

Usability and efficiency of e-Learning – “Quality the Buzz Word”

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Introduction

E- Learning, the world over are facing a complex scenario which involves- “*The demands of customers or end users exceeding expectation and the buzz word “Quality”.*”

IT Management (Project Management) and Content Management can be the back bone to achieve success in delivering quality e-learning projects, it requires skills to manage and lead the team performing the desired operation.

Quality is viewed as relative goodness, while in a profession, quality means meeting standards. Artistic endeavors use judges to evaluate quality, while in a profession, quality assurance comes as standards and controls that are in place in order to quantitatively measure the quality of projects against the standards established for those projects. But in the case of e-learning along with other objectives, the content quality and the way it presents matters.

This is seemingly important for successes to be attributed to an e-Learning project is rated by the responses of the end user. When the user is unhappy with the performance of the system, its content quality, it becomes difficult for the project to see success.

I Quote , The simplest definition is generalization given as,” **Quality is Conformance to Requirement**”. - Crosby(1979)

The other two definitions(IEEE 1990) of quality are:

- The degree to which a system, component or process meets specified requirements.
- The degree to which a system, component or process meets user needs or expectations.

Implementation of an e-learning program requires a minimum technological platform— hardware, adequate telecommunication capabilities, current browser versions, access to software, etc. IT needs to be involved from the beginning in the evaluation and selection of e-learning tools and technologies.

It is important not only to consider the internal equipment and software that deliver Web-based learning, but also to consider the end-user’s office and home PCs, portable PCs, printers, and phones and the vendor's technology. Again, while e-learning provides cross-platform flexibility, it also requires that astute consideration be given to all the possible permutations of equipment that may be used to complete online coursework. The provider should follow the following

guidelines to ensure the successful deployment of an e-learning solution:

- Providers must work to ensure that e-learning packages are designed using high-quality materials and with appropriate attention to the principles of good teaching.

- Providers should ensure that individuals have an effective learning experience and are able to measure their progress in relation to learning outcomes and apply what they have learned.

- Providers should also ensure that appropriate support mechanisms are available both on- and offline to support the learning process and a range of preferred learning styles.

- Providers must make sure that learners have a minimum skill set. At a minimum, the end user needs intermediate Windows and Internet navigation skills and basic typing abilities.

- Providers must ensure that the learner is comfortable enough with the technology to concentrate on the content of the training and operate efficiently with the interactive elements in the learning module.

The learner's gain significant learning benefits when learning from audio-visual or computer media, as opposed to conventional instruction; however, the reason for those benefits is not the medium of instruction, but the instructional strategies built into the learning materials. Similarly, Schramm (1977) suggested that learning is influenced more by the content and instructional strategy in the learning materials than by the type of technology used to deliver instruction.

Objectives to maintain the quality and flexibility.

One important but often overlooked aspect of delivering an online learning message is that you should plan the delivery

ahead of time. When you deliver a message online, a little practice goes a long way. If you are comfortable and prepared, your message will be more effective.

Create a plan for your lesson. Think ahead and ask some basic questions:

- What am I going to teach or deliver?
- In what order will I teach these topics?
- What are my instructional goals and objectives?

- To whom I am going to teach?
- What will be the background of my audience?

- What type of examples am I going to use?

- Where should I insert visuals?
- What types of visuals should I use?
- What word on this screen are you going to highlight?

- How long am I going to pause on this screen?

Plan your lesson step by step so that it makes sense to the learner and conveys all the necessary information. The planning process will make the lesson more effective, dynamic and engaging. In a classroom, you can react to learner questions or adapt the content based on feedback from the learners.

For online learning you will need to anticipate rather than adapt; this requires a keen understanding of your audience and content. The planning process involves many different facets of the lesson from delivery to proper design of the instruction. When conducting a webinar, you should estimate learner reaction, confusion, and misunderstandings. You can use this knowledge to insert strategic explanations, clarifications, and activities into the lesson. The first step is to plan the content you are going to present and how you are going present it.

Orient your learner to your lesson

Since online learners might be multitasking (eating lunch, checking e-mail) while logged onto your session, you need to continually orient your learner to the lesson in the following ways:

Provide the learner with an overview of a lesson Online learners might need only a portion of the instruction you created. Provide them with an overview of the topics covered in the lesson and the order in which they will be presented. Doing this allows learners to choose applicable instruction for the topics they want to learn.

Provide an advance organizer An advanced organizer is a cognitive learning technique that helps learners orient to a lesson. It encourages the learner to think about the content prior to its presentation and provides a context for the instruction.

