Developing a Strategy for creating and assessing internship Digital Media curriculum in UAE University

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Abstract:- **Creating and assessing a digital media curriculum is a challenge because of the difficulty in making the connection between concepts and applications..This paper describes an assessment experiment recently conducted to help us gain insight into students' thought processes. Students are observed and videotaped in a closed lab (Abu Dhabi TV) designed to help them understand concepts and to help us assess how they relate concepts to activities. Their input and feedback was compared with another group of students who were not enrolled in the same internship course (control group). The small size of the internship class precludes doing comparative studies where one group uses our curriculum material while the other uses nothing**

Index terms- **Digital Media, Education, Assessment, Internship**

1. Introduction

Every day digital media becomes more important as a means for receiving, producing, sharing, and broadcasting information (1) .Digital media is an inherently interdisciplinary area of study with links to computer science, art, film, music, communications, and design. The impact is best translated into the social change that digital media is able to create in the lives of students, teachers, and educators around the world (2) .Tools and resources that were once the exclusive properties of a few are now available to many more people. Tomorrow's publishers, marketing people, and community leaders will need to know how to use digital media to persuade others and tell new and effective stories. Knowledge of the rules and grammar of movie production, broadcasting, and media presentation is a new powerful literacy.

Creating and assessing a digital media curriculum is a challenge because of the difficulty in making the connection between concepts and applications (3) . Digital media is a relatively new discipline, and its academic home varies from one university to the next. Some schools have independent digital media or multimedia programs. Others offer the program under various departments, such as computer science, art, or communication. Due to the subject's highly interdisciplinary nature, the curriculum emphasis varies from one department to another.(4)

Review of Literature:

Generally speaking, a review of literature showed that research that studied the strategies for developing Digital Media Curriculum differed in the objective, scope of study and the methodology as follows:

Thomas Risk in his study(5) **to** develop a strategy for teaching a digital Media Course concluded that a well designed instructional strategy should focus on four key elements of the student-centered learning process: (1) information, (2) engagement, (3) practice, and (4) assessment. In his view, classroom or online environments must provide rich, authentic, contextualized, problem solving activities that learners can experience individually or collaboratively He also emphasized on the importance of providing students the opportunity to engage in self-assessment of their performance .

On the other hand, Philip J. Parisi aimed in his paper entitled Digital Media Curriculum Converted from Liberal Arts to Practitioner Based(6) to delve into using various traditional and student-centered/regulated learning theories as part of developing course material(s) for the new DM curriculum. He believes that replacing the old liberal arts based Digital Media curriculum with a professional based program will better prepare Digital Media majors for the workplace. This goal could be achieved by blending objectivist and constructivist learning models, which provide the learner the structure to learn new material and actively construct and apply meanings to each course.

Another study by Gabriel Gomez*(7)* surveys a pedagogy geared towards media literacy that demonstrates and deploys digital technology in the training of school library media specialists. The objective is to outline in broad terms the structure, techniques, and methods needed for the education of media specialists in light of contemporary technological change. This entails instruction in basic and advanced computer skills, as well as a discussion of social change, because both issues are integral to the aims of information science**.**

In conclusion, the review of literature showed that the lack of DM Course that involves learners in designing the curriculum and reflected the need of a strategy that provides a balance and clear connection between concepts and applications. Therefore, the goal of this study is to create curriculum that explains fundamental concepts of lasting utility, and to explain these concepts in a way that facilitates the students' ability to work in application programs and to be adaptable to new applications when they encounter them. Interactive learning aids allow students to visualize difficult concepts, get instant feedback, and create hands-on solutions to problems that make theory come alive. (8)

What is needed is curriculum material that finds the common ground of all approaches to digital media, and then moves from there to more advanced focus on other discipline-specific topics. (9) The most adept and successful digital media professionals will be those who combine expertise in software

tools (application) with understanding of the science and mathematics upon which the tools are built (theory) and adaptability to rapidly evolving technology. (10) Students need to sharpen their sense of aesthetics and design as well as develop their skills in efficient, user-directed implementation.(11) Good curriculum material should pull these interdisciplinary elements together in a coherent and organized manner, with an emphasis on the concepts and skills that will remain relevant beyond the ever-changing versions of software tool. (12)

