

ENGAGING THE DISENGAGED - IN VIRTUAL CLASSROOMS FOR ADULT LEARNERS

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ABSTRACT

The title of the paper defines its purpose, given the fact that, the deployment of Information Communication Technology (“ICT”) based delivery medium for learning resources and academic courses curriculum, is fast approaching a plateau, both in the developed and developing economies. The attractive features of the advanced electronic & digital devices, and their portability in the cyber space, may be an attraction for the young learners or perhaps the only mode of learning for future generations (*Shirley Bach et al. 2007*). However in contrast the working adults as learners hard pressed for time, in need of learning a specific subject matter or with an underlying objective of acquiring a recognized qualification, would be seeking a medium, a forum and a methodology, for affective and customised delivery. In the absence of which such group of learners will be disengaged in face-to-face sessions and often log-out of the virtual sessions. The proposed “three dimensional (3D) methodology,” to meet these objectives is based on three factual precepts.

First the concept of *Elvidagogy* (*Dhingra, ELFA2015*) should be adopted and not pedagogy for adult learners, as the traditional term pedagogy implying dichotomy of authority and docility as a starting point, is not without its demerits (*Presner as in Takis Kayalis et al. 2010*). The term pedagogy has inherent connotations or a characteristic of child education from its origin, grounded in the Greco-Roman principles. The adult learning principles which are well ingrained in the term andragogy (*Knowles et al., 2012, p. 57-63*) are considered to be more appropriate for designers and developers of adult learning curriculum. Secondly, the adult learners referred to in this paper, imply working adults and not aged persons devoid or deprived of education in their youth years e.g. late starters. Thirdly, the working adults are more engaged in a forum where the desired learning objective is fulfilled in a shortest and most productive manner, otherwise they are disengaged quickly unlike young learners, who have to somehow complete a tertiary education program made available to them.

This paper recognizing the foregoing precepts is focussed on a three dimensional (3D) delivery mechanism based on an ICT platform, to keep the adult learners fully engaged, both in face to face sessions and in virtual class rooms. The paper also discusses the findings of 3D sessions conducted in public forum, as well as in tertiary institution’s face to face class room setting, and virtual class room sessions. The early findings are encouraging enough to recommend this methodology for adoption or trial by professional trainers and academia.

Keywords: Andragogy; Virtual Classroom; 3D Learning Forum; Elvidagogy; Learning Designs;

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INTRODUCTION

Surely the advancement of Info-com Technologies (“ICT”) has made a significant impact on the large segments of conventionally educated working adults. There are an increasing number of adult learners undertaking courses of either higher education or professional development. The credit for this trend goes to the states, professional institutions and the academia for promoting Continuous Professional Development (“CPD”) and life-long-learning. The professional adult learners know what they need to learn. They want to acquire the requisite skills and knowledge within a shortest possible time frame. On the other hand the working adults seeking an academic qualification in pursuit of career growth are generally interested in fulfilling the course requirements e.g. marked assignments, examinations and group works. The course curriculum and the pedagogy often developed for young learners, fails to impress the adult learners, if the learning outcomes are not aligned to their desired learning needs or requirements. Furthermore, simply uploading the traditional course curriculum on to an ICT based Learning Management System (“LMS”) will only facilitate access but disengages the genuine learners. In contrast, the prospective employers and future learners demand not only academic qualifications but also the competency and skill set to chart their career paths in a highly competitive global arena. Thus the objective is to develop a comprehensive and versatile delivery mechanism, focussing on three groups of learners, which are: professional adults seeking acquisition of a special skill set or competency, adult learners seeking academic qualification and futuristic learners with an objective of acquiring both academic qualifications and skill set or competency in the subject matter.

There is a vast array of literature available on eLearning and digital course design, and to support the quest for achieving desired learning outcomes, but with limited focus on delivery mechanism. Palloff & Pratt (2013) suggest that the content can be creatively delivered through facilitation of effective discussions, collaborative assignments that promote teamwork, internet research and links to the websites outside the course site. Furthermore the content that is delivered in multiple ways also addresses different learning styles and creates a more interesting course overall.

