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# Innovations in Defining, Designing and Delivering Online Corporate Training Programs: A Case Study

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## Abstract

*Online education has provided new avenues for corporations to train their employees in enhancing skills without losing out on valuable productive time, hitherto a prerequisite in the conventional face-to-face training. However, unique contextual requirements of corporate clients put immense pressure upon training providers to continually innovate in terms of defining, designing and delivering such customized programmes (Macpherson et al, 2004, 2005). This case study details out how digital storytelling, programme-specific Wiki, Vodcasts and many more innovations resulted in an authentic, engaging and constructivist online training programme for a major petrochemical corporation in India and how the same model can be replicated in the Middle East.*

## Introduction

More and more corporations world-wide are recognizing the critical importance of training and development (T&D) not only in grooming their employees, but also in retaining them. In the highly competitive market sphere, where organizations do not hesitate to 'poach' employees from their competitors, T&D plays a major role in underlining the value system of the organization before the employees. Today's professionals do not look only at the pay package, perks and other benefits offered by an organization, but also at the long-term professional growth offered by an

organization by way of continual T&D through a well-planned strategy.

Under this unprecedented competitive scenario, the role of T&D personnel is also witnessing a radical change. In a cross-national study conducted by Yadapadithaya & Stewart (2003), 'delivering training' was an important function of T&D for about 37% of the Indian and British companies surveyed, highlighting the trend of training departments acting as 'strategic advisors' or 'internal consultants' to outside training partners rather than themselves acting as 'front-line deliverers of training programmes'. Thus, their role is shifting more towards performing a training needs-analysis for various categories of employees before having liaison with training providers to mutually define and design a customized training programme, while closely matching the skill-development requirements of employees. The burgeoning online corporate training requirements of corporations worldwide have resulted in them creating numerous strategic alliances with major universities and e-learning provider companies, and in the creation of corporate universities (Clarke & Hermens, 2001).

Corporations are also becoming more open to experiment with and deploy contemporary training delivery methods like online training, in conjunction with the conventional face-to-face training. A major factor in favor of online training is the reduction of various ancillary costs, particularly the travel costs. Hambrecht & Co, (2000, pp. 3-4) found that companies spend about two-thirds of the training budget as employee travel expense to

distant traditional training centers. General Electric Medicals now uses online training to demonstrate the tools and usage of its X-Ray and MRI machines to its worldwide customers, thus saving on high business travel cost of bringing such customers to specific locations where these machines are physically installed (Jenson, 2006). BAE Systems has saved millions of pounds by using tutor-led online learning to train its engineers with the help of Cranfield University, University of Southampton and University College London (Pollitt, 2005). Singapore's leading telecom company, Singtel saved about one million Singapore dollars in direct training costs by converting 30 days of traditional classroom training to its customer service officers into 150 hours of online learning while ensuring minimal disruptions to their productive work. Similarly, in Nokia's Singapore office, its Asia-Pacific regional manager drastically reduced his travel costs to various countries to train the account managers and channel partners by leveraging e-learning and thus, reducing two days of face-to-face training to a single day (Igonor and Tang, 2003).

Another major advantage of online training over conventional training methods is the ease of creating online communities of practice whereby people with the same interests come together in groups on a regular basis (Wenger, 1998). Therefore, there is a great opportunity to capture the tacit knowledge of geographically dispersed employees sharing similar interests. Hsiao, Kuo & Chu (2006) suggest that technology mediated learning (TML) design should begin with learning context rather than technology, instructional method or learner characteristics alone. They demonstrate how situated-learning model with communities of practice in TML resulted in better learning outcomes for after-sales-service technicians of Sony Corporation located in geographically dispersed locations like Singapore, Hong Kong, Taiwan and

Australia. According to Barsamian (2005), the employees forming the communities of practice in online training programmes should not be explicitly observed by corporations, to allow them freedom of expression and construction of new knowledge. Otherwise, they may feel threatened and may not contribute for fear of negative impact upon their jobs.