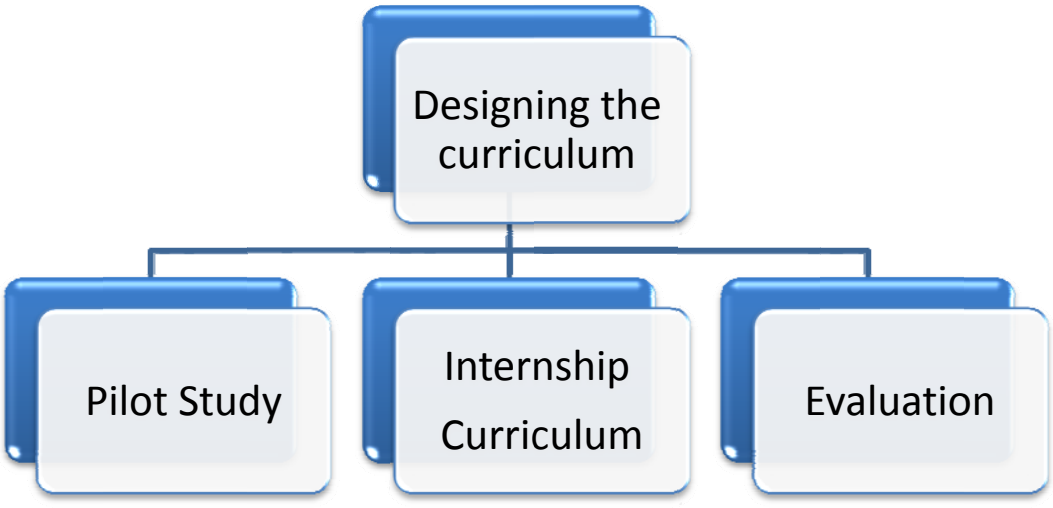
Meaningful assessment is never easy in educational research, and in some ways we have found this part of our work to be the most difficult. This paper describes an assessment experiment recently conducted to help us gain insight into students' thought processes. Students are observed and videotaped in a closed lab (Abu Dhabi TV) designed to help them understand concepts and to help us assess how they relate concepts to activities

Creating internship Digital Media curriculum:

The challenge in coordinating a digital media program between computer science and art is showing students the relationship between the science and the art while taking them to a level appropriate for their major. (13)

In this study, the internship curriculum passed different stages including the following

1. Defining the purpose of the curriculum: enhancing the skills of students in producing TV programs that helps in developing UAE community using the digital technology.
2. Duration: one whole semester
3. Designing the curriculum:



a. Pilot study:
   - Focus group discussions were conducted with two groups of students expected to register the course in the next two years. The purpose of holding these discussions was to determine intern students' needs and expectations in regard to the Practicum course.
   - Field visits were arranged to Abu Dhabi TV to explore the available facilities that is needed to achieve the goals of the curriculum/program.
   - Meetings were held with Human Resources personnel and the Training department that was recently developed to recruit locals and enhance their skills in TV production. These meetings aimed at explaining the goals of the experiment and the need of equipments and personnel to help the researcher in conducting the experiment. The roles of both the academic and field supervisors were also identified in detail. They both worked in designing the curriculum according to students and job market needs.

B. The curriculum: It included the program to be applied in detail, starting from the first day of training when students meet with both supervisors to get a brief idea about the curriculum and fill the pre- knowledge test. Another general meeting is to be held with students at the end of the semester to evaluate the curriculum and identify problems that faced intern students. Students are also requested to complete the post –knowledge test at the end of the semester.

C. Evaluating the curriculum: was done on two levels

* Formative Evaluation: to ensure that the content of the curriculum fit the goals of the course. Mass Communication students and professors at UAE University, HR and training personnel at Abu Dhabi TV were requested to complete the evaluation form before conducting the experiment. Furthermore, media professors selected from different universities, and media practitioners were also asked to complete the form.

* Another assessment was conducted at the end of the program and was part of the experiment.

