Details of Module and its structure

Module Detail	
Subject Name	Education
Paper Name	Perspectives, Issues and Research in Teacher Education
Module Name/Title	Techno-pedagogic Analysis
Module Id	e-PGEDN 10.27
Pre-requisites	Learners have the knowledge of ● principles of communication. ● principles of Technology. ● principles of Teaching- Learning. ● Educational Technology.
Objectives	After going through this module the learners will be in a position to ● express the various techno-pedagogic skills. ● analyse a Digital Educational Instruction Program in terms of Techno-Pedagogic Skills Employed. ● describe the Digital Scripting Process. ● design a Video Program employing Techno-pedagogic Skills. ● appreciate any Digital Educational Instruction Program in terms of Techno-Pedagogic Skills Employed.
Keywords	message, medium, contiguity, credibility, fidelity, composition, configuration, compatibility, testimony, Techno-pedagogy

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1. **Introduction**

The 21st century demands that every teacher from early childhood care and education through higher and continuing education is a techno-pedagogue. Techno-pedagogy is a discipline which focuses on inter weaving the principles of technology and pedagogy. Every digital production which is meant for educational instruction ought to be based on the principles of techno-pedagogy, such as media message compatibility, spatial and temporal contiguity of various message forms, balanced composition configuration of the view forms, and message credibility and media fidelity. Possibility of correcting an erratic message is a figment of imagination. So there should be optimum communication control. A sea volume of MOOCs and repositories is no use unless it passes the principles of techno-pedagogy. Let us recall our first transition from home to school. Each one of us has a highly touching story to narrate, because, it is a deeply feeling phenomenon. A child for the first time leaves home for school, where, home and school, facially, both have different cores and cultures. Bondage between the child and home, child and peers, child and nature, child & school, differ and differ significantly. Home attracts and the school pulls. There is very often, rather, always a tussle between home and the school, to begin with. The present study has made an attempt to techno-pedagogically analyze a film – SAFAR GHAR SE SCHOOL TAK for parents and teachers for facilitating first transition of a child from home to pre-school. The techno-pedagogic analysis of the film has been done in terms of various techno-pedagogic elements, such as medium is message, temporal and spatial contiguity of various message forms, message credibility and media fidelity, message compatibility in totality, technological feasibility, technological fidelity, and pedagogic suitability, aspect ratio of picture and text, self contained status and speed of delivery of the film, content and quality of the film in terms of various elements, such as audio, video, frames, and communication elements, such as who, says what, to whom, through which channel, and with what effect through correspondence amongst sender, message, medium and receiver.

It is digital age. The immediate focus of India is Digital India. It is to realize transparency by surfing through digital age skills, such as, skimming, scanning, skipping, switching, hyper-linking and full immersion with scale and speed, anywhere, anytime, any task, any field. It is not only for realizing transparency, but along with to realize recency, immediacy and omnipresence through the speed of electromagnetic waves which travel with the speed of $3*10^{10}$ cm/sec which is 7 times the circumference of the earth, meaning thereby, that a message can cover the circumference of the earth within one-seventh of a second. It is the speed of digital waves.

Indian Education has immediate focus on e-content development and communication. E-content development and transaction demands interweaving of content, pedagogy and technology, employing various techno-pedagogic principles, such as, media message compatibility, temporal and spatial contiguity of various message forms, such as, picture, text and sound, message credibility and media fidelity. It also demands production skills. There has to be a judicious sharing of the shots by the different cameras, smooth transition from one to the other, controlling jerks while zooming out and zooming in. There has to be a perfect coordination amongst the different cameramen, producer, and shots selector and mixer. Finally it has to be a quality production, observing all the quality parameters, resulting into a perfect view composition. E-contents have various quality parameters, such as, original, mediagenic, concise and precise, interwoven and interesting resulting into an attractive view composition. It has to be HiFi & WiFi that is, having High Fidelity & Wireless Fidelity for wider coverage.

Digital world demands digital culture. What use are digital volumes if not innovative. The digital has to observe its own testimony. Every bit of it has to be rich and reaching. For realizing this objective the e-designing, development, production and transaction have to be perfect. At times there is quality and identity loss while duplicating, converting from one medium to the other and losses during mediation and transmission. All these need to be controlled. It is true that no camera shots can capture the reality, but, the losses ought to be minimal. If not natural, it should tend to be natural & self-contained.