This paper aims to identify the crucial characteristics of a delivery mechanism for virtual classrooms, with emphasis on ensuring the engagement of commonly disengaged but potential learners and proposes a pragmatic solution. The paper also reflects upon the findings from a pilot project of three dimensional (3D) delivery method, developed by the author, leveraging on the graphical user interface (“GUI”) and ICT, in support of Virtual Classrooms and Collaborative Learning. The term three dimensions of delivery refer to the forum, the deliverer and the validation of

the quality of content. The subject matter for learning is also based on the three dimensions: the context of learners' needs, the content suitable for the desired learning outcomes and the demonstration by facilitator of some applications to real life cases or scenarios. Henry Khiat and Selina Lim (2014) revealed from the survey of adult learners at SIM University, that the instructors which exhibited attributes (in online or face to face teaching), such as secure learning, engaged-instruction and nurturing personality, were more effective in shaping their learning outcomes.

Thus engaging the adult learners through engaged-instruction in this context comprises of traits like, experience, interactivity, relevance and subject expertise. Likewise the objective of delivery and the 3D learning should be to ensure that, what is being delivered is relevant for shaping the future of the present generation of the stated three groups of adult learners, and keeps them engaged. Kenneth Fee (2009) emphasizes the role of evaluation of e-learning as determination of the 'merit', 'worth' or 'significance' is in terms of what learners have learned and can apply at work, and what that means for their organizations.

Elvidagogy can be defined as, "Multi-dimensional facilitative exchange of knowledge, information and experiences between learners and facilitator (teacher) in virtual space, for high quality learning outcomes." In elvidagogy, ICT is used as a tool and the tutor as a facilitator in a Virtual Classroom, where learners are able to join at their convenience, sharpen their skills and acquire knowledge, sufficient for them to apply in their work places. The term pedagogy for eLearning or such similar qualifiers is inappropriate for the future adult and lifelong learners, as it inherits the assumptions of Greco-Roman era of teaching young children. The only difference in pedagogy for eLearning is that it implies the use of digital technology instead of writing on stone tablets, conventional chalk and blackboard or exercise books with pen and paper. Whether admittedly or not, but subconsciously the focus of a teacher remains to develop methods of teaching as a teacher and not as a fellow learner.

However the proposed features of elvidagogy as explained in another paper by the author, the role of futuristic teachers should be of a fellow learner or facilitator, with experience in the field of study or a level of expertise in the subject matter being learned (not taught), in a group of adult learners. In andragogical model, the teacher takes the role of facilitator, consultant or change agent and prepares in advance a set or procedures for involving the learners and other relevant parties in the learning process (*Knowles, 2012 p. 114*). Likewise elvidagogy is the science of teaching, learner-centric, value-driven future generations and for high quality learning outcomes in virtual classrooms.

Yeung Sze Kiu (2014) describes a possible pedagogical model for synchronous web conferencing, in which the instructor is expected to have special traits like empathy, attitude, communication skills, organizational skills, patience and immediacy of response for effective learning, when delivering a lecture on web-based platform. In addition to these basic traits or soft

skills, the challenges faced by a facilitator for delivering ICT based 3D Methodology in virtual forum, is in designing the learning process by the use of domain expertise, apposite applications and responding in real-time to the challenging queries from the diverse range of learners. Some findings from the pilot project are discussed in this paper to elaborate further.

DESCRIBING THE 3D METHODOLOGY

The three core dimensions of the 3D Methodology are coordinator / facilitator delivering quality content simultaneously in context, to diverse range of learners. For simplicity, the term facilitator is used instead of coordinator, or tutor, or trainer as a fellow learner. Each core dimension is further enhanced in view of the delivery forum (Virtual or Face-to-Face), learner groups and the desired learning outcomes. The quality of content is customised in context of the desired learning outcomes, with facilitator in the centre of the three dimensions. The following three core dimensions are further illustrated in figure 1.