The Assessment Experiment:

This paper describes an assessment experiment recently conducted in UAE University by Mass Communication Program to help us gain insight into students' input and feedback. Students are observed, questioned and videotaped in a closed lab (Abu Dhabi TV) designed to help them understand concepts and to help in assessing how they relate concepts to activities. Their input and feedback was compared with another group of students who were not enrolled in the same internship course (control group). The small size of

the internship class precludes doing comparative studies where one group uses our curriculum material while the other uses nothing.
We attempted to respond to the challenges of digital media curriculum development by dividing the material into four modules, two concerns the concepts and the other two modules relate the concepts to activities as shown below:

1. A computer science module explaining the mathematical and technical underpinnings of digital media. The module includes specific application programs for example Photo Shop, Adobe Premier & Flash.
2. A module presenting concepts and techniques important to media students
3. A field module focusing on both observation of how television programs are produced and participation of intern students in the production processes.
4. Group or team field work trying to relate concepts to practical activities. Students are asked to produce a final visual project which will be evaluated by a jury committee composed of two external evaluators in addition to the instructor of the course.

. Each module consists of traditional text-based chapters accompanied by interactive on-line demos, worksheets, and programming exercises as appropriate to the subject. Parallel chapters run through all three modules in the areas of digital imaging, digital audio, digital video, and multimedia programming.

This internship course is offered to television students and typically has between 10-15 students.

Digital media courses involve an integration of concepts and applications, and thus a proper assessment of digital media curriculum involves evaluating the student's understanding of concepts and their application of concepts in hand-on activities. Thus, one way to assess students' performance is to look at the students' finished work in projects assigned in a digital media course, but this alone is not an accurate assessment tool... Also, traditional tests and quizzes are not enough. What is needed is an assessment strategy that evaluates the students' understanding and application of concepts. So, this paper is an attempt to develop an appropriate strategy for assessing the value of the curriculum material

Goals of the Study:

The goals of this study are as follows:

1. To evaluate how well the students understood the concepts they had learned as part of the curriculum.
2. To determine the concepts that still gave students trouble.
3. To note the concepts that we need to add to the curriculum because of its importance to achieve the effective use of the application tools.
4. To evaluate which of the curriculum approaches (text-based, worksheets, on-line demos, and in-class lecture) the students found most useful to their understanding.
5. To apply the outcomes of the experiment to developing a general strategy for development and assessment of digital media curriculum.

Diffusion of Innovations and Information Processing theories were chosen to help in designing and creating the curriculum & analyze data as well as variables.

According to Diffusion of innovation theory, technological innovation is communicated through particular channels, over time, among the members of a social system. (14)

The **stages** through which a technological innovation passes are:

- **knowledge** (exposure to its existence, and understanding of its functions);
- **Persuasion** (the forming of a favorable attitude to it);
- **Decision** (commitment to its adoption);
- **Implementation** (putting it to use); and
- **Confirmation** (reinforcement based on positive outcomes from it. (15)

On the other hand, George Miller (1956), believes that there are three kinds of memory: Sensory registers (the part of the memory that receives all the information a person senses), Short-term memory (STM) (also known as working memory, the part of memory where new information is held temporarily until it is either lost or placed into long-term memory), and Long-term memory (LTM) (the part of memory which has an unlimited capacity and can hold information indefinitely).(16)(17) The key factors for effective encoding of information include ensuring that the material is meaningful and that activation of prior knowledge occurs. (18) Strategies for assisting encoding include chunking (breaking the information up into manageable chunks), rehearsal, imagery, mnemonics, schema activation, and level of processing. (19)

Hypothesis:

1. There are significant differences in the knowledge of digital technology between students who participated in the training program and their counterparts who did not participate in the program or between the treatment and control groups.
2. There are significant differences in the attitudes towards digital technology between students who participated in the training program and their counterparts who did not participate in the program
3. There are significant differences in the skills of digital technology between students who participated in the training program and their counterparts who did not participate in the program.
4. The more assessment tools you use to evaluate the curriculum/ program, the higher credibility you reach with your curriculum/ Program.
5. There is a positive relationship between the variety and diversity of teaching tools in the internship curriculum and the level of intern skills.