There is considerable body of research on the learning design aspect of online training programmes for corporations. Newton, Hase and Ellis (2002) identified six factors as important in the effective implementation of online learning in Queensland mining industry: external influences, organizational culture, organizational structures, training environment, learner's needs and the online learning environment. Taran (2006) proposed the use of rapid e-learning (Jimenez, 2005) design in a large telecommunications company for synchronous online training by enabling subject matter experts to reduce training development time and deliver workshops online while maintaining acceptable quality of instruction. Barnes & Blackwell (2004) present useful recommendations for online business courses and online corporate training, particularly that online classes should be predominantly if not totally asynchronous in nature with the instructor playing active role as a developer, facilitator, tracker and coach. The training design, however, varies from organization to organization on the basis of the uniqueness of their industry and other factors. IBM has created an e-learning infrastructure by deploying Lotus Notes and virtual spaces for social networking to enable employees in exchanging ideas online and to facilitate peer-to-peer learning (Weinstein, 2007). Brewing giant Heineken partnered with Thomson NETg to use Cardeen University Quantum course suites for instructor-led online learning blended with face-to-face instruction at their

Amsterdam training center (Pollitt, 2004). Comacchio & Scapolan (2004) performed an exploratory study of Italian banking and pharmaceutical industry regarding the adoption of e-learning. They found that e-learning is more diffused and advanced in the banking sector due to more factors inducing institutional and competitive pressures. Pietrykowski (2001) notes that corporations are least interested in extended study to culminate in an academic degree for its employees, but in providing “just-in-time” skill development by using need-specific modules through asynchronous learning, detached from fixed time schedules followed in regular degree programmes.

Typically, any change is often opposed by employees and so is the case with online training and development. However, the scenario is changing fast as more and more organizations are embracing online training due to the immense benefits offered by it. Berge (2002) reports the findings of a survey conducted on business and corporate respondents that the overall number and intensity of barriers towards distance education reduce as the organization matures in terms of distance education competency as a whole. Slotte and Herbert (2006) present a case of Valio, a large dairy products company based in Finland and report that participants learning online gained similar or slightly better learning outcomes, while earning the certificate in lesser time than those who used the print material. Businesses today are driven by information technology and online T&D gels well with this lifestyle of the employees.

It must be recognized that despite all the strides made in creating leading-edge online T&D programmes, there is scope for innovations in making such programmes much more authentic, engaging and interesting. Unique contextual requirements of corporate clients put immense pressure

upon training providers to continually innovate in terms of defining, designing and delivering such customized programmes (Macpherson et al, 2004, 2005). New technologies offer opportunities of knowledge management within organizations, which were hitherto grappling with fruitful implementation of these concepts. In this case study, innovations in defining, designing and delivering online training programme in a major petrochemical corporation in India are highlighted. These innovations are not radical, but are incremental in nature and are helpful in refining the approaches of training providers in online training design and delivery.

### **Defining, Designing and Delivering Online Training Programs**

Indian Oil Corporation Limited is currently India's largest company by sales with a turnover of Rs. 220,779 crore (US \$51 billion), the highest-ever for an Indian company, and profits of Rs. 7499 crore (US \$1.73 billion) for fiscal 2006. IOCL is also the highest ranked Indian company in the prestigious Fortune 'Global 500' listing, at the 135th position based upon its performance in 2006. It is also the 20th largest petrochemicals company in the world.

IOCL has been handling several mega projects over the past decades. These projects can be broadly categorized into refinery projects, pipeline projects and marketing projects. During early 2006, Universitas 21 Global (U21Global), the world's premier online business school and IndianOil Institute of Petroleum Management (iIPM) started exploring together the possibility of creating a customized online programme for IOCL executives. The IOCL executives are based at various locations through out the country and many of them are working on some mega projects. Displacing them from these projects

to attend long-term conventional face-to-face training programme can become detrimental to the future of projects. Thus, IOCL understood the importance of bringing these executives on a common online platform to share their best practices and experiences with fellow peers under the guidance of a faculty member. Some of the senior managers of IOCL were apprehensive about the outcomes of this “online” approach to training. Few weeks were spent by the faculty of U21Global and HR officials of iIPM to mutually define the requirements of the training programme. In this process, the standard course outline of 701 Project Management Methods of the MBA programme of U21Global was provided to IOCL. Several round of discussions between IOCL and U21Global resulted into the following changes desired by IOCL into the 701 curriculum:

