PresentationTube

A Network for Producing & Sharing Video Presentations in Oman

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By Alaa Sadik
Founder & Project Leader
Sultanate of Oman

www.presentationtube.com
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PresentationTube project aimed to help teachers in Sultanate of Oman produce and share quality video presentations in a new and easy way. The project offers a free presentation recording application and online video sharing platform. The application synchronizes a variety of visual aids, including teacher’s audio and video footage, PowerPoint slides, whiteboard, drawing board, and browser content. With visual aids, like the drawing board, the teacher can draw lines, curves, graphs, and shapes on the screen to emphasize or clarify an idea or concept, so the demonstration can be clearer. The project established an online community for producing and sharing quality video presentations in Oman and provided training for more than 450 school teachers and 100 university teachers at Sultan Qaboos University on using PresentationTube to produce video presentations effectively, resulting in more than 1,000 quality video presentations. Preliminary usability evaluation results showed that teachers found PresentationTube Network effective, efficient and satisfactory in terms of producing and sharing video presentations. Online video presentations are perceived as useful in improving students’ learning and increasing their overall level of satisfaction and confidence, providing students with a valuable resource, saving time giving face-to-face lessons, and re-organizing teaching time.
Background and Justification

The Sultanate of Oman, is neither a rich country, like United Arab Emirates (in the north), nor a poor country like Yemen (in the south), and it does not have the immense oil resources of some of its neighbors, like Saudi Arabia. Oman’s renaissance program started in 1970. From an agrarian society without any sort of infrastructure, the country has been transformed into a thriving modern state over a relatively short span of a couple of decades. This has been achieved through the judicious design and implementation of successive Five-Year Development Plans. Connecting all Omani schools and universities to the Internet was one of the outcomes of these plans, which already achieved five years ago. In Oman, there is currently a strong emphasis on systemic reform in education at all levels. This development is encouraging stakeholders to collaborate in supporting the achievement of high standards in Omani schools.

Research on video sharing networks emphasized the importance of considering the potential possibilities that video content presents when deciding how to support learners. Proponents of videos argue that there is increasing interest in providing students with recorded materials and video is demonstrated to be an expanding channel for presentation. Providing video on demand to students is used to support facet-to-face, online, or blended learning. Students can choose when and where to use the material and can spend as long or as little time on each learning activity. Watching video is considered as a basis for mental activity. It is socially acceptable and widely used and supported by multimedia cell phones and portable media players. Video is a more forgiving and powerful presentation medium, and does not have to be stand-alone, like a television program. Learners can play, rewind, forward, or pause the video to address their specific needs. It can be used in many ways to encourage interactions between the teacher and students and create engagement.

In conventional classroom settings, a teacher uses a large wall screen, whiteboard or flipchart and wants to video everything, including him/herself. But if the camera is pointed at screen or play area, students would not be able to read from the video because the low quality of the video output (e.g., contrast, reflective surfaces, glare, shadows, small text, limited area, positioning, etc.). This necessitates having a camera operator to pan and zoom as the teacher works. Therefore, the need was emphasized for the development of an
unconventional network to assist teachers to automate the process of producing effective video presentations using their existing PowerPoint slides. PresentationTube offers the application and platform for helping teachers to pre-record effective video presentations. The application and the platform accommodate the technical differences among teachers, as well as the requirements of producing and sharing effective video materials for students.

**Objectives of the Project**

The project aimed to:

1. Establish a free-access online network for producing and sharing quality video presentations for Omani teachers and students.

2. Provide training and support for more than 500 Omani teachers and university faculty members on producing and sharing effective video presentations.

3. Offer meta-tagged, high-quality, classified, and relevant online video presentation library, estimated by 1,000 video presentations by the end of Spring 2014, that would be immediately and easily used by teachers and students in Oman.
4. Promote effective use of information technology for the production and dissemination of quality e-content at Omani schools.

5. Develop positive attitudes toward producing and exchanging of online resources and learning objects among Omani teachers and students.

6. Evaluate the effectiveness and efficiency of online video presentations on improving student learning and satisfaction in some Omani schools.

Method

A three-stage methodology was adopted in this project. The first stage was one of orientation and discussion to identify issues and teachers’ needs. The second stage was implementing the project in reality. The third stage consolidated participants’ perceptions and examined their online activities throughout PresentationTube Network. At the beginning of the project, more than 20 workshops were offered for teachers in schools and at Sultan Qaboos University, as a part of professional development programs hosted by the University. Topics included producing and sharing video presentations, the applicability of online video presentations to current teaching contexts, and their advantages were provided. In addition, more detailed information about using PresentationTube recorder and
network was offered via the network blog and Facebook group. The workshops emphasized the importance of co-operation among the project team and teachers for the success of the project and benefits for students.