2. Methodology

This study follows:

1. The Quasi-experimental design which is a form of experimental research used extensively in the social sciences and psychology. Whilst regarded as unscientific and unreliable, by physical and biological scientists, the method is, nevertheless, a very useful method for measuring social variables.(20) The inherent weaknesses in the methodology do not undermine the validity of the data, as long as they are recognized and allowed for during the whole experimental process.

This type of design involves selecting two groups of students:

- Treatment Group: composed of 15 TV students who were enrolled in the Practicum course (Spring 2007)
- Control Group: composed of 15 TV students who completed 100 credits but did not yet register the practicum course.

To study the effect of the internship digital curriculum on students, we tried to control other variables like age, gender, GPA, and number of completed credits.

2. The survey Method: to identify students' attitudes towards digital technology and its capabilities in TV programming.

Data Collection:

1. Students' knowledge was measured through a knowledge test that was applied twice, before and after the training program. The total grade of the test (20 points)was classified as follows:
   A 19-20 points
   B 16-18 points
   C 13-15 points
   D 10-13 points
   F below 10
2. Students' Skills were measured through a Self-evaluation questionnaire (pre-post questionnaire), Academic and field supervisor's evaluation forms, and student's final projects.
   a. Self-evaluation questionnaire: Ten skills were identified in the questionnaire (five of these skills were related to the use of digital technology while the other five were general media skills). Respondents were asked to specify their skills (before and after the training program) using a four point Likert item.
   b. Academic and field supervisors forms: the form of each included two main items:
      - Assessing the intern's performance on a scale of 4 points
      - Assessing the intern's skills: we applied the five skills chosen by the BBC as the basic qualifications of a media practitioner.
   c. Evaluation of final projects by a jury committee according to a designed form. (Total grade=50 points). Relevance to UAE community was one of the main criteria according to which the project was evaluated.
3. Students' Attitudes were measured according to pre-post questionnaire. The questionnaire included 10 positive and negative statements in regard to using digital technology in TV production. Respondents were asked to specify their level of agreement to each statement using a five point likert item.

Designing the knowledge Test: The academic supervisor in collaboration with the field supervisor designed the Knowledge Test that was applied twice, before and after the training, the test included questions that cover two main areas:

1. General Concepts related to Video Production and the latest technological developments
2. Digital Technology and its uses in TV production.

Moreover, we organized focus group discussions with mass communication students twice:

a. to gather data needed for designing the training program according to students' needs
b. to evaluate the training program

The knowledge Test, pre-post questionnaires and the training program/ curriculum proposal were all reviewed by a group of media professors and experts in the TV production field. All materials were sent to reviewers via e-mail.

Percentages, means, standard deviation, correlations and T-test were used to identify the significant differences between the two groups of students (control group and experimental group). The p-values of 0.05 and 0.01 were used as the level of significance. SPSS version 10.0 was used for statistical analysis.

3. Findings

Hypothesis 1: There are significant differences in the knowledge of digital technology between students who participated in the training program and their counterparts who did not participate in the program or between the experimental and control groups.

1. The knowledge test that was applied on both the experimental and control groups showed the following:
    - No significant difference between the two groups was reported regarding digital technology knowledge before conducting the experiment.
    - After the experiment the results showed a rise in the level of knowledge of the experimental group while the level of knowledge of the control group did not change. T- Test results confirmed that these differences between the two groups are significant. (T= 3.833 , p-value= .001)
    - Pre-test results pointed out that the two groups correct answers on questions related to general media concepts were higher in percentage than their correct answers on questions about the latest technological developments including digital technology.

    The above results confirms hypothesis 1 and therefore, we cannot reject the hypothesis.