1. Keeping in view that the participants of the programme would be undergoing an online programme of this sort for the first time ever, a two-days face-to-face orientation would be required to be provided by the faculty at the iIPM campus in Gurgaon. This would be helpful for making the participants aware of the online pedagogy and features of the learning management system (LMS) used in the online class of U21Global.
2. Reviewers of the online content from IOCL found that there was requirement to add certain topics relevant to their needs of IOCL in the existing online content. These topics were: environmental impact assessment, project viability, field engineering, project organogram and managing outsourcing.
3. It was insisted upon by the IOCL HR personnel that a two-day face-to-face session be incorporated during the mid-term of the programme to be

conducted by the faculty at the iIPM campus. This would provide the opportunity to the participants to clarify any doubts in the online course, in addition to more inputs from the faculty. In addition, a four-day face-to-face session was desired by them in Singapore, to be conducted by U21Global and NUS (National University of Singapore) faculty. This, according to them, was imperative to provide a global perspective on project management to the participants. A course in which most (80% or more) or all content is delivered online is categorized as “Online”, while a course with 79% or less content delivered online (and the rest in traditional face-to-face mode) is termed as “Blended” (Allen et al., 2007). It was ensured that the face-to-face component in this training programme was kept to a minimum (less than 20%) to retain the “online” flavor of the programme.

4. In order to provide insights to the participants about the industry specific project management issues, it was suggested by IOCL that the existing case studies in the online content be replaced by cases with the context specific to the oil, petrochemical and gas industry.

Till that time, U21Global had provided purely online training programmes to its corporate clients like Satyam Computer Services and HPCL (another Indian PSU in the oil, petrochemical and gas sector). For Satyam, it had created a customized programme for global business leadership. However, upon understanding the unique requirements of IOCL, it was agreed to incorporate the face-to-face sessions, industry specific case studies and new topics as suggested by them. Out of these new topics suggested, a module from

another course on “Outsourcing” in the MBA programme of U21Global was utilized in the 701 courseware. The remaining topics were authored by the U21Global faculty and were supplemented with articles from the research databases available in the U21Global e-library.

### ***The Innovations***

#### ***Digital Storytelling***

Dana Atchley brought the art of digital storytelling to the limelight and to the domain of the business world. His clients included Coca-Cola, EDS, Adobe, Silicon Graphics and many others. In the words of the Atchley himself, ‘...digital storytelling combines the best of two worlds: the ‘new world’ of digitised video, photography and art, and the ‘old world’ of telling stories’ (Reynolds 2005).

During early 2006, digital storytelling was experimented with at U21Global for creating multimedia introduction of faculty members, to be provided to students in the regular MBA classes (Williams, Bedi & Goldberg, 2006). Microsoft PowerPoint was used as the medium for creation of digital story introduction by professors. The core faculty members of U21Global were given one-day training through Elluminate about the digital storytelling skills, which included adding pictures/ photographs to the slides and recording narration in the background. It was found that such an introduction helped the students in getting connected to the professor in a better way. Early feedback from students suggested that listening to and telling ‘true stories’ was a compelling and emotionally-engaging experience, providing an opportunity for ‘transformative reflection’ (Lambert, 2000). Encouraged by this positive result, students in the first batch (started during mid-2006) of IOCL Hybrid Programme in Project Management were encouraged to submit their team assignments

in the digital storytelling format. It was found that most student teams successfully submitted their TA in this format, however some faced problems in using the file compression software (Impatica for PowerPoint) or such compressed files did not open properly at the professor’s end or the students could upload such files into the LMS with great difficulty. The experiment was repeated in a regular MBA section during early 2007, but such problems seemed to persist (Williams & Bedi, 2007).

The IT department at U21Global was made aware of the problem and they developed a large file upload system accessible through a link on the organizer page of the LMS. This upload system was made available to the students of the IOCL batch 2 which started during May, 2007. Thus, using this system the students could directly upload the large digital storytelling assignment files up to 50MB in size into the LMS. The students of this batch had both the options for uploading, that is, could use the file compression software (Impatica) before uploading the vastly reduced file size normally as an attachment to a discussion board posting or could directly upload the uncompressed file using the large file upload system.

It was observed that out of the ten teams in this class, one team experienced difficulty in uploading files through the large file upload system. This was primarily because this team failed to restrict the file size to the maximum limit of 50 MB. On a positive note, all the teams submitted the TA in the digital storytelling format and some of the submissions were indeed exemplary.

The experiment provided a means to the students to express their views in a multimedia format rather than the usual plain text-based format. A survey was conducted to know the various facets of the student’s

experiences of using digital storytelling as a vehicle of assignment submission.

