-Collaborate-vs-Adobe-Connect

- Gregory, J., & Salmon, G. (2013). Professional development for online university teaching. *Distance Education, 34*(3), 256-270.

- Gunn, C., Hearne, S., & Sibthorpe, J. (2011). Right from the start: A rationale for embedding academic literacy skills in university courses. *Journal of University Teaching & Learning Practice, 8*(1), 6.

- Habermas, J. (1971). *Toward a rational society: Student protest, science, and politics* (Vol. 404): Beacon Press.

- Hamm, M. (2015). Understanding Urban Social Movements in Cognitive Capitalism: Methodological Reflections on Participatory and Ethnographic Research. *Anthropological Journal of European Cultures, 24*(2), 16-33.

- Heiser, S., Stickler, U., & Furnborough, C. (2013). Student training in the use of an online synchronous conferencing tool. *CALICO Journal, 30*(2), 226-251.

- Henderson, M., Selwyn, N., & Aston, R. (2017). What works and why? Student perceptions of 'useful' digital technology in university teaching and learning. *Studies in Higher Education, 42*(8), 1567-1579.

- Hill, J. R., Song, L., & West, R. E. (2009). Social learning theory and web-based learning environments: A review of research and discussion of implications. *The Amer. Jrnl. of Distance Education, 23*(2), 88-103.

- Hudson, T. M., Knight, V., & Collins, B. C. (2012). Perceived effectiveness of web conferencing software in the digital environment to deliver a graduate course in applied behavior analysis. *Rural Special Education Quarterly, 31*(2), 27-39.

- Huijser, H., Kimmins, L., & Evans, P. (2008). Peer assisted learning in fleximode: Developing an online learning community. *Australasian Journal of Peer Learning, 1*(1), 7.

- Huijser, H., Kimmins, L., & Galligan, L. (2008). Evaluating individual teaching on the road to embedding academic skills. *Journal of Academic Language and Learning, 2*(1), A23-A38.

- Inside Higher Ed 2010, First Reactions to Blackboard Buying Wimba and Elluminate,

- viewed 20th Jan 2017 https://www.insidehighered.com/blogs/technology_and_learning/first_reactions_to_blackboard_buying_wimba_and_elluminate

- Jaggars, S. S., Edgecombe, N., & Stacey, G. W. (2013). Creating an Effective Online Instructor Presence. *Community College Research Center, Columbia University*.

- *Digital Media, Web 2.0 and More for Learning*: IAP.

- Kliger, D., & Pfeiffer, E. (2011). Engaging students in blended courses through increased technology. *Journal of Physical Therapy Education, 25*(1), 11.

- Kohorst, K., & Cox, J. R. (2007). Virtual office hours using a tablet PC: E-lluminating biochemistry in an online environment. *Biochemistry and Molecular Biology Education, 35*(3), 193-197.

- Lavolette, E., Venable, M. A., Gose, E., & Huang, E. (2010). Comparing synchronous virtual classrooms: Student, instructor and course designer perspectives. *TechTrends, 54*(5), 54.

- Lee, C. B., & Hanham, J. (2017). Evaluating the impact of online tutoring (YourTutor).

- Lillie, R. E., & Wygal, D. E. (2011). Virtual Office Hours (VOH) in accounting coursework: Leveraging technology to enhance an integrative learning environment. *Journal of Accounting Education, 29*(1), 1-13.

- Lim, C. (2010). Student perceptions of the use of elluminate live! for synchronous e-learning. *International Journal of Arts and Sciences, 3*(11), 123-136.

- Mackness, J., Waite, M., Roberts, G., & Lovegrove, E. (2013). Learning in a small, task–oriented, connectivist MOOC: Pedagogical issues and implications for higher education. *The International Review of Research in Open and Distributed Learning, 14*(4).

- Madison, D. S. (2011). *Critical Ethnography: Method, Ethics, and Performance*: SAGE Publications.

- Martin, F., & Parker, M. A. (2014). Use of Synchronous Virtual Classrooms: Why, Who, and How? *Journal of Online Learning and Teaching, 10*(2), 192.

- Martin, F., Parker, M. A., & Deale, D. F. (2012). Examining interactivity in synchronous virtual classrooms. *The International Review of Research in Open and Distributed Learning, 13*(3), 228-261.

- McBrien, J. L., Cheng, R., & Jones, P. (2009). Virtual spaces: Employing a synchronous online classroom to facilitate student engagement in online learning. *The International Review of Research in Open and Distributed Learning, 10*(3).

- McDougall, J., Holden, H., & Danaher, G. (2012). Pedagogy of hope: The possibilities for social and personal transformation in an Academic Language and Learning curriculum. *Journal of Academic Language and Learning, 6*(3), A59-A69.

- McIntyre, A. (2008). *Participatory Action Research*: SAGE Publications.

- McSweeney, D. (2010). A Framework for the Comparison of Virtual Classroom Systems.

- McWilliams, R., & Allan, Q. (2014). Embedding academic literacy skills: Towards a best practice model. *Journal of University Teaching & Learning Practice, 11*(3), 8.

- Miller, A. (2015). On paper, in person, and online: A multi-literacies framework for university teaching. *Journal of Academic Language and Learning, 9*(2), A19-A31.

- Miller, A., & Schulz, S. (2014). University literacy: A multi-literacies model. *English in Australia, 49*(3), 78.

- Mort, P., & Drury, H. (2012). Supporting student academic literacy in the disciplines using genre-based online pedagogy. *Journal of Academic Language and Learning, 6*(3), A1-A15.

- Muller, A., Gregoric, C., & Rowland, D. R. (2017). The impact of explicit instruction and corrective feedback on ESL postgraduate students' grammar in academic writing. *Journal of Academic Language and Learning, 11*(1), A125-A144.