1. Context
2. Facilitator (Learner-Tutor as deliverer)
3. Content

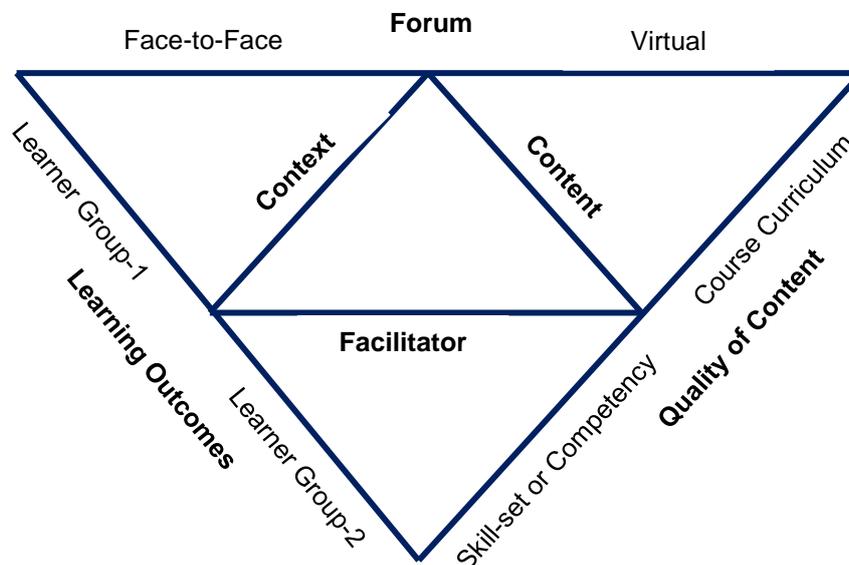


Figure 1: Overview of 3D Methodology for Elvidagogy

The context in this methodology is in accordance with the subject matter, while the quality of the content is determined by the composition of the types of learner groups, in the audience. For example while teaching a subject of contract law, there can be multiple contexts depending on the type of industry e.g. construction industry, oil & gas industry, maritime industry etcetera, each with a different type of contracts, legal regimes and types of applicable laws. The scope of contextual

applications, to be demonstrated, while explaining principles of contract laws, will vary accordingly. The content quality besides the standards set by institutions of higher education should be expressed in terms of meeting the customer (learners) requirements. Therefore in terms of the quality of the content, it should be developed and delivered based on the learner groups and desired learning outcomes. For the learner group interested in only obtaining an academic certificate, the course curriculum and scope of examinable content will suffice. However for the learner group keen on applying the knowledge to their working life, the case studies and demonstration of application of various laws in different situations will be expected. Similar contrasts can be seen when delivering a course on management subject matter like risk management. There can be variety of context viz. corporate risk management, industrial plants risks management, enterprise risk management, project risks management or financial institutions risks management. To deliver content in context, to diverse audience, the facilitator not only has to be a domain expert but must also leverage the ICT technologies, for simultaneous customised delivery. This is now possible by adopting the 3D Methodology described here.

The facilitator will use one screen dedicated to show the course curriculum related content. The second screen (GUI Screen) will display a GUI based content full of resources like case studies, literary references and practical applications, including audio, video and chat box functionalities for receiving questions from the participants and explaining answers. The resources on the GUI screen can be accessed by clicking on it, just like using a website, but with a distinct advantage of accessing pre-planned content. The variety of resources made available by the facilitator on the GUI screen, will determine the possible diversity of the learner groups. In face to face sessions this methodology works very well, as learners, facilitators, and two screens and audio-video facilities are available within the lecture room. In virtual sessions with advanced technologies supporting LMS and collaborative learning, like *Blackboard*, *Canvass* etcetera do have the limitations of one screen at a time, for the proposed delivery by 3D methodology. This requires switching too often through two screens which can be a cause of interruption in the learner's thought process and visible frame. However with integrated third-party audio-video streaming functionalities, the 3D methodology is now feasible for adoption. The available collaborative learning and LMS platforms at present are insufficient to engage the busy adult learners of the future. The 3D methodology if adopted or integrated with LMS will provide impetus for innovation and development of advanced virtual learning platforms.