What use are the oceans of MOOCs and OERs if these lack originality. The e-form demands to be quintessentially innovative. The e-volumes have to be pioneer. Every e-production has to be

original and innovative rather than mere conversion. Many a problems are on the fore. We rarely meet our predicaments, because, what use are those feelings which do not emanate into action. Every e-content is expected to be an embodiment of our knowledge, values and skills. Who says high tech is mechanistic? It can have deepest reach and highest touch. We need to develop digital culture in India. Cashless transactions in India cannot be realized over night, it, is because, a large majority of us are not techno-literates. System conversion from one form to another has to be done in a highly civilized way. Direct conversion in one go at the massive level is rarely feasible. Suitably, we can go for parallel conversion, phased conversion or modular conversion. The very aspiration of techno-conversion overnight can create chaos. Modernization may not be civilisation. Any conversion by any one has to be done with all decency, decorum and discipline, irrespective of, who does it. E-conversion demands e-culture.

Digital crowd in India is easily perceptible. Everyone is after e-production, whether, e-literate or illiterate. Commerce is trying to superimpose all the disciplines. There are blind slips in the e-valleys. Whether we like or not, e-forms will prevail. Before there is irreparable damage let us try to develop e-culture. It is not a journey to fly and arrive at. We have to travel patiently. Enough of imitation. We ought to do indigenous production observing relevance, quality and compatibility.

2. **Steps of Digital Scripting Process**

a. **Program Ideas**

All the digital scripts originate with the germination of an idea. "My Grand Pa accompanied me to the Municipal Corporation School which was miles away from home walky and left me in Std. I Class which was in the open under a PEAL TREE in Haryana, the class teacher Master Kashi Ram only in the Arm Chair. After some time when the attention of the teacher diverted from me, I ran away with the speed of storm towards Home. Grand Pa on the way ran after me, caught hold, and again took me to the School. Again I ran away. This time I could skip the attention of Grand Pa. When he reached home, he found me already there. Next day he purchased some orange slices on the way to the School, left me there and orange slices with the teacher, suggesting him to give those to me periodically and treat me affectionately, so as to retain me in the school. Well, it worked and worked very well." Progressively, while guiding doctoral

research in Education, it clicked me that why not to produce a film for facilitating first transition of the children from Home to School. This germination of the idea and incubation resulted into Programming, production and connection.

b. Program Brief

Based on the germination and incubation of the ideas, it was decided to script a film- "SAFAR GHAR SE SCHOOL TAK" for facilitating first transition from home to the pre-school. It also provided a road map for how to proceed.

c. Program Research

It is at this stage that the script writer must plan and carryout thorough research both on the topic as well as target viewers looking out for the related inputs on the topic. It is important for the script writer to get to know the viewers well- their background, interests, likes and dislikes. It helps the script writer to collect, select and organize relevant program materials most suitable for the viewers.

d. Selection of Contents

At this stage the most relevant materials, visual sources and resources, and information which match the program objectives are decided/selected.

e. Message Planning

Here many considerations come into focus, such as:

- Identifying key concepts or ideas to be highlighted.
- Selecting a suitable format for program presentation.
- Exploring media possibilities, such as, use of examples and analogies, graphics, photographs, reality bites, stock shots, animation, experiments, and other sources and resources both audio and visual.
- Choosing a definite storyline for message presentation: using human characters in the story- men, women, children, presenter, anchor, cartoons, puppets, animals and birds.

3. Program Structure and Visual Treatment

Here the script writer will give thought to such questions as follows:

- How will the program begin?
- How will the program end?
- What will be the shape & order of the sequences that will form the middle part?
- How many sequences will the program finally contain and in which order?
- What will be the length, sequence, emphasis and amount of educational content of each of the sequence?
- To what extent the content of each of the sequences match the program objectives? If not fully, then, how can content & objectives be matched optimally?