Plan interactions with the learners Interactions don't just happen online; they need to be planned in advance. Decide when you are going to ask questions, when you are going to have the learners break into virtual groups to complete an assignment, and when they are going to answer surveys or take a quiz. Plan to keep the learner engaged and active.

Provide a summary After you have presented all the information contained within your overview, and provided dynamic visuals and interactive material, provide a summary of the key points before ending the lesson. Summaries reinforce information and aid with learner retention.

A summary also provides closure to the online session so that learners are comfortable that the session is over.

Provide resources and additional information As part of your summary, don't forget to tell the learners how to access additional information on the topic if they are interested but remember to give a authenticated and quality reference which go in hand with the currents trends and technologies. Provide a Resources or Links page so the learner can gain more information if desired. If appropriate, provide your e-mail and other contact information.

Remind them that the session is available for review One terrific advantage of a web lesson over a traditional classroom session is that web lessons can be recorded or replayed. Let learners know the session will be recorded and explain to them how they can access the recorded session for later viewing.

One picture is worth a thousand words Online learners do not want to look at screen after screen of text. If that happens they will soon be checking voice mail and tuning out your lesson. Lots of text is physically tiring on the learner's eyes even with an accompanying audio track. Remember to include visuals in your lesson. They provide a place for the learner's eyes to rest and relax.

Visuals also have an added cognitive benefit; they explain difficult ideas and illustrate relationships between concepts. Visuals arrange information in the appropriate order and increase the chance of learners retaining and comprehending what is being taught.

You should apply the following tips for online visuals:

- Include a picture of yourself on first slide. Learners want to know who is speaking.
- Keep the visuals relevant to the topic.

- Diagrams and flowcharts are great for explaining complicated material.
- You can use actual pictures or line drawings to emphasize a point.
- Keep diversity in mind when you use images of people.

Find a buddy

Enter the technical assistant, the assistant can field the technical calls, answer login questions, and generally shield the instructor from having to troubleshoot and instruct at the same time. This type of arrangement benefits the learners because the ones without problems proceed with the lesson, and the learners with problems get them resolved quickly. The instructor benefits by being able to concentrate solely on the information at hand. Even if all the learners are technically savvy, you may still want an assistant. Regardless of their technical sophistication, a large audience can easily overwhelm an instructor with a deluge of emails or chat messages. Difficulties arise when you need to juggle too many competing tasks.

Check, one, two ... check

Technology is not equal among learners. Some learners browse with Microsoft Internet Explorer, others with Netscape Navigator. Some have Macintosh computers, some have PCs. Some have high-resolution monitors and others have low resolution. Some learners have high-speed Internet access; others are working on modems with low-bandwidth capabilities.

Determine the average learner workstation and design your session to that machine and connection type. If you don't design to the appropriate machine and connection type, your high-speed, high-resolution presentation will appear slow on

the learners' machines. It might be so slow that they would rather watch grass grow.

When considering workstation configurations, remember that different monitors display the same colors differently, so you shouldn't rely on subtle color differences to make a point or highlight information. If you use colors as an educational tool, make them bold and dramatically different from one another.

Do The Quality Assurance Yourself...

As an online instructor, you need to be aware of these issues and take some proactive steps:

- View the material as a pretest in different browsers. Verify the legibility of text, and the clarity of graphics and images.
- Test application sharing for readability of application text and responsiveness across a typical learner connection. You may wait a second or two between application actions to accommodate transmission delays.
- Ask some learners or your colleague to log in a couple of days early for a pre-class technology check. Then have someone stand by to assist with any problems. If your technology provider has any tools to test connection prior to the event, take advantage of those.
- Check with your network or IT team. Don't plan a session during a major system backup or during peak network usage; the performance of your session will suffer.
- Determine the average machine and connection speed of your learners and design the lesson to those specifications.
- Check to see if your delivery software allows you to choose the connection speed for optimization of the delivery of content. This feature helps you choose the correct delivery speed for your audience's technical capabilities.

Be calm but show enthusiasm

The first rule when presenting online is to relax. If you carefully planned your lesson and have someone to assist with the communication or technical aspects, you can already breathe a sigh of relief. An online presentation is not unlike a classroom presentation, and experience shows that your classroom personality will shine through online. Express enthusiasm in your voice and actions. Be prepared for unplanned events. You can't plan for everything, so be willing to be flexible just as you would in the classroom.