#### *Program-specific Wiki*

'Wiki' is the Hawaiian word for 'quick'. The first Wiki was developed by Ward Cunningham in 1995, as the Portland Pattern Repository, to communicate specifications for software design. A Wiki is a set of linked web pages, created through the incremental development by a group of collaborating users (Leuf and Cunningham, 1999), and the software used to manage the set of web pages. Entire projects are being drafted, designed, edited and coordinated by teams through the use of a wiki, where the observable principle allows visitors to view, contribute and collaborate at much faster rates through virtual real-time conversations (Dickerson, 2004).

The genesis of experimenting with Wiki in a corporate class at U21Global can be traced to the requests from many corporate clients about case studies to be incorporated in the online classes, very specific to their unique requirements. The best of case study and research databases could not yield such case studies. Therefore, it was decided to experiment with the Wiki to create such case studies by using the participants in corporate classes themselves. It was reckoned that many of these participants in the corporate classes are experts in their own right and had accumulated tacit knowledge over the years, which can be captured using the Wiki.

MediaWiki was used to create this programme-specific Wiki for the IOCL batch 2. The students were given a demo on the use and tools of Wiki by the professor during the mid-term face-to-face sessions. In addition, scaffolding was provided to the students by providing them with a document having screenshots explaining the use of various tools of Wiki. The students were informed to use the Wiki for their final project assignment, which was team-based. The students were allowed to form the teams themselves according to the common projects they might have worked upon at IOCL and also, to choose the project themselves. Ten teams were formed, with some of the teams opting to work on more than one project simultaneously. Figure 1 shows the screenshot of the main page of the Wiki with the list of various projects chosen by the final project (FP) groups. About a month's time was provided to the groups to complete the final project assignment using the Wiki. A basic framework as under was provided to the groups to develop their respective Wiki pages:

- Background
- Major activities in the project
- The project plan
- Challenges faced during the implementation of the project
- Ways in which the above challenges were overcome
- Key learning(s) taken by IOCL/ you from this project for use in future projects at IOCL
- Conclusions

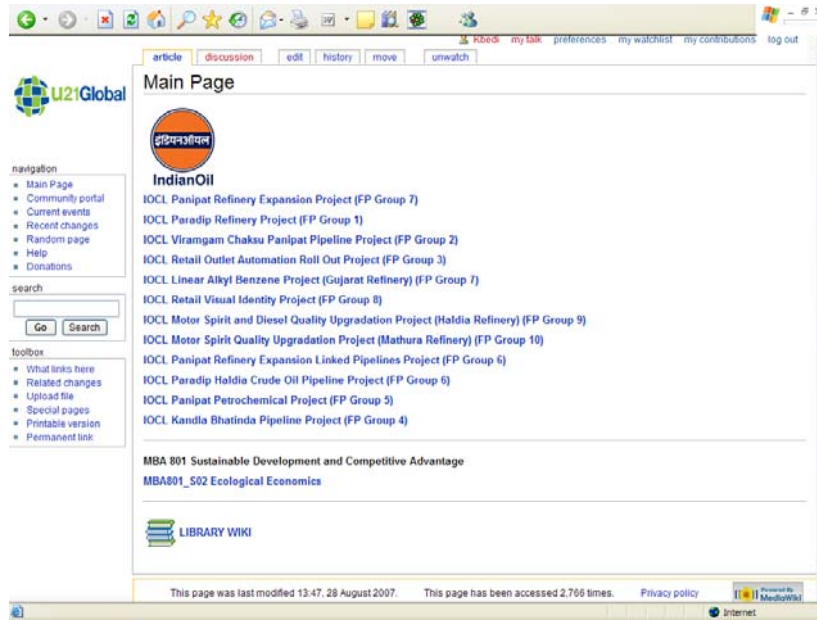


Figure 1: Main page of the programme-specific Wiki with the list of projects

The final projects developed by the FP groups on the Wiki provided great insights about the past projects of IOCL, the challenges faced and the learnings taken thereof. Figure 2 shows an overview of the content provided by

one of the FP groups on their Wiki project page. A survey was conducted on the participants to know about their experience of using the Wiki for their final project.