4. Storyboard Making

The storyboard means a detailed, shot-by-shot description of the program on sheets of paper divided into two vertical columns. The rectangular boxes (3:4) in the left hand column are used for drawing pictures/sketches with shot sizes described on each; and the right hand column is used for writing supporting words, sound effects and music.

5. Draft Script

The story board when complete leads to the preparation of a draft script. The draft script is the first full length script that includes a complete listing and description of all visuals, captions, commentary, dialogues, actions, movements, music, sound effects and any kind of pre-recorded inserts or audio/video inputs. The draft scrip must be discussed with all the team members, experts, as well as, producer to get their reactions and suggestions on various aspects. The script writer must be open to criticism and ideas.

6. Final Script

The final script is prepared and passed on to the producer after considering and incorporating the suggestions. This is how the scripting of the film – SAFAR GHAR SE SCHOOL TAK was done. The film was converted to the digital form and produced according to the prescribed format.

7. Rationale of the Study

Wish our school could tend to be like our home. This is a pious expectation, but, only a figment of imagination. The over-discipline, mechanized classrooms, incompatible curricula, dull modes of transaction, less emphasis on teaching-learning and more on examination have made our educational institutions dull and dreary, where, beauties of childhood are destroyed, energies of the adults are wasted, and the prime of the youth is killed. Could our education be cultured right from the induction of a child to the exit of a youth? For that we ought to revive and sustain our educational cultural heritage and set the modernization pace very carefully. Our Education Policy has to be perfect. The views of the democratic public are not baseless to be disrespected by the republic. Why should there be excessive delay in Educational Policy formulation? The answer is evident. The education is not even being considered as an entity. The question of identity does not arise. But, Education has its own identity and responsibility. When the army of Educationists marches on the roads its movement will echo and re-echo. Education will definitely revive its identity so that the entire chaos prevailing in my country is controlled. A new order will emerge. Digital India will be realized in the right earnest. Our education will be civilized right from induction to convocation. The children will have joyful state with momentum in their motor and vision in their eyes. The convocations will be with invocations. The graduates will have power in their soul and full immersion and connection in the universe to make this sphere live able. Our Education will prepare both for *PRAVRITI & NIVRITI*. The present paper attempts to analyse a film – *SAFAR GHAR SE SCHOOL TAK* techno-pedagogically to facilitate first transition of a child from home to school, so that, the Education is compatible rather than mechanical.

8. Objectives of the Study

To study the perceptions of Educational Multimedia Research Centre (EMRC) students on the techno-pedagogic skills interwoven in a film 'SAFAR GHAR SE SCHOOL TAK'.

9. Research Methodology:

a. Population:

All the Students of all the EMRCs in India.

b. The Film:

The film 'SAFAR GHAR SE SCHOOL TAK' was produced by Mrs. Sucheta Jasrai- a Doctoral Scholar of CASE, Faculty of Education and Psychology, the Maharaja Sayajirao University of Baroda, Vadodara-Gujarat, India under the Guidance of Prof. Devraj Goel, Head CASE. It is an Award Winner Film (Adult Category) of the CEC (Consortium of Educational Communication), New Delhi.

c. Sample

One student of B.Sc. (Electronic Media), six students of M. Sc. (Electronic Media) and 18 students of MBA (Media Management), Devi Ahilya Vishwavidyalaya, Indore constituted the sample (25) for the study. The sample was drawn conveniently & purposively.

d. Tool & Technique

A perception Scale of 25 items on five points- Excellent, Very Good, Good, Poor, Very Poor, and an open ended item for seeking suggestions on improving the film was constructed by the investigators. Also, Focused Group Discussion (FGD) was conducted with the sample students.

e. Data Collection

The film was screened on 26.11.2016 in the conference hall of the EMRC, DAVV, Indore. The sample students viewed the film. After that the Perception Scale was administered followed by the FGD.

f. Data Analysis

The data with respect to the 25 close ended items were analysed in terms of frequencies and percentage responses, whereas, the responses to the open ended item were content analysed. Table-1 presents the data analysis.