Qualities of the e-Teacher

First and primarily, an excellent e-teacher is an excellent teacher. They like dealing with learners; they have sufficient knowledge of their subject domain; they can convey enthusiasm both for the subject and for their task as a learning motivator.

Beyond these generic teaching skills is a second set of technical skills. One does not have to be a technical expert to be an effective online teacher. However, one must have sufficient technical skill to navigate and contribute effectively.

Finally, during this early period of creation and adoption of this new learning context, an effective online learning teacher must have the type of resilience, innovativeness, and perseverance typical of all pioneers in unfamiliar terrain.

Knowing the Learner

It is a good idea to remind ourselves that the learning enterprise is not about us as educators: the focus should be placed on the learning, not the teaching. Similarly, in providing learner supports, we should focus on what the learner needs, not on what we

want to or are able to supply, but it is surprising how easily this emphasis can be lost in our wish to help. We identify real needs best if we know our learners. Therefore, we must ask questions about the learner's readiness for online learning, access to and familiarity with the technology required, proficiency in the language of instruction, individual learning style, and educational goals, as well as about how aspects of the individual's culture can affect learning. These are some of the things that we need to understand about the learners; they are also things that the learners need to know about themselves in order to benefit from the learning experience. Once the institution has this information, it must determine what supports are most critical for learners, and must establish priorities to ensure that resources, which are always limited, are directed to the most useful supports. In doing so, the institution must keep in mind that some learners will require more support than others, and that any learner may need more help at one point in their educational career than at others. So the institution must find a balance between "just-in-case resources" and "just-in-time resources" that recognizes that an online learner is often an adult with responsibilities other than their educational goals. Flexible, continuously available, easily accessible learner support systems are required, but such systems must be genuinely useful. Learners have been clear that they need to see the value added by a resource, or they will not use it; they have also let us know that supports should be available but not intrusive.

The QAA Open and Distance Learning Quality Council (ODL QC) standards:

The Quality Assurance Framework in the United Kingdom is not just comprehensive; it is "the most complex anywhere in the world" (Brown, 2000). The

Quality Assurance Agency for Higher Education (QAA) was incorporated in 1997. The QAA distance learning guidelines reference the work of the voluntary association in the United Kingdom's distance education sector, citing the Open and Distance Learning Quality Council (ODL QC) standards. These accreditation standards, revised in 2000, are organized into the following discrete operational areas:

- course objectives and outcomes (providing clear statements of what will be achieved on successful completion; having objectives that are compatible with the method of delivery);
- course contents (providing sufficient content to enable the target group of learners to meet the course objectives);
- publicity and recruitment (providing accurate materials and direct communication to give potential learners the best basis for deciding to take the course);
- admission procedures (communicating the terms of the course, including its scope and the requirements needed to realize the intended outcomes, and providing applicants with enough information to assess their own needs and level of preparation);
- learning support (monitoring student progress, providing appropriate supports, including supplementary material, and facilitating peer group interactions);
- open learning centers (identifying groups of users and ensuring that sufficient resources are available to serve them);
- learner welfare (maintaining accurate records, providing appropriate guidance, demonstrating learner satisfaction and appropriate completion rates);
- providers (having appropriate plans and resources to meet their mission, adopting good business and employment practice, adhering to relevant legal requirements, ensuring that staff have appropriate qualifications, monitoring performance);
- joint provision (specifying respective rights and responsibilities, including

procedures to meet standards); and

- accreditation (having procedures for application, limitation, and review).

Conclusion

Online learning allows for flexibility of access, from anywhere and usually at anytime—essentially, it allows participants to collapse time and space (Cole, 2000)—however, the learning materials must be designed properly to engage the learner and promote learning. According to Rossett (2002), online learning has many promises, but it takes commitment and resources, and it must be done right. “Doing it right” means that online learning materials must be designed properly, with the learners and learning in focus, and that adequate support must be provided.

The greatest challenge for trying to define quality in any product or service is that quality remains a relative experience, realized in large part through an individual's level of expectation. At a basic level, the characteristics of quality educational delivery demonstrated in these frameworks include 1) providing clear statements of educational goals; 2) sustaining the institutional commitment to support learners; and 3) engaging in a collaborative process of discovery, which contributes to 4) improving the teaching and learning environment. 5) Providing precise and clear structured content 6) provide the quality and authenticated references.

The quality principles add value by reducing defects, in all angles. The cost to identify and correct defects does not add value, thus the emphasis on quality & flexibility will add value and increase the efficiency. Based on my personal experience, I believe, to attain quality and flexibility in e-Learning, the IT Management (Project Management) and Content Management should go in tandem.