

Classroom Innovations for Quality Education

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Abstract –

The purpose of this paper is to evaluate the Classroom innovations for quality education that can be helpful in imparting knowledge to the student. This qualitative study seeks to explore how design thinking as a new model of learning is used in classroom learning. The findings showed that the teachers were not passive recipients of this new pedagogical tool and have “appropriated” it in multiple unique ways – to suit different purposes, different learning contexts and their different subjects . Every teacher always tries his/her best to impart the knowledge as the way he/she understood it. The cultivation of a broader set of skills and dispositions beyond core content knowledge is critical, and they merit the investment of more time in the classroom.

Introduction – Teachers are the pillars of the society. Education is the light that shows the mankind to right direction. Creativity of a student and Teacher can be developed at any stage. Innovative methods can benefit both student and teachers. It is our prime duty to convert education into a sport and learning process that generate the interest in the students and motivate them to stay back in the institution than to run away from it. Education should become a fun to them rather than burden and boredom. Education works as an engine for the growth and progress of any Nation.

Methodology: Methodology is the process which is to be used by the teachers to provide its best to the students. In this presentation our main stress is on the MULTIMEDIA METHOD. Multimedia method basically include

- **Text**
- **Images**
- **Audio**
- **Video**
- **Animation**

Purpose of Evaluation - Evaluation is beneficial for both the student and the teacher. The purpose is to help the teacher to identify the impact of their teaching practice on the student learning. Effective evaluation practice includes feedback to students to provide them with insights into themselves as learners and help them to identify how they might improve their own learning practices. The overall purpose of evaluation is to develop an enhanced learning environment for the students.

Principles of Evaluation:

- Evaluation includes the students. Here students are not only the target for responding to questions but also involve them in evaluating their own reaction to learning.
- Evaluation should be open and honest. The purpose of evaluation should not be to

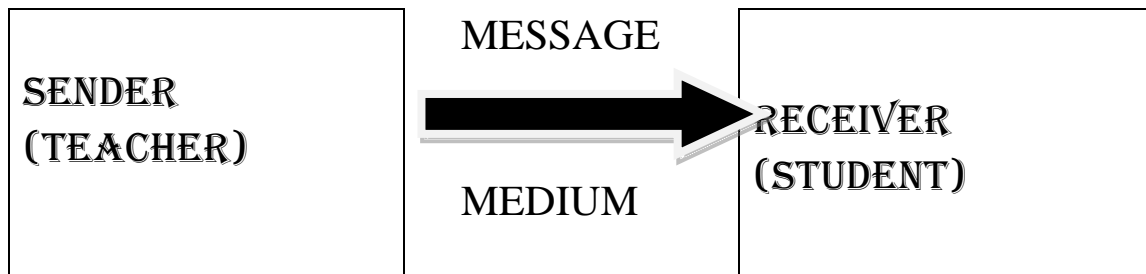
provide evidence of good practice or to find fault but to provide the effective information.

- Evaluation should distinguish between formative and summative purposes. Formative evaluation is undertaken for the purpose of improving the learning environment. Summative evaluation is undertaken essentially to provide evidence of the effectiveness of the environment.

Traditional teaching method: an Evaluation –

In the traditional technology education context, teacher is the sender, education material is the information and student is the receiver of the information. In terms of the delivery medium, the educator can deliver the message via the “chalk-and-talk” method. In other words, the teacher delivers the lecture content and the students listen to the lecture. Thus, the learning mode tends to be passive and the learners play little part in their learning process. In such a lecture students assume a purely passive role and their concentration fades off after 15-20 minutes

TRADITIONAL METHOD – A ONE WAY FLOW



LIMITATIONS:

- Teaching in classroom using chalk and talk is “one way flow” of information
- Teachers often continuously talk for an hour without knowing students response and feedback.
- The material presented is only based on lecturer notes and textbooks.
- There is insufficient interaction with students in classroom.
- More emphasis has been given on theory without any practical and real life time situations.
- Learning from memorization but not understanding.