Table-1: Perception of EMRC Students on the techno-pedagogic skills interwoven in a film 'Safar Ghar Se School Tak' to facilitate first transition of children from home to pre-school

S.No.	Items	Excellent	Very Good	Good	Poor
1.	How was the message-medium-pedagogy compatibility?	4 (16%)	9 (36%)	12 (48%)	0
2.	How was the temporal contiguity of various message forms (picture, text and sound co-existence)?	0	3 (12%)	17 (68%)	5 (20%)
3.	How was the spatial contiguity of various message forms?	1 (4%)	10 (40%)	14 (56%)	0
4.	How was the temporal and spatial contiguity of various message forms?	1 (4%)	5 (20%)	18 (72%)	1 (4%)
5.	How were the credibility/ testimony of the messages?	9 (36%)	14 (56%)	2 (8%)	0
6.	How was the media fidelity (expression without communication loss)?	2 (8%)	11 (44%)	10 (40%)	2 (8%)
7.	How was the pedagogic compatibility (suitability/ appropriateness for the target viewers)?	6 (24%)	14 (56%)	5 (20%)	0
8.	How well the content, technology and pedagogy were interwoven?	6 (24%)	7 (28%)	10 (40%)	2 (8%)
9.	How were the messages credibility, technologic fidelity and pedagogic suitability?	0	9 (36%)	15 (60%)	1 (4%)
10.	How was the aspect ratio of the pictures and text in the film?	0	11 (44%)	11 (44%)	3 (12%)
11.	How was the quality of the messages?	6 (24%)	11 (44%)	8 (32%)	0
12.	How powerful were the visual stimuli?	6 (24%)	11 (44%)	6 (24%)	2 (8%)
13.	How powerful were the audio stimuli?	1 (4%)	7 (28%)	11 (44%)	5 (20%)
14.	How was the configuration of the view composition of the film?	1 (4%)	8 (32%)	11 (44%)	5 (20%)
15.	How self-contained was the film?	6 (24%)	10 (40%)	9 (36%)	0
16.	How was the speed of delivery of the film?	3(12%)	4 (16%)	17 (68%)	1 (4%)
17.	How was the level of attention of the viewers of the film?	4 (16%)	9 (36%)	6 (24%)	6 (24%)

S.No.	Items	Excellent	Very Good	Good	Poor
18.	How was the feel of the film for facilitating first transition from home to school?	6 (24%)	17 (68%)	2 (8%)	0
19.	How is the deploy-ability of the film country-wide?	2 (8%)	9 (36%)	14 (56%)	0
20.	How was the level of adjustment of the children progressively?	1 (4%)	13 (52%)	11 (44%)	0
21.	How was the level of transition through the film?	2 (8%)	9 (36%)	13 (52%)	1 (4%)
22.	How effective were the tips for facilitating first transition?	3 (12%)	13 (52%)	9 (36%)	0
23.	How was the view of the transition reality through the film?	7 (28%)	14 (56%)	4 (16%)	0
24.	How was the feel of the film as a whole for realising the objectives enunciated?	7 (28%)	11 (44%)	7 (28%)	0
25	How do you perceive the film as a whole?	2 (8%)	7 (28%)	16 (64%)	0

It is evident from Table 1 that the frequencies (>75%) of the responses have been registered on the points Excellent, Very Good and Good against all the 25 statements, representing the techno-pedagogic skill level of the film. The quality of the film could be enhanced by further focusing on the entire view composition of the film. The message, media, technology integration was found to be compatible. There was spatial and temporal contiguity of the various message forms, such as, audio, video & text. Testimony of the text and fidelity of the media were well observed. The content, pedagogy and technology were found to be well interwoven. There was ample content validity, pedagogic suitability and technology integration. Aspect ratio of the pictures and text was observed reasonably. The quality of the messages was observed. The audio and video stimuli were found to be powerful. The view composition of the film was found to be balanced in terms of background, configuration, foreground & the entire view. The film was found to be self contained. The speed of delivery was found to be suitable. The level of attention was found to be at the level of full immersion. The film could reasonably facilitate the first transition of children from home to pre-school. The film was found to have medium level of deploy ability because it was delimited to an urban school setting. As a whole the film was found to at the mid-point of the five point scale, that is, good.

g. Suggestions for improving the quality of the film- SAFAR GHAR SE SCHOOL TAK:

The suggestions made by the respondents are presented as follows on the basis of content analysis of the open ended item.

