

ASSESSMENT OF MULTIMEDIA LEARNING MATERIALS

Round table III

June, 2008

Background

In view of the increasing importance and availability of multimedia materials for education, CEMCA-COL initiated a project of Quality Assessment of Multimedia learning materials to define standards by which quality could be assessed and certified in public interest. After wide ranging consultations core groups were constituted in India and Malaysia to prepare guidelines for quality assessment. The core groups decided to adopt the ADDIE (Analysis, Design, Development, Implementation and Evaluation) model. The India group worked on the Process assessment and Malaysia group worked on the Product assessment approach. There were planned occasions to exchange notes to bring convergence between the work of the two groups.

This Round table was organized to review and integrate the work of the two groups and provide guidelines for future course of action.

The Round Table

The third round table was chaired by Dr V S Prasad who conducted the proceedings.(A list of Participants is attached.) Mr. B S Bhatia gave the background. Ms Haniza gave the background of the work in Malaysia. Ms Sucheta Phadke presented the India core group report and Ms Hanin and Dr David Asirvatham presented the Malaysia group report. This was followed by a general discussion on the approach to integration and future direction.

India Group Report

The report of the India group gave a detailed description of each stage of the ADDIE process, the sub-activities and the methodology for carrying out each of the sub-activities. It listed the objectives of each phase and the Outcomes expected.(report attached.)

Malaysia group report

This report too gave the details of each stage of the ADDIE process and indicated the criteria for Summative evaluation and a scale for quantitative evaluation of the product. (report attached.)

Discussion

Comments:

- The focus should be on criteria for quality assessment and not on providing guidelines for developing content. The document should not be a manual for good content generation. The first criteria for assessing quality should be whether the content is meeting the learning objective. The assessment should be quantitative and measurable. The focus should be on indicators and we should be able to tell if the material is of A grade or B grade etc.
- The document in its present form is more like an Instructional Design manual. Is a process being equated to quality? If the process is rigorous can we assume that the

quality is good? Each person learns differently. It is very difficult to make the learning experience objective. Who will use this framework; who is the assessor. Is it the teacher or the student or a regulatory body? Is the regulatory body like a censor board? Should the criteria be called relevance criteria rather than quality criteria? The document gives a lot of information but does not mention how to assess

- The experience of recording several hundred video lectures in engineering has indicated that there can be 50 to 60 styles of material delivery. Can all these fit into one framework? A series of well delivered lectures can be very effective teaching material: is that Multimedia or not? (response—there is always an ideal and a reality. The question is how good is the reality when compared to the ideal. The standards should have flexibility for different styles.)
- A single framework or a single set of criteria is not the end all in itself. The framework has to be flexible enough to be able to respond to changing technologies and changing context. The framework has to be dynamic in nature and not static.
- Design is a scheme prepared for doing the activity. Development and Implementation are actually putting it in action. Therefore Design can be part of Analysis Development and Implementation.
- If we try to define criteria for Product evaluation we can ask-Is the Objective stated or not? If yes is it clear or not?- Has the target audience been specified or not. We can give value to each of these and evaluate. This evaluation can be done by an expert or it can be a classroom evaluation. The Malaysia group has listed about 20 such criteria.

Suggestions:

- There is need to introduce sensitivity to disability in assessment of materials.
- At the school level the competence level of the teacher and availability of Infrastructure vary considerably. The material should be adaptable to such variations.
- An important difference between traditional material and multimedia is Interactivity. Navigation is not interactivity. Interactivity should increase the involvement of the learner with the material. There should be interactivity in every frame rather than having a Quiz at the end .If a package is really interactive the learner should be able to spend time on it. The interactivity has to be designed keeping in mind that there may be two three learners to one PC.
- There are five activities/stages in the ADDIE process. Analysis is aimed at developing understanding of the learner , learning requirements and situation. some times there is duplication between Analysis and Design. One may think of Analysis as part of Design or else the duplication should be avoided as possible.
- The Malaysian group has given Outcomes of each activity. Those outcomes can be integrated with this framework.
- Quality indicators is the key factor. What are the quality indicators of each activity? e.g. what are the quality indicators of Needs Analysis? The Malaysia group has talked about Best Practices. Benchmarks have to be drawn from the best practices.

- There is need to integrate Process, Product, Outcomes, and Indicators. This will help in making it more precise and specific. For example: the outcome of Needs Analysis is Goals. There could be a variety of processes of needs analysis, but the outcome is goals. The quality indicators of goals could be specificity , quatifyability, comprehensiveness etc.. When a needs analysis report is written what makes it a good report- Those are the quality indicators .These quality indicators can be given Weightages and Scores to get a quantified indicator of quality. When an activity is done it has an Outcome. The level of satisfaction with the outcome is a quality indicator.
- A Developer should not be required to adhere to each and every step of the five stages of the ADDIE process e.g. In a given lesson Needs analysis may not be required. There should be a minimum subset that should be essential.
- If we agree with this format of Activity, Process, Outcome, and Indicators then most of the material is available in the reports. It needs to be restructured and put in this format. If some gaps and missing links are found these can be filled up .All the Five stages may be kept and duplication reduced or Analysis and Design may be clubbed. The two documents have to be integrated into one.
- The core group while looking at the process was addressing content developers. Have they followed the process of defining Target, understanding Context and the learner, defined Pedagogy etc...These steps should lead to better quality, relevance and effectiveness. The Evaluation is by teacher or user.

Support:

- Digital Empowerment has about 1000 members spread all over the country with some in other Asian countries. Many members are involved in content generation. If this Network can be of assistance in this process it would be happy to cooperate.
- Media Lab Asia and IGNOU have promised support.
- Azim Premji Foundation is also involved in generating Digital Learning Resources. It is also working on developing quality criteria. It would be happy to synergise.
- Sri Lanka to will also examine possible areas of support after studying the documents.
- The core groups have been working effectively. To be able to associate more experts and get detailed inputs Sub- groups can be setup with core group representation and additional expertise.

Recommendations:

- The format of Activity, Process, Outcome, and Quality, indicators may be adopted.
- Each of the Activity and its sub activities may be defined, along with the Process of carrying out the activity and the expected outcome. The indicators of the activity having been satisfactorily carried out should be listed.

- The indicators should be measurable or should be converted into measurable units.
- Most of the material is already available and needs to be restructured.
- This should be completed before September 2008.