

**Internet Appendix A80 Virtual Learning**  
**A80.1 Illustrative Pitch Template Example**

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<b>(A) Working Title</b>	Nature of Formative Assessment in Virtual Learning Environments				
<b>(B) Basic Research Question</b>	<i>What is the nature of formative assessment from the design aspect of virtual learning environments in achieving educational success?</i>				
<b>(C) Key paper(s)</b>	<ul style="list-style-type: none"> <li>Piccoli, G., Ahmad, R., and Ives, B. 2001. "Web-Based Virtual Learning Environments: A Research Framework and a Preliminary Assessment of Effectiveness in Basic It Skills Training," <i>MIS Quarterly</i> (25:4), pp. 401-426.</li> <li>Black, P., and Wiliam, D. 2009. "Developing the Theory of Formative Assessment," <i>Educational Assessment, Evaluation and Accountability</i> (21:1), pp. 5-31.</li> </ul>				
<b>(D) Motivation/Puzzle</b>	Technology has significantly changed traditional learning environments from basic learning systems to fully developed virtual learning environments. Technologically supported learning contributes for informal learning and is critical for learning success. The informal learning through feedback is known as formative assessment which can be improved through the access to learning resources, interaction and communication, and the use of effective learning processes. Dynamic technological changes in education, the wide range of informal learning practices, and non-availability of research motivated us to develop our research to investigate forms of formative assessment that lead to learning outcomes in terms of performance, satisfaction, and efficacy.				
<b>THREE</b>	<b>Three</b> core aspects of any empirical research project i.e. the "IDioTs" guide				
<b>(E) Idea?</b>	<p>Contemporary education uses information systems extensively and the technology changes dynamically. Students today, use technology for learning including informal learning systems such as social media for learning. Therefore, the development of the design of learning systems becomes increasingly important. Changed learning styles together with technological changes demand an improved formative assessment process in contemporary education. Accordingly, <b><i>the research investigates different forms of formative assessment from the design aspect of virtual learning environments in achieving educational success.</i></b> The research adopts an exploratory methodology investigating the nature of the formative assessment in an online learning environment. Findings are expected to contribute to the research by reflecting the forms of formative assessment in virtual learning environments, and inform practitioners about the importance of the design aspect of the learning environments.</p> <p><u>Dependent variables:</u> Educational Success (consists of learning performance, learning satisfaction, and efficacy)  <u>Independent variables:</u> Design dimension attributes of virtual learning environments within the formative assessment process (consists of interaction, communication, learning space, informal quizzes, tutor feedback, etc.)</p>				
<b>(F) Data?</b>	<ul style="list-style-type: none"> <li>Data will be collected from the participants from tertiary educational environment during one or more semester(s). Participants are students and instructors. Therefore the unit of analysis is individual level. Active learning occurs in tertiary educational environments as participants' uses technology extensively for education. Tertiary educational environment is viewed as a rich source for data and also for effective research. Additionally tertiary educational environment provide feasible research environment as the outcome of this research benefits the educational environments.</li> <li>Sample size could be approximately 200+ and it will be a Time series / Longitudinal.</li> <li>Data is not a panel dataset.</li> <li>Data will be sourced from interviews, surveys and focus groups. Preliminary items will be based on the existing research with</li> </ul>				

Cued Template taken from Faff, Robert W., Pitching Research (January 11, 2015). Available at SSRN: <http://ssrn.com/abstract=2462059> or <http://dx.doi.org/10.2139/ssrn.2462059>

	<p>the flexibility to change based on the findings. Therefore, the research adopts an exploratory research methodology. Research assistance for data processing may be required at a later stage.</p> <ul style="list-style-type: none"> <li>• There are no foreseen problems in missing data/observations at this stage of the research.</li> <li>• It is expected that variables exhibit adequate meaningful variations to give good power, quality and reliability of data.</li> <li>• Other obstacles such as external validity and construct validity will be reviewed continually. Currently there is no issue.</li> </ul>
<b>(G) Tools?</b>	Exploratory interviews and focus groups are in-progress which is designed based on the key concepts of the research question. Once the interview data has been analysed, the empirical framework will be finalized. Therefore it is viewed that the empirical framework is currently under development.
<b>TWO</b>	<b>Two</b> key questions
<b>(H) What's New?</b>	Research in formative assessment in virtual learning environment is an under developed area. Virtual learning environments have two dimensions, namely, design dimension and human dimension. Formative assessment is primarily an informal process while formal processes can be accommodated learning through formative assessment. To develop learning it is critical that we recognize the impact from these informal processes in online learning. Our research investigates different forms of formative assessment in the design dimension of virtual learning environments.
<b>(I) So What?</b>	Our research can inform design aspect of the virtual learning environment within the formative assessment process. During the research process it defines the formative assessment in virtual learning environment. Such a definition is necessary due to staggered views of the formative assessment and to include the current practice of the formative assessment. In summary, the research is expected to contribute by developing a framework for formative assessment in design dimension in virtual learning environments.
<b>ONE</b>	<b>One</b> bottom line
<b>(J) Contribution?</b>	The research contributes by investigating forms of formative assessment in design dimension in virtual learning environments. Findings can inform to improve designs in virtual learning environments, learners can be better learners as well as instructors can improve the use of learning management systems benefitting the educational institution to be a better educator.
<b>(K) Other Considerations</b>	<ul style="list-style-type: none"> <li>• Comments and collaborations for the research desirable. <ul style="list-style-type: none"> <li>○ Idea: Would like to have comments from internal and external comments.</li> <li>○ Data: Would like to explore data analysis options beyond the individual level. For example, how to view data from different perspectives. Collaborations welcome.</li> <li>○ Tools: Any comment that helps to improve the quality, validity and reliability.</li> </ul> </li> <li>• There is a pool of good journals to be considered. The idea has great potential which must be backup with quality evidence.</li> <li>• There is low-moderate risk. Primary risk is to have the support from the educational institution for data collection. No other obvious risks.</li> <li>• Scope is appropriate.</li> </ul>