APPLICATION OF 3D METHODOLOGY

The application of 3D methodology is suitable for adult learners well versed with the use of latest digital devices, web-based portals and internet. In terms of type of courses and academic programs, the subjects encompassing theoretical knowledge as foundation for the development of

practical applications, and which can be illustrated by case studies, are most suitable for delivery by 3D methodology. Unlike principles of physics and chemistry which can be tested in science laboratories and through experiments, the principles or concepts of management science, humanity, finance and legal studies, are hard to comprehend without some sort of trial or testing in a life sciences laboratory. This may not be practically possible, so the teaching methods are often developed by use of case studies, to demonstrate case based reasoning or through research work. In a fast paced society of digital age with limited time to keep pace with challenging times, the learners want to learn everything about a subject from concept to its application in one continuous process, instead of taking a step by step approach. In such instances, the 3D methodology can be enhanced by the domain expert facilitator, with good academic knowledge to share with others, and learn at the same time. Ideally it should set the process of life-long learning into motion, engaging learners through interacting exercises, involving case based reasoning, discussion forums and blogs.

The rules of learner engagement are not new but well established through research and evaluation of practices in institutions of higher education. The engagement begins with harnessing prior knowledge, experience, skills and desires of the learners (*Ellie Chambers in Takis Kayalis et al. 2010*) and taking off in appropriate directions. The content should be intelligible enough to invoke their daily experiences, and linking it to the learning process, of the subject matter. Further the interest level can only be sustained, if the learners can visualize, how they are progressing in grasping new concepts, and if there is a potential for applying the knowledge gained. This requires that the content should be designed with higher quality for ensuring engagement and usefulness.

The term learning designs is equally appropriate for a content to be delivered through 3D methodology. The learning design involves taking stock of learner's background, learning tools available and learning environment created through network of relationships, resources and groups (*Oliver in Betham & Sharpe, 2013*), which is complementary to the concept of 3D methodology illustrated in figure 1. The high quality learning designs are a prerequisite for quality learning outcomes, but without a proper delivery methodology at an appropriate forum (Face-to-face or virtual session), it may not be feasible to achieve desired learning outcomes. The facilitator and learners assume varying roles in each of the four types of learning designs, posited by Ron Oliver et al. which are: rule-based, incident-based, strategy-based and role-based. Though these models provide a comprehensive coverage on types of learning resources and support required, but do not address the issue of delivery mechanism. Such learning designs provide an ideal application for 3D methodology, to ensure engagement as well as high quality learning outcomes.

The author has developed over a span of about 10 years number of courses grounded in incident-based, strategy-based and role-based learning designs, and delivered successfully to professional learners through 3D methodology in face to face sessions. A trial run in an institution of higher education was conducted in March 2016, for both face to face, and virtual sessions, with

working adult learners, enrolled for the subject of Risk Management and Business Continuity Planning, as part of their academic degree program. In order to ascertain the effectiveness of 3D Methodology a survey was conducted in May 2016. The findings as discussed herein are encouraging to consider the application of this methodology, in institutions for higher learning and tertiary education as well.