Hypothesis 2: There are significant differences in the attitudes towards digital technology between students who participated in the training program and their counterparts who did not participate in the program

1. The pre- Attitude questionnaire pointed to a trend among the two groups towards neglecting the use of digital technology in TV production. This could be due to misleading information or lacking the adequate information on digital technology and its uses in TV production. 70% of the respondents believe that digital technology kills creativity, 53.3% confirm that designing a media message using this technology requires a lot of time and effort. Moreover 90% believe that the digital message attract audience through its marvelous picture resolution rather than the content of the message. T- Test results showed no significant differences between the two groups in that respect.(T= .354 p-value= .05)
2. Post- attitudes questionnaire scale reported a great transfer in the attitudes of the treatment group towards digital technology after the experiment while the control group attitudes reported no significant change. Respondents of the treatment group unanimously approved the use of digital technology in TV production and adding chapters on digital technology in all media curricula.

   This obvious transfer in the attitudes of respondents could be explained in terms of the dazzling effect of the digital technology taking into account that the attitudes were measured directly at the end of the training period. Our belief is that results would differ if the attitudes were tested after a longer period of time. Similar results were revealed by Becker & Hemels (2000) (21), Beckman 1995(22), Feldman, T. (2005) (23) Herbert 2005. (24), Gaunt, 2000(25) & DeFleur M. & Davenport L. (1993) (26)

   All the above results lead us to accept the second hypothesis in this study.

Hypothesis 3: There are significant differences in the skills of digital technology between students who participated in the training program and their counterparts who did not participate in the program

Self-evaluation skills scale showed that there are significant differences in skills between those who participated in the internship program and those who did not as follows:

1. Before conducting the experiment, the Skills scale showed that skills of 40% of the treatment group and 53.3% of the control group members were weak. On the other hand only 10% of participants

stated that their skills in TV production and digital technology in particular were good. T-Test results confirmed that there are no significant differences between both groups' skills in digital technology, as T value= .529 (p-value= .05) is not large enough to be significant.

2. After the experiment, results showed a significant rise in the level of students' skills (treatment group), while the level of skills of the control group did not report any change. 86.7% of the treatment group students reported that their skills in digital technology can be graded excellent while all members of the control group did not report any change in the level of skills. T- Test results confirmed statistically significant skills' differences between the groups after conducting the experiment. Note that T value = 9.317 (df= 28 & p-value =.000)

Based on the previous results, we cannot reject the third hypothesis in this study

3. The data indicates that participants' general skills in TV production, before the experiment, were higher on the level scale that their skills in using digital technology. The general skills of 23.3% of participants were good and 6.7% reported that their skills were excellent while no participants reported high level of skills in terms of using digital technology.
4. Applying the internship curriculum led to enhancing both the general media skills and the digital technology skills in a considerable way.86.7% of the interns reported high levels of general skills and digital technology skills while members of the control group did not report any increase in the level of their skills. T- test results proved that the differences between the two groups in terms of skills are significant.(T=9.317 , p-value= .000, df= 28)
5. The above results are similar to results of studies conducted in other parts of the world citing for mention (Russial J. & Wayne W. (2003)) (27) (Webre, 2009) (28) & (Beckman 2001) (29). They all agreed on the fact that training raise the level of skills of interns.
6. Intern students indicated that the internship curriculum was effective in enhancing some general job skills needed for media practitioners as teamwork (80%); meet deadlines (40%), Punctuality, initiative, Leadership skills (16.7%). It is important to mention here that (Nasr & EL Semary 2000) (30) had found that the practicum course curriculum lacked training students on the basic skills needed for a media practitioner. These results point out to the positive aspects of the curriculum.

7. It is also found that in terms of digital technology, the intern skills before the training did not exceed knowing how to operate the digital equipments (80%) and training others on how to use it (10%). The internship curriculum was found to enhance further skills citing for mention developing new and creative uses and capabilities of the technology in producing TV programs (more than half of the interns)
8. Data indicated that the internship curriculum which was applied throughout the semester made interns capable of answering all survey questions and "have no idea" option was not recorded at all among the answers of who were trained on the digital technology (the treatment group)

Hypothesis 4: The more assessment tools you use to evaluate the curriculum /program, the higher credibility you reach with your curriculum /program

Self-evaluation scale was not the only assessment tool used to evaluate the internship curriculum. Moreover, the academic supervisor and the field supervisor evaluation forms and the final projects evaluation were also used to assess the internship curriculum. They all confirmed the results of the self-evaluation questionnaire.