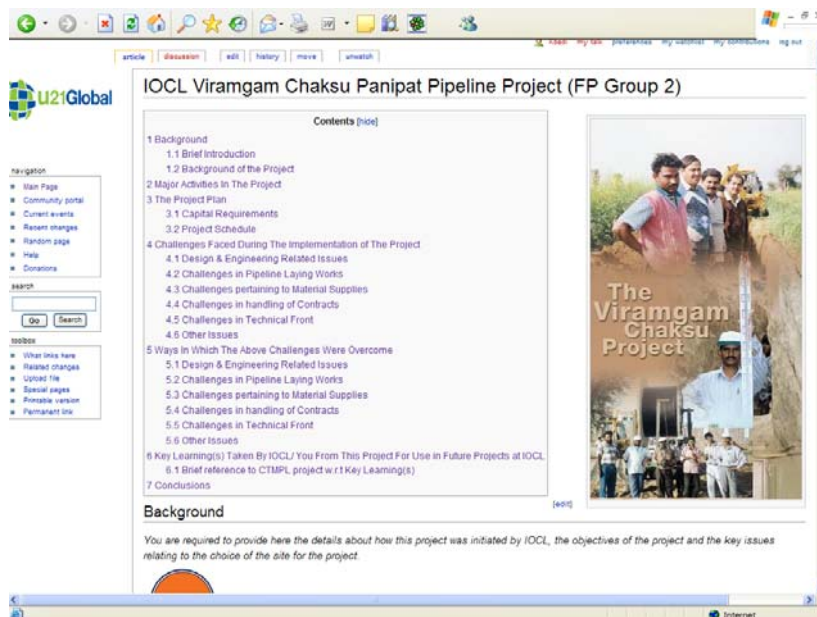


Figure 2: Overview of the content provided by one of the FP groups on the Wiki

Vodcasting is fast becoming a viable option for providing a multi-media rich learning experience to online learners. The easy availability of broad-band internet in major cities across the globe has made sharing of video files feasible for learning purposes. According to Arbaugh (2001), in the near future the immediacy construct (between the professor and online learners) may be broadened to include nonverbal behaviours for web-based courses as full motion/streaming video becomes more technologically feasible.

Vodcasting was used in the IOCL batch 2 by the professor to make generic announcements and for providing feedback to the students. Figure 3 shows the screenshot of one such announcement made by the professor. The time duration of the vodcasts was kept

somewhere between 2 to 4 minutes to keep the file sizes manageable. Initially, *YouTube* was used to provide the vodcasts to the students through a link in the LMS. However, it was found that for such a link to work in the LMS, the video has to be made accessible to the public at large. Thus, the privacy of the feedback to the students in the class was hampered due to this public access. In addition, due to the common threading of other vodcasts of the professor (meant for other classes), the students of one section could see the vodcasts meant for other sections. In order to tackle this issue, an internal system was developed within the large file upload system using *HipCast*, to upload the videos on the servers of U21Global to be accessible only to the relevant classes.



Figure 3: Vodcast announcement made in the IOCL class

The initial vodcast announcements were difficult to record as the professor had to do the recording impromptu in one stretch. Later, the quality and ease of recording of vodcasts was increased by using the Windows Movie Maker. Using this software, the recorded

vodcasts could be edited easily with the provision for mixing a background score and adding titles to the portions of the video.

The informal subjective feedback of the students supported the value of such vodcast announcements in the class.

#### *Skype Communication*

The *WebCT* LMS has an inbuilt chat tool to allow real-time synchronous interaction between the faculty and students. However, this text-based interaction is possible only between people who are logged on to the LMS at a given point in time.

In the IOCL batch 2, the professor experimented with the use of *Skype* as a supplementary tool to communicate with the students. The advantage *Skype* offers over the *WebCT* chat tool is the facility of teleconferencing as well as videoconferencing. Also, people appear online in *Skype* as soon as they start their computer machines. Thus, they become available for interaction without logging into the LMS. However, there is a big possibility of the professor being swamped with *Skype* calls from the students at any point in time. In order to circumvent this problem in the IOCL section, the professor laid some ground rules for the use of *Skype*. It was emphasized to the students not to initiate a *Skype* call as a telecon or a video call, but as a text chat. This way, the professor would have the opportunity of interacting with more than one student at the same time. The text-based

interaction ensures that the students would be more precise in “keying-in” their issues compared to a telecon or a video call. The students were advised to use telecon and video call facilities in *Skype* only during times of great urgency.

It was found that the use of *Skype* under these “controlled” conditions was manageable by the professor and also, it resulted in great satisfaction on part of students to be aware that their professor is within their easy reach most of the time. This resulted in giving a message to the corporate clients that in online training, the professor is much more easily “accessible” for real-time interaction than the conventional face-to-face settings. The subjective informal feedback from the students substantiated these results.