ANALYSIS AND FINDINGS FROM THE SURVEY

Background of the Survey

In the first two face to face seminars, each of 3 hours duration, on the subject of “Risk Management and Business Continuity Planning Module,” a pilot test was carried out by using two independent projector screens and the facilitation by the lecturer present physically. The presentations of the Study Unit 1 & 2 of the Course Curriculum was presented on one projector screen (Screen-1) and the second projector screen (GUI Screen) contained a Graphical User Interface (GUI) based course specific resources for discussions, exercises, contextual case studies, videos and reference materials. The GUI Screen was used to illustrate and elaborate the key concepts presented on the Screen-1. The lecturer explained the topics simultaneously from Screen-1 and Screen-2. The questions from the participating learners were answered, without having the need to switch Power Point Files or search for examples, as one click on the GUI Screen was enough to open the relevant information (Audio, Video or Text) without delay. This method of navigating through multiple resources in shortest time was feasible by use of two projectors, incident-based learner design, hyperlinked through GUI and well integrated audio and video devices. In order to gauge the effectiveness in realizing the desired learning outcomes of this Course Module and the relevant Study Units, learners were invited to answer ten questions based on their personal experience.

Findings from Face to Face Sessions

There were 29 responses received from among the 103 learners invited to participate in the survey, so the findings are based on 29 responses only. All respondents are Singapore residents, in the age group of 20 to 45 years, comprising of males and females, and well versed with internet and ICT devices.

- 79% were able to differentiate between the two screens without difficulty, 17% were not able to appreciate the difference and balance had other reasons.
- 82% agreed that they were able to pay attention to the lecturer and refer to the screens without difficulty, 7% disagreed and 10% were not sure.
- 80% agreed that they were able to understand the correlation between video, audio, text and the explanation by the lecturer, while 7% disagreed and 10% not sure.
- 75% agreed that the 3D methodology was more engaging than the conventional seminars, 10% disagreed and 14% not sure.

- 75% agreed that it was easier to understand the concepts taught by the 3D methodology, 10% disagreed and 14% not sure.
- 69% agreed that they were not overwhelmed by the information overflow, 14% disagreed and 17% not sure.
- 66% agreed that in contrast to conventional method, they were able to retain better about the subject matter and examples discussed, 14% disagreed and 20% not sure.
- 69% agreed that 3D methodology based on ICT platform is appropriate for fast paced learning, 14% disagreed and 17% not sure.
- The respondents commented that the best features of the 3D methodology were:
 - ✓ Both screens showed information which was easily understood;
 - ✓ More information can be taught in a short time;
 - ✓ Engaging and elaborate in details;
 - ✓ All views can be seen simultaneously;
 - ✓ Detailed examples and fast access;
 - ✓ Practical applications, make me attentive and interacting;
 - ✓ Facilitated by the video; and
 - ✓ Exam questions also discussed.
- Some of the respondents commented that the worst features of the 3D methodology were:
 - Too confusing;
 - Too much information for part time students, may be a bit too much;
 - Not being able to concentrate on one screen at a time;
 - Might be unable to see from recorded session;
 - Sometimes get overwhelming with too much information;
 - Sometimes out of the course syllabus; and
 - Not relevant for examination.

Virtual Classroom Sessions

The virtual classroom is an environment based on the ICT platform, in which learners can see, hear and read various learning resources simultaneously with the tutor, without being physically present next to each other. The learners can raise questions in text through chat box or by use of audio, and may even come online through video channels, when requested. In contrast with the setting of a physical classroom, in virtual classroom, a tutor can answer questions directly to any individual or to the entire class. The learners can access the recorded virtual sessions at any time and at any place

through the internet. The learners and the lecturer need not be present in one city, country or time zone but can access either live sessions or recorded sessions at their convenience.

The Virtual Learning Environment by using 3D methodology, to ensure continuous and consistent engagement, was tested in the three collaborative sessions, for Study Unit 3, 4 & 5 of the “Risk Management and Business Continuity Planning Module.” Unlike in the face to face seminars, instead of using the two projector screens, desktop sharing feature of the *Blackboard LMS* was used. The GUI Screen was kept open on the desktop and navigation to various resources including Screen-1 course content, was conducted without switching files or uploading number of different documents.

In order to gauge the effectiveness in realizing the desired Learning Outcomes of this Course Module and the relevant Study Units, learners were invited to answer the ten questions based on their personal experience.