The purpose of the implementation was to supply information on how the PresentationTube network functions in reality and its effectiveness in achieving the objectives of the project. In addition, evaluation focused on teachers’ behaviors during the implementation and their students’ reactions toward the usability of network. The implementation allowed the project team to answer the following questions:

1. How usable is the network as a system for producing and sharing video presentations as perceived by the teachers?

2. What is the quality of video presentations produced and shared by teachers?

Issues raised from the implementation stage were explored further through quantitative and qualitative methods, as mentioned below.
The usability of the network

As a principal aim of the evaluation is to investigate how effective, efficient and relevant is the design and functionality of PresentationTube network as perceived by participant teachers, an online questionnaire was administered for this purpose. The overall results show that participants found the network, including the video presentation recorder and the online platform, effective in facilitating the process sharing video presentations with students, easy to use in producing quality video presentations (efficient), and relevant for use by teachers and students (satisfactory).

In terms of effectiveness, participants strongly agreed or agreed that PresentationTube recorder is a useful tool for recording presentations from the comfort of home or office (76%), has all the functions to synchronize teacher’s video footage and slide content (81%), and allows narrating slide content and annotating slides in a very effective way while presenting (85%). The majority of participants strongly agreed that (85%) that the visual aids included in the recorder, such as the whiteboard and the drawing board allowed them to emphasize or clarify their ideas, so the presentation can be clearer. In addition, teachers
found the online platform very effective in uploading video presentations quickly (77%), sharing presentations with students (89%), and responding to students’ questions and comments on the lecture (71%). However, only 39 per cent of the participants believe that PresentationTube video presentations could be used in different teaching settings and scenarios in a flexible way.

In terms of efficiency, participants rated presentation recorder and platform as very easy to use or somewhat easy (80%). They rated the recorder as very easy to use in recording presentations (86%), importing and displaying slides (90%), navigation through slides while presenting (89%), and adjusting camera and video settings (68%). However, they rated the recorder as somewhat easy to narrate slide content while recording (65%), and illustrate slide content and guide learners through the presentations using visual aids like the whiteboard and the drawing board (58%). They argued that adjusting audio and video quality, and switching between different video presentation layouts (such as single, mixed and side-by-side modes) are not very easy using the recorder. In addition, teachers rated the online platform itself as efficient in uploading video files and embedding and sharing video presentations with students (79%). In terms of satisfaction, participants indicated that, overall, they are satisfied with PresentationTube network (87%), and would like to be used by other teachers (65%). The results indicate that they liked the way that PresentationTube recorder uses to capture the presentation (67%), and combine slides with the video for uploading to the online platform (76%).

To learn more about the factors affecting the usability of PresentationTube recorder and platform and validate the quantitative findings above, responses from seven participants were collected using the semi-structured interview schedule after one week of ending the implementation period. The responses to the interview questions are organized, analyzed, and coded to address the three aspects of usability. However, since many responses contained multiple and similar beliefs, the number of codes assigned to each question varied. Responses are categorized according to the three aspects of usability and the type of feedback (general or distinctive). The first question evoked responses to the overall experience with PresentationTube recorder when used for the first time. A teacher indicated that “when I used PresentationTube for the first time I was amazed to see that simple software can help me to produce video to my students in minutes”. A second teacher expressed that “it was very nice experience to learn how to record my class presentations
and work from my office”. Similarly, a third response confirmed the previous believes “...when I used it for first time, I liked its interface and found no difficulty while using it. It was interesting to learn and use”.

When participants were asked about the most and least useful features they found in PresentationTube Recorder, they indicated that PresentationTube has almost all the features they need to produce video materials. A teacher indicated that “I liked the feature that you can use your already made slides, so you do not have to create them in the program itself. Also, adding and taking out the teacher’s face. I liked that there are the other tools like the browser and whiteboard, but was not able to use it because of time limitation and my browser setting. I loved the way you embedded the presentation in my Moodle course”. Stating another point of view, a second teacher liked the software and suggested more features to be added. He explained that “it is very interesting to share class presentations as video with my students, but it should provide some extra features for collaborative work. It should provide real time feature”. When participants were asked to suggest more new features or functions to be added to PresentationTube, a teacher suggested that “enhancement for teacher’s image on video like maybe add some picture effects to reduce the bad lighting some people have”. This idea was justified by the point of view of another teacher who indicated that “the teacher’s video footage should be positioned in a better way, not inside the slides, so part of the text is hidden”. In terms of length or recording, a teacher highlighted that “a longer video recording time creates a very large file size that may take a long time to upload”.