#### **The Survey Findings**

In order to gauge the effectiveness of the innovations introduced in the IOCL sections, a survey instrument was designed and executed on the students. The survey instrument focused upon the digital storytelling and Wiki interventions. Out of the 50 students in the class, 24 students responded to the survey. The findings of the survey are shown in table 1.

S. No.	Statement	SD	D	N	A	SA	NA
<b>Digital Storytelling</b>		<b>Percentages</b>					
1.	The introduction of the professor in digital story format helped me to get to know him better compared to the usual text-based/ face-to-face introduction.	0	0	12	44	44	0
2.	The download and viewing of the digital story introduction of the professor was a straightforward process.	0	4	8	52	36	0
3.	The introduction of the professor in digital story format has improved the learning environment for me.	0	0	12	68	20	0
4.	The opportunity to submit the Team Assignments in digital storytelling format was a good idea.	4	0	0	20	76	0
5.	Deciding what information to include in the digital story was a straightforward process.	4.2	29.2	12.5	41.7	12.5	0
6.	The submission of the Team Assignments in digital storytelling format improved the learning outcomes from this subject.	0	0	8	44	48	0
7.	The submission of the Team Assignments in digital storytelling format improved this type of presentation skill, which is highly sought in the business world today.	0	4	0	24	72	0
8.	I was integrally involved in the creation of digital story for my Team Assignments.	0	0	0	20	80	0
9.	I would feel comfortable submitting my OBOW (Open Book Open Web) exam in this format.	8	16	12	20	40	4
10.	Creating the MS PowerPoint slides for the digital story was a straightforward process.	0	8.3	12.5	41.7	37.5	0
11.	Finding the relevant images from the web for the digital story was a straightforward process.	4.2	12.5	16.7	54.2	12.5	0
12.	Recording the narration in the background for the digital story was a straightforward process.	4.2	16.7	12.5	37.5	29.2	0
13.	The file size of the completed digital story meant uploading via the 'Student upload site' and this was manageable.	4.2	16.7	25	33.3	20.8	0
14.	Overall, the creation of the digital story for assignment submission was a relatively straightforward process.	0	12.5	16.7	58.3	12.5	0
15.	The "Creating Digital Stories: Principles and Practice" presentation was helpful in creating the digital story team assignment.	0	0	8.3	54.2	37.5	0
16.	The "Digital Story FAQs" presentation was helpful in creating the digital story team assignment.	0	0	16.7	54.2	29.2	0
17.	Digital storytelling should be a feature of all U21Global subjects for introductions by professors and students.	0	0	8.3	33.3	58.3	0
18.	Digital storytelling should be a feature of all U21Global subjects for at least one assignment.	0	4.3	4.3	43.5	47.8	0
<b>Wiki</b>							
19.	Wiki is better compared to the online discussion board for creating organization specific case studies.	0	8.3	20.8	37.5	33.3	0
20.	The instruction documents provided by the professor regarding the use of Wiki were useful.	0	4.2	4.2	50	41.7	0
21.	The editing tools in Wiki are simple to use.	4.3	4.3	13	39.1	39.1	0
22.	It was easy to insert pictures/ images on the Wiki pages.	0	8.3	20.8	50	20.8	0
23.	Wiki is an effective tool for group learning.	0	0	4.2	45.8	50	0
24.	It was difficult to coordinate with the team members for adding information to the project on the Wiki.	20.8	45.8	12.5	16.7	4.2	0
25.	I often used the "History tool" (to compare previous versions) in the Wiki to see the latest changes incorporated by my team members.	0	8.3	16.7	50	20.8	4.2
26.	My team members communicated with each other through emails/ phone/ chats before adding any new information on the Wiki project.	0	25	4.2	45.8	25	0
27.	The case studies of IOCL projects created on the Wiki would be useful as knowledge objects to other IOCL executives.	0	0	0	16.7	83.3	0

Legend used: SD – Strongly Disagree; D – Disagree; N – Neutral; A – Agree; SA – Strongly Agree; NA – Not Applicable

The data relating to digital storytelling and Wiki in table 1 provides some insights about the issues related to these innovations in the IOCL section. Firstly, we focus upon the negative indicators with significant proportion of responses as “Strongly disagree” and “Disagree”.

It is evident that quite a large proportion of students did not find deciding about the information to be included, finding relevant images from the web and recording the narration in the background of the digital story a straightforward process. A significant proportion of students faced problems with the large file sizes and the upload system. Many of them shared that they would not feel comfortable submitting the Open Book Open Web (OBOW) final exam in this format.

There were some students who did not find the editing tools of Wiki easy to use, while a large majority found it difficult to coordinate with the team members for adding information to the project on the Wiki. It is noteworthy that a large proportion did not communicate with their team members through email, phone or online chats before adding any new information on the Wiki. These issues require further investigation to know if this lack of communication between student team members through other tools before sharing ideas on the Wiki is indicative about self-efficacy of Wiki as a collaborative tool. However, there seems to be some contradiction on this due to the survey findings about large majority of students finding it difficult to coordinate with the team members through Wiki.

Overall, the survey findings (see the data highlighted with blue) support the utility of both these innovations in improving the learning environment, skill development and knowledge construction.

## **Future Directions and Scope for Replication of this Training Model in the Middle East**

In order to make the digital storytelling process more user friendly, the author is currently experimenting with Photo Story 3 as a substitute for MS PowerPoint. This software has been used by some researchers (Jenkins & Lonsdale, 2007), who advocate its ease of use and smaller file sizes compared to Microsoft PowerPoint. Similarly, the MediaWiki used for creating the IOCL Wiki was not configured to have the “Undo” or “Reverse” feature commonly found in applications like the Wikipedia. This might have posed challenges for the team members to reverse to an earlier version of the content promptly and might be the reason for difficulty in team coordination. The innovations done in the IOCL section are still to be tested for large scale implementation in the other corporate sections and regular MBA sections of U21Global. Hence, future research would focus upon this dimensions.

These innovations in online training model appear to be easily replicable in the Middle East. The key issues to be taken note of in this regard are:

- Online training providers need to be flexible in blending their online training programmes with a suitable proportion of face-to-face teaching in order to make the students comfortable with the online pedagogy and the LMS, in addition to making them feel more “connected” to the “human” professor. However, contemporary software like Elluminate or Interwise may help in avoiding the travel costs and other expenses of physically bringing the students and faculty at a particular location. These online real-time “webinars” can be a good substitute to the face-to-face teaching. In the

Middle East, where the online training is yet to catch up in a big way, this blending of online training with some face-to-face sessions is imperative to dissuade any initial inhibitions of the potential clients about “purely online” learning.

- The training providers must have a qualified and experienced team of faculty to understand and define the unique training requirements of the client and then, promptly “customize” the online course content as per these requirements. The level of customization should preferably be confined to the choice of case studies relevant to the client’s industry, while keeping the online content more or

less unchanged to keep the customization costs under check.

- Programme-specific Wiki can be used as a powerful medium for the development of organization-specific case studies, which may serve as knowledge objects for whole of the organization.
- Innovations like digital storytelling, vodcasts and Skype communication help in making the online training programmes much more engaging, interesting and authentic in addition to helping in knowledge construction through the constructivist pedagogy adaption.

## Conclusions

In today's networked world, the T&D function of organizations is changing radically to include a strategic focus. Organizations are embracing contemporary ways of defining, designing and delivering training programmes. Online T&D is fast becoming a favored mode of delivery. However, it is critical to define, design and deliver the online training programmes such that the learning outcomes are closely linked to the expectations and professional growth of employees.

In this case study, incremental innovations in the use of digital storytelling, programme-specific Wiki, vodcasting and *Skype* communication are highlighted for creating an authentic, engaging and constructivist training programme for a large petrochemical organization in India. The survey conducted on the students of this online corporate class revealed that digital storytelling and Wiki received an overwhelming positive response, while qualitative feedback on the use of

vodcasting and *Skype* communication also reinforced the utility of these tools in modern T&D programmes. The case study also highlighted the challenges faced in incorporating these innovations in the customized online programme created for a large petrochemical organization in India and scope for further improvisations in refining such innovations in the times to come.

There is great scope for replicating these innovations in online T&D programmes in the Middle East. However, the training providers should offer enough flexibility in terms of blending the online programmes with a judicious mix of online with face-to-face training and customization of the content according to the unique requirements of the organizations. The innovations highlighted in this case study would be helpful in dissuading any myths about online T&D and would pave the way for making online T&D a preferred mode of training in organizations operating in the Middle East.

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