1. The academic supervisor evaluation resembled that of the field supervisor in regard to those interns who deserved an overall grade A (13.3%) and B (66.7%). The difference between the two supervisors evaluation was related to the interns who deserved an overall grade D. Among those who were graded D, 13.3% were rated by academic supervisor while 20% were rated by the field supervisor. Wilcoxon Matched-Pairs Ranks test showed that the differences between the evaluations of both supervisors are insignificant. **Pearson's chi-square** (χ^2) **test** also indicates that the relationship between the evaluation of both supervisors is very strong as X2 = .954
2. The Academic supervisor's evaluation resembled the evaluation of final projects by the jury committee in terms of interns that deserved an overall grade A, but they were different when rating the rest of the students. **Pearson's chi-square** (χ^2) **test** confirmed the relationship between the academic supervisor and the jury committee's evaluations , but the relation is not very strong (X2= .601) (alpha= .18)
3. The evaluation of jury committee resembled the field supervisor's evaluation more than the academic supervisor's evaluation. This could be explained in the context that media practitioners have different views than academics in terms of the way students should be qualified

to work in the media. Practitioners, unlike academics, form their views depending on their field experience and their direct contact with the media environment.

4. To study the relationship between the three assessment tools (academic supervisor, field supervisor and jury committee) **Pearson's chi-square** (χ^2) **test pointed that the relationship is very strong as x2= ,782 (p-value= .004)**
5. On the other hand , Wilcoxon Matched-Pairs Ranks test confirmed that there are no significant differences among the four assessment tools applied in this study (Self Evaluation- Academic supervisor evaluation- field supervisor evaluation & jury committee's evaluation) Therefore, we cannot reject the fourth hypothesis in this study

Hypothesis 5: There is a positive relationship between the variety and diversity of teaching tools in the internship curriculum and the level of intern skills

Information in our internship curriculum was presented to students through several teaching tools as Lectures, observation, group discussions, brainstorming, closed lab exercises, work involvement & final projects.

Based on George Miller's ideas in his information processing theory (31), the teaching tools were applied in a systematic order starting from observation, lectures followed by group discussions and brainstorming .The last stage included closed lab exercises, work involvement and final projects.

Results indicated that this order of teaching stages was accompanied by a systematic increase in the level of interns' skills as follows:

1. Academic and field supervisors' evaluation after the first stage of the program (teaching tools were observation followed by lectures) showed that the level of skills of 20% of interns did not exceed "fair" while the rest of students were weak.
2. The percentage of interns rated "fair" and "weak "decreased after applying the second stage of the program (teaching tools: group discussions & brainstorming) by 10%
3. Closed lab exercises & Work involvement lead to an increase in the percentage of interns that were graded "Good" and Very Good" (65%). Note that only one student was evaluated as an A student. On the other hand, no one got "D"
4. Final Projects showed that there is a significant increase in the level of skills as 33,3% were graded "A" on their project, 53,3% got B+ while the percentage of those who were graded "fair" did not exceed 6.7%

We conclude that there is a systematic increase in the level of skills that accompanied each stage of the program. **Pearson's chi-square** (χ^2) shows this as shown below:

First stage	x= .842 (p-value= .000)
Second stage	x= .940 (p-value= .000)
Third stage	x= .980 (p-value= .000)
Fourth stage	x = .992 (p-value= .000)

Therefore, we cannot reject the fourth hypothesis.

4. Conclusion:

This paper describes an experiment recently conducted to help us develop our "in-house" assessment strategy. Universities with large classes could find difficulty in applying the same strategy.

In general, findings revealed that the internship curriculum raised the level of knowledge and skills of students in terms of digital technology. It also created a positive attitude toward digital technology and its uses in TV programming.

Despite the fact that the rise in the level of knowledge among students in regard to digital technology was not one of the goals of this study, it was found that this goal was achieved after conducting the experiment.
This could be due to the lack of fundamental basic information related to the latest technological developments in the media courses curricula.