- The film chose a very rare topic. More such concepts should be chosen to depict unspoken and unexpressed feelings.

- The audio quality could have been improved. The speed of delivery could be enhanced. The music could be of better quality.

- The shots taken could have been more creative. Children have so many expressions. They are excellent actors. Their expressions could be valuably utilized.

- The present day schools have changed, children have changed. New technology can be used for the film production.

- SAFAR GHAR SE SCHOOL TAK is a good documentary on the teaching system of India on how a child starts school life from home to school. Though there are some commonalities, but the adoption varies from child to child. We could add thinking of the present day parents with respect to their wards. Many more dimensions, such as education system, child behaviour, financial position of parents could also be included which affect the child behavior. Scenario of only one private school has been produced. The public school scenario could also be produced.

- The film production could have been done with advanced technology. The content is good, but the video quality could be improved. If the film is re-produced with visuals of today's scenario and society then it will have better appeal. Sound was running faster than the visuals. The film speed was fast. There could be blank audio space for assimilation of the flowing messages. Poetry related to childhood could find place in the film. Problems and confusion of parents could be still discussed along with solutions. Presentation of a few success stories could enhance the effect.

- Show the new play schools which are filled with new themes and projects. Video quality could be improved.

- Even the educated parents are not aware of making their children ready before sending them to school.

- The parents should create school like atmosphere at home for preparing children for school.

- The interviewer should not put the same stereotyped question to all the parents. There could be a variety of expression. She could interact with the children also.

- Characters could be more attractive. Visual quality could be better, as well as, the back ground music related to the conditions of transition of the children.

- Add sub-titles in English or English version could also be produced with Hindi captions.

- Sound quality and voice quality could be improved. Technical disturbance in sound could be controlled.

- Messages could have been more appealing.

- Framing could have been better. Visual and audio mismatch could be controlled.

- Interaction amongst the parents and teachers could be organized after school and recorded.

- Lip synching could be better. Better scenes and background music could be added.

- Teacher's point of view should be there. A scene where parents making their children understand about going to school could be added. Some of the visuals could be better quality.

- There should have been added focus on dialogues.

- Some games taught by the teachers could be shot.

- More of animation could have been added.

- Camera angles and view composition must improve.

- More sound effects could be added.

- The jerks in zoom-in and zoom-out could be controlled.

- The placing of the tips could have been at the end or just before the conclusion, so that, it could be more effective.

- We could add a bit more interviews with the experts. The interviews with the teachers could also help.

- The content was good. But, at times there were distractions which could be controlled through background music.

- We can change the frame and technology for the visual medium for the film. New technology could be utilized for audio of the film. We could take new places for shooting. We could talk to children, as well as, more number of experts.

- At the end there could be a caption that "come and know the views of children". But, no views are shown on how children feel on the first day of their school.

10. Concluding Remarks

The film 'SAFAR GHAR SE SCHOOL TAK' has been well designed developed and produced techno-pedagogically. It is a quality film for facilitating the first transition of the children from home to pre-school. The utility of the film could be enhanced by screening it in various localities and schools by adding subtitles in English and other regional languages. There is no end to perfection. Voices of the children and teachers, soothing sites of the schools, aspect ratio of the pictorial and textual, suitable frame size, sensitivity of the presenters, such as, lip-syncs and speed of delivery, expertise of more experts and production skills, like, controlling jerks while zooming-out and -in and correspondence between the anchor and camera could definitely enhance the quality of the film. The film has been found to be definitely useful for Parents and Teachers in facilitating the first transition of children from home to pre-school. Every e-content for Education ought to be original and techno-pedagogical. Digital culture demands originality and validity of contents and techno-pedagogic compatibility. Any techno-pedagogue should faithfully live by the principles of techno-pedagogy, such as, medium is message, spatial and temporal contiguity of message forms, message credibility and media fidelity, media language proficiency, resonance of sender, message, medium and receiver, interweaving of contents, maxims of teaching and principles of technology. Techno-pedagogy can deterministically facilitate Quality Teaching- Learning by employing various skills and principles easily and precisely. There is a need to develop digital educational culture in India right from Early Childhood Care and Education.