In terms of factors that make PresentationTube platform better than other slide or video sharing networks like SlideShare and YouTube, a teacher expressed that “the way that PresentationTube uses to combine video with presentation slides is very brilliant. YouTube is a great platform when you need to share a video with your students, but students cannot point to a particular point in the presentation. In PresentationTube students can follow and control the video presentations”. Additionally, another teacher stated that “PresentationTube helped me to make my presentations clearer. It makes presentation look wonderful as interactive video and slides than any other. PresentationTube changed the way I share course materials and information with my students. With just a few clicks, I can open my presentation, add my picture, and narrate the slides”. A third teacher confirmed the same point of view. She explained that “The ability of PresentationTube to integrate slides,
teacher’s sound, and writing board in a video can capture the attention of students. Video content is easier to read. Students can have greater flexibility in watching videos, which can be used repeatedly as needed in the future to different groups of students”.

In terms of the possibility of using PresentationTube videos in future classes, a teacher pointed out that “PresentationTube is a good solution for recording and sharing PowerPoint presentations online. I can directly upload the video file to PresentationTube and send the link to my students to view my presentation on a computer or smart phone. It makes it easier to students who did not attend the lecture or those who are under academic probation”. Lastly, two teachers concluded that that many teachers still need training and encouragement to use PowerPoint in their classes, before producing video presentations for their students. They believe that this kind of teachers may often be an important factor inhibiting the successful use of PresentationTube.
The quality of video presentations

To assess the extent to which teachers produced quality video presentations using PresentationTube, the Quality of Video Presentation Rubric was used to assess video presentations uploaded and shared via PresentationTube platform. Each video presentation was assessed using the rubric since the project was relatively small and is feasible to examine all the video presentation. The project principal investigator and two research-assistants, who received their bachelor degrees in education, and attended a training workshop in using the rubric, selected 187 video presentations randomly to be assessed. To improve consistency between evaluators, a sample of video presentations was assessed for practice and to enhance agreement among evaluators. Scores for each video presentation are analyzed and represented as a set of averaged ratings, one per criterion, and summarized as a final average covering the thirteen criteria used in the rubric. A total number of 186 videos were assessed. Videos varied in length and quality, but most videos were about 15-20 minutes long.

Overall, assessment of video presentations showed that, teachers did well in their recordings and their videos met most of the pedagogical and technical attributes of quality
video presentations. The majority of video presentations (72%) were exceptional in terms of learning goals, accuracy, motivation, quality of graphics, and interaction with students via discussion boards. The rubrics scores revealed that video presentations have many features that attract students’ attention (such as inclusion of multimedia elements, interactivity, and length) are likely to show an interest in learning with the video presentations. Video presentations also were rated high in terms of design of presentation, text formatting, camera positions, and reusability of the presentation. In addition, most video presentations (86%) showed clear content narration and effective use of annotations that help students to understand the main points in the presentation. The design of presentations took into account the differences in students’ needs, allowing different cases of students to benefit from the videos.

### Quality of video presentations produced by teachers (n=186 video presentations)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Poor (0)</th>
<th>Low (1)</th>
<th>Moderate (2)</th>
<th>High (3)</th>
<th>Exceptional (4)</th>
<th>Mean of Rating</th>
<th>StdDev</th>
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<td></td>
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<td></td>
<td></td>
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<td>2. Motivation</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>3.31</td>
<td>.6265</td>
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<tr>
<td>3. Accuracy of content</td>
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<td>✓</td>
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<td></td>
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<td>.5956</td>
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<td>4. Sequencing of information</td>
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<td></td>
<td></td>
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<td>.5476</td>
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<tr>
<td>5. Design for learning</td>
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<td></td>
<td></td>
<td></td>
<td>3.01</td>
<td>.6434</td>
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<td>6. Text and formatting</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>2.51</td>
<td>.5744</td>
</tr>
<tr>
<td>7. Audio narration &amp; annotations</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.69</td>
<td>.4977</td>
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<tr>
<td>8. Quality of graphics</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td>3.05</td>
<td>.8562</td>
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<tr>
<td>9. Camera positions</td>
<td>✓</td>
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<td></td>
<td></td>
<td>2.86</td>
<td>.7751</td>
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<tr>
<td>10. Transitions and effects</td>
<td>✓</td>
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<td></td>
<td></td>
<td>2.11</td>
<td>.6245</td>
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<td>11. Metadata and interoperability</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.91</td>
<td>.4235</td>
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<tr>
<td>12. Interaction with students</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.63</td>
<td>.8380</td>
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<tr>
<td>13. Re-usability of presentation</td>
<td>✓</td>
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<td></td>
<td></td>
<td></td>
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<td>.6491</td>
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<td><strong>Average Score</strong></td>
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<td></td>
<td></td>
<td></td>
<td><strong>2.79</strong></td>
<td><strong>.1645</strong></td>
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However, scores revealed that camera positions and interaction with students via eye contact need to be improved by ensuring the teacher positions the camera appropriately. On a practical note eye contact with students when recording the video is to be encouraged, by ensuring the teacher looks into the camera, not slides or computer screen, most of the time. In terms of transitions and effects, quality of audio, and graphics the analysis
demonstrated that teachers were not able to make use of the all the technical features of PresentationTube, in order to enhance the presentation of their video presentations. The scores show that slide transitions effects are mostly smooth but may be inappropriate or distracting. The biggest challenge issue for teachers was the tight integration between the audio narration and slides movements. In a significant number of video presentations (26%) it was found that sound is inconsistent with slides and transition effects when moving from slide to another.