Findings from Virtual Sessions

There were 26 responses received from amongst the 87 learners (who attended the virtual classes) invited to participate in the survey, so the findings are based on 26 responses only. All respondents are Singapore residents, in the age group of 20 to 45 years, comprising of male and female, and well versed with internet and ICT devices. 92% learners used PC/laptops and 23% used both tabs/mobile devices and PC/laptops to attend the virtual sessions.

- 62% agreed that they were able to feel the repository of resources in front of them on their computer screens, 16% disagreed and 22% not sure.
- 69% agreed that they were able to pay attention to the lecturer and read from the document referred without any difficulty but with more clarity as the text was in front of their device (laptop, desktop, tablet, mobile phone etcetera), 19% disagree and 11% not sure due to either lagged response of the internet or was tiring at times.
- 46% find in contrast with commonly used Virtual Session presentation method of teaching, the 3D methodology was more engaging, 19% disagreed and 35% had other suggestions.
- 85% were able to understand the correlation between the video, audio, text file and the explanation from the lecturer without any difficulty, 8% disagree and 7% had other suggestions.
- 46% find it was easier to understand the concepts by 3D methodology of learning without feeling the lack of physical presence, 15% disagree and 38% not sure.
- 65% agreed that in contrast with conventional eLearning methods, I was able to retain in my mental memory the subject and examples discussed during the session, 15% disagreed and 20% not sure.
- 69% agreed that they were not overwhelmed by the technological platform interactions and able to keep pace with concentration on the subject matter, 11% disagreed and 19% had other reasons or not sure.

- The respondents commented that the best features of 3D methodology in virtual classroom were:
 - ✓ Easy to understand and pay more attention;
 - ✓ Were able to ask more questions through chat-box as compared to face to face sessions;
 - ✓ Able to attend anywhere online;
 - ✓ Sessions were interactive and more lively; and
 - ✓ Detailed examples were good.
- Some of the respondents commented that the worst features of the 3D methodology in virtual class were:
 - Screen lag and connectivity issues with delay in timing online;
 - Too much switching of files in between; and
 - Unable to focus as compared to face to face session with 3D methodology.

CONCLUSION AND RECOMMENDATIONS

The key characteristics of engaging the adult learners are meeting their desired learning outcomes, in context of their future needs, by leveraging on their past experiences and knowledge. The three groups of adult learners are, first the professional learners seeking advanced knowledge and competency, second adult learners keen in academic certification for career growth and the third group seeking both certification and enhancement of knowledge and skills for excelling in a competitive environment. Each group with different objectives, do have one common attribute, which is of learning in a fast paced environment, within limited time, through an affective delivery mechanism. The proposed 3D methodology is one such delivery mechanism, when coupled with rich content design, in context of the learners' profiles, can be an effective methodology for face to face as well as virtual sessions.

One concluding and encouraging finding from the recent survey is that, the 3D methodology is welcomed and successful in face to face sessions, with professional adult learners, keen in acquiring new knowledge, skills and competencies. It has been also effective in tertiary educational institution with majority of adult learners attending face to face sessions. There are some concerns about the excess information flow, and some learners are more focussed on the scope to be limited to the examinable content. This diversity is an expected finding, as it is understood that the there are three distinct categories of learner groups. So in view of the each learner group expected learning outcome is also different. However the findings of the first such survey, though with limited number of respondents, the feedback is promising, so as to recommend the 3D methodology to be adopted in face to face sessions, with high quality content based on learner profiles.

In terms of virtual sessions, the 3D methodology has proven to be engaging and more interactive, based on the survey responses and direct feedback. This being the first experiment, there is a need for further research and trial in more subsequent virtual sessions. The challenges faced, which are indirectly business opportunities for technology providers, were lack or limited ability of the available ICT technology to replicate two screens similar to face-to-face sessions, with enough bandwidth. These drawbacks, hopefully in the near future will be resolved by LMS technology providers.

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