These results confirm two important points:

1. All courses should be linked to the latest technological developments in the field to provide students with at least a brief idea about the concepts and features of any new technology.
2. Internship programs should also include different components that provide students with necessary information to relate theory to practice. In other words, any internship curriculum should include both theoretical and practical modules. The theoretical modules could include lectures, text based material, educational videos, & interactive on-line material.

The lack of basic digital technology knowledge led students to disregard its positive aspects and form consequently negative attitudes towards using it in TV production. They rejected the spread of this technology in all TV stations,

teaching digital technology in all Mass Media courses, & also developing an internship digital media curriculum. The attitudes scale reported a great transfer in the attitudes of students after conducting the experiment. They unanimously agreed on applying the new technology in all types of TV programs.

The internship curriculum proved to be effective in enhancing the skills of students not only in using the digital technology, but also in producing TV programs in general. This result was confirmed by the different measurements applied in this study citing for mention student self-evaluation scale, academic and field supervisors' evaluation & the evaluation of the final projects by a jury committee. Moreover, the final grades of the course showed how effective the curriculum was. All students passed the practicum course.

One of the important results in this study was the dedication and motivation of students which proved to be an important factor in the success of both the curriculum and the experiment. This motivation made some students stay more than assigned training hours to observe and learn more about the new technology in the different television sites.

Others left their emirate and searched for a residence in Abu Dhabi to benefit from the time that is lost daily due to transporting students from and to Al Aim or any other emirate.

The design of the internship curriculum helped in deepening the understanding of the digital media technology due to the graduate flow of information in a systematic way and the different stages of information processing in the program. This caused a significant increase in the level of knowledge and skills of intern students that was obviously regarded by academic and field supervisors and also by the jury committee. It also helped in achieving the curriculum goals on both the theoretical and practical levels.

The intern students found the computer science module the most difficult part of the curriculum while the closed lab exercise, work involvement, & and the final projects were the most interesting components.

The closed lab exercise used in this experiment was fairly structured and directive in nature in that students were given specific steps to go through and asked to analyze what they saw or heard. However, they didn't actually produce a video product of any significance.

Generally speaking, the students (66.7%) found the class lectures most helpful, with the text-based material a close second. With regard to their preference for the text-based material over the on-line material, we found the on-line demos for the digital media units were not the best ones among our

curriculum material in the sense that they are fairly short and not as interactive as they could be.

Students (86.7%) requested more closed lab exercises and simplifying the computer science module (93.3%), but all four modules were important to their effective use of the application tools and nothing need to added ((73.3%).

As a conclusion, an internship curriculum needs technological and financial facilities as well as a design based on the needs of the job market and the students. In terms of dedication and motivation, students should be well-motivated to achieve the goals of the curriculum on the different levels.
We end this study by some recommendations that could help in creating a strategy for internship media curricula in our department.

1. The internship curriculum should include two basic components, theoretical and practical.
2. It should be designed and created by different parties not only the academic supervisor citing for mention the field supervisor, media practitioners and experts & media professors. It should also include the flow of different levels of information in a natural systematic way that deepens the understanding of the concepts and features of the technology.
3. Intern students should be motivated by different means before applying the training program. We should create interest in the internship course through promoting the program in- campus, offering bonus to excellent students throughout the different activities of the practicum course and/or prepare public screenings of the final projects of intern students.
4. Dedication of field supervisors is one of the important factors affecting the success of the program. Intern students in this study complained that field supervisors were busy with their work assignments and left the training sites more than once for business reasons. It should be clear that field supervisors should be paid for their time and effort.
5. Intern students should be totally freed for completing the program. Many students did not attend important training sessions because of being involved in mid-term exams or quizzes as they were allowed to take one or two courses with the practicum course. This negatively affected their performance during the different stages of the program and also affected the assessment experiment.
6. Students should be encouraged to work in groups and should show commitment to teamwork throughout the different courses of the mass communication study plan. Field supervisors indicated in their

evaluation forms that students lacked the skills of working as teamwork which negatively affected their final projects.

7. Diversity of assessment methods and measurements help in reaching credible results that could improve the output of the internship curriculum.

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