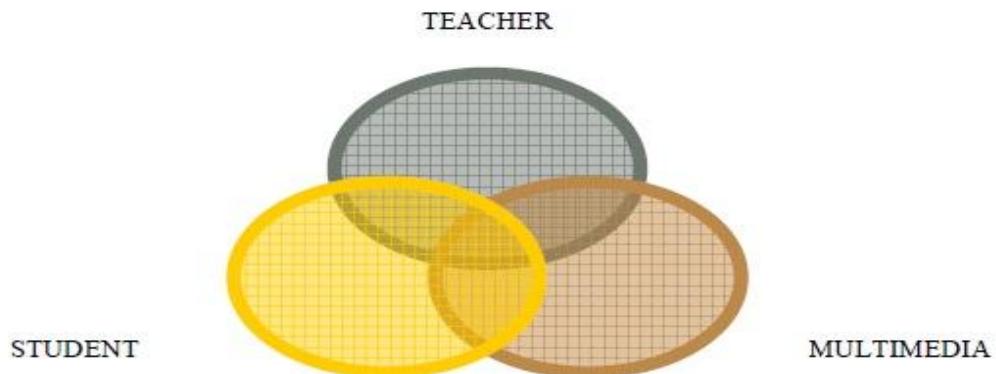
**INNOVATIVE TOOLS:
MULTIMEDIA LEARNING PROCESS:**

“WHAT YOU SEE IS WHAT YOU GET”

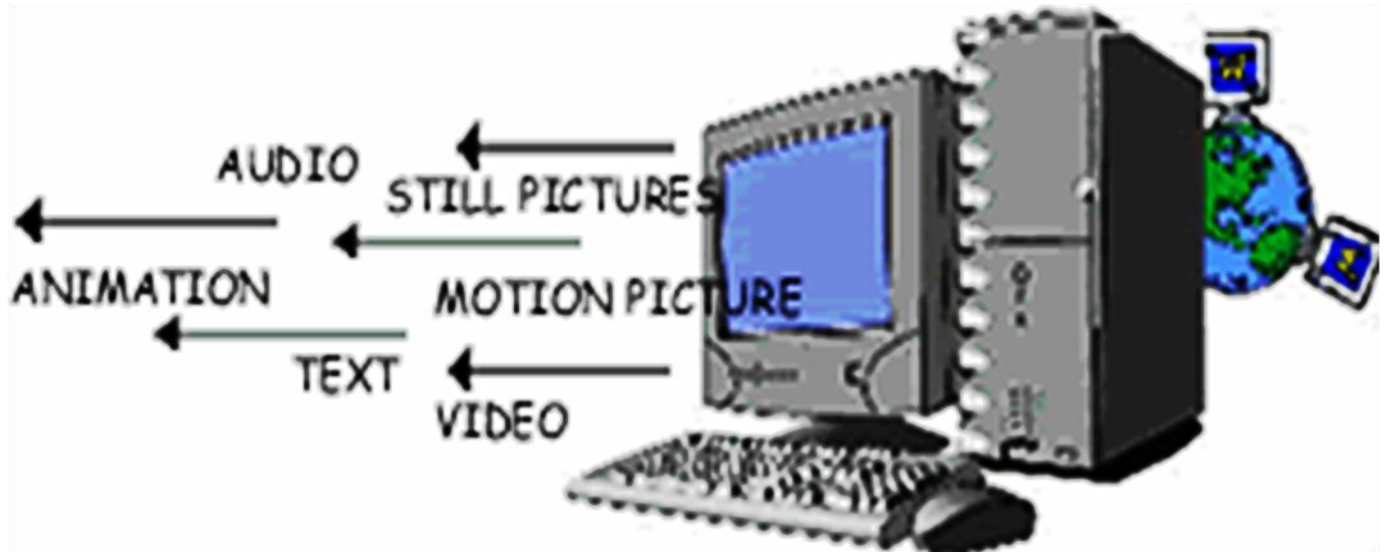
Multimedia, is the combination of various digital media types such as text, images, audio and video to convey information to the students. The teacher uses multimedia to modify the contents of the material. It will

help the teacher to represent in a more meaningful way, using different media elements. These media elements can be converted into digital form, modified and customized for the final presentation. By incorporating digital media elements into the project, the students are able to learn better since they use multiple sensory modalities, which would make them more motivated to pay more attention to the information presented and retain the information better.

MULTIMEDIA LEARNING – AN INTERACTIVE LEARNING PROCESS





MULTIMEDIA ELEMENTS



VARIOUS MULTIMEDIA TOOLS

Tools	METHODS	EXAMPLES	METAPHORS
Mspowerpoint, Astound Graphics and Flash Slide Show Software	Easy to prepare and it can be prepared with many of the popular multimedia elements like graphs, sound and video		SLIDE BASED

<p>Macromedia, Flash Authorware, BPP I Learn and I Pass</p>	<p>Presentation is created using icons to represent different media elements and placed in a flowline</p>		<p>ICON BASED</p>
<p>Windows Movie Maker, Winampp, Macromedia Director</p>	<p>Presentation is created using moviemaking concepts of casts, sounds, pictures and scores</p>		<p>MOVIE BASED</p>

Design thinking to optimize student learning

Design Thinking is an approach to learning that focuses on developing children’s creative confidence through hands-on projects that focus on empathy, promoting a bias toward action, encouraging ideation and fostering active problem-solving – skills and competencies that align with the five core assumptions outlined by Zhao. In a report put together by the REDlab (Research in Education and Design Lab) team at Stanford, it was recommended that design thinking be integrated into academic content for while it

may stand Innovation in the Classroom 5 alone, its power as a tool for learning comes in the ways it can support a diverse range of interdisciplinary academic content (Carroll et. al, 2010). Instruction that uses design thinking as leverage for learning can thus provide rich experiences that encourage meaning making without the imposition of a fixed set of knowledge and skills. Through the implementation of curriculum that integrates design thinking and academic content, educators can help students develop a skill set that includes ideas generally not fostered within traditional school settings. This process would contribute to different

levels of creative knowledge, creative skills and creative mindsets that can be achieved by design thinking education, culminating in a capability that is called “creative confidence”

Methodology

Purpose of study

Purpose of study Although design thinking today has been accorded more importance in higher institutions of learning, it is still a relatively new model of learning in K12 education. This study thus seeks to find out the possibilities and constraints inherent in the processes of Design Thinking that potentially shape the way both teachers and students use this tool for learning. An area proposed for further research is looking into the effective ways of integrating design thinking processes, educational standards and academic content information (Carroll et al, 2010). A deeper understanding of how the processes of Design Thinking can be embedded in academic content at both the planning and implementation stages can also potentially impact how teachers and schools use the approach to frame their instructional processes and practice in future. Given that teachers do not make pedagogical decisions in a vacuum, it was the interest of this study to find out their key considerations when using design thinking in the classroom. More specifically, the questions are as follows:

1. What are the key considerations that teachers have when using design thinking in classroom learning?
2. How do these factors influence the way design thinking is used in classroom learning?

3. How does design thinking intersect with the teaching of academic content? What do these lessons look like? The Setting The New Horizons Academy is one of the schools currently in partnership with

Qualitative Study

The aims of the research and the questions that have emerged pointed to the qualitative case study as the most fitting methodology. Case study is “an intensive, holistic description and analysis of a bounded phenomenon” (Merriam, 1998, pp. xiii), involves systematically gathering enough information about a particular person or group and situation to permit the researcher to effectively understand how the subject operates or functions (Berg, 2004, pp. 251) and can “penetrate situations in ways that are not always susceptible to numerical analysis” (Cohen et al., 2001, pp. 181). Indeed the personalized and contextual Innovation in the Classroom 9 details gathered from each of the case study participants facilitated the deep analysis of complex relationships between their beliefs, experience and the unique context of New Horizons.

Lesson Observations

The lesson observations took place in late March and each teacher’s classroom was visited over the course of two weeks (8 math lessons, 6 language arts lessons, 6 social studies lessons, and 6 STEM-design thinking lessons were observed). Each observation was 45 minutes long – the length of every lesson period, except on shorter days when the lesson was 37 minutes long. This study focuses mainly on the teacher as the target of observation because delivering both content and skills in a rich way that improves student

outcomes requires the teacher to be knowledgeable about a broad range of topics and be able to make spontaneous decisions as the lesson unfolds. It is also a research interest to observe how the teacher simultaneously engages with content, classroom management, and ongoing monitoring of student progress – especially when design thinking is introduced in the classroom.

Interviews

In-depth interviews were conducted three weeks after the lesson observations, which were immediately followed by the school's spring break. The goal of the interviews was to discover how the school leader and teachers thought about teaching and learning in general, their experiences with design thinking and how the school had used it in classroom learning. I was interested in discovering both the general and particular desires of the school leader and teachers in relation to these