**Risk Analysis/Project Constrains**

**Cultural Barriers**

In Oman, computer and Internet use is still dominated and controlled by urban male teachers. Female teachers’ presence is modest compared to male teachers. Many female teachers do not like to be presented on the Internet, even to offer video materials for female students. PresentationTube provide to option to narrate slides using voice only.

**Costs and finance**

Decisions on the use of technology are educational decisions. Yet, the immediate costs of a technology project often have greater impact on decision makers than its potential benefits. Discussions on costs of the educational uses of technology tend to compare traditional and technology-mediated approaches as if they had similar purposes. This large-scale project on the use of technology will be financed through partnerships between Omani governmental agencies and international organizations. A great part of the infrastructure hardware and software is already offered.

**Legal frameworks**

In planning a technology-mediated project for education, attention must be paid to the regulations that will affect the project, either facilitate it or create barriers to it. ICTs defy many of the national legal frameworks that were created for a world with frontiers. Solutions, albeit necessary, are difficult to find and slow to implement.
**Intellectual Property**

Like many content and video sharing networks, the teacher who submits the video will retain all ownership rights to the content. However, when teachers upload videos to PresentationTube, they grant PresentationTube to retain, move, delete or redistribute the videos via PresentationTube network. Third parties must get permission from the teacher when they use the video under a license granted.

**Outputs, Dissemination & Sustainability**

By the end June 2014, PresentationTube offered more than 1,000 quality video presentations. These presentations cover various topics and subjects in Arabic. This quality of video presentations will be shared using different approaches, like social networks, Facebook groups, workshops, conferences, etc. The network will be very encouraging for local and regional organizations to adopt PresentationTube project and encourage teachers to use it. Using PresentationTube Network does not require sophisticated technical support to help school teachers or university instructors produce, upload and share video presentation, or to maintain and run the system. In the long term run, the project will provide a professional version of the PresentationTube Recorder as well as premium support for schools. Also, PresentationTube will provide workshops and training in Oman and across the Arab region (e.g., United Arab Emirates, Saudi Arabia, etc.) to transfer the project experience to other educators in these countries. This kind of cooperation and training will provide good resources to sustain PresentationTube project. Lastly, it will be important to explore factors influencing the actual use of PresentationTube and to seek to implement strategies to maximize this level of use. As more and more video presentations are added to the Network, it is hoped that PresentationTube will grow and support the culture of sharing and re-using of quality video content in the community of Omani and Arab educators. At this stage, it will be possible to tackle evidence-based research to assess the value and return-on-investment of PresentationTube Network. Lastly, PresentationTube has developed a new significant API-based application component to host videos on YouTube service, while benefiting from PresentationTube network features using YouTube’s API (Application Programming Interface). YouTube uses its own advanced API, allowing
PresentationTube project to upload videos directly from the platform and without the need to pay for video hosting and streaming on Bits on the Run service (currently JW Player). The new solution allowed videos to be uploaded directly from PresentationTube servers to YouTube media servers for encoding and optimization, and then for embedding in PresentationTube platform. This solution allowed PresentationTube project to eliminate a significant part of the running costs of the project.

**Conclusion**

PresentationTube project has been implemented in Oman by Dr. Alaa Sadik. The project aimed to help teachers and university instructors produce and share quality video presentations in a new and more accessible way. Within few months, PresentationTube received a considerable recognition from teachers and students in Oman and other Arab countries and around the world, allowing the developer to release the English version of the Network for world-wide use. Today, PresentationTube has more than 6,000 subscribers and hundreds of quality video presentations in all subjects. The evaluation of the project provided very encouraging feedback regarding the effectiveness and efficiency of PresentationTube network. Teachers favored the video presentation recorder and found it useful in producing video presentations, easy to use, and satisfactory.
Awards

The World Summit Award: e-Content & Creativity – October 2013

Khalifa Award for Education 2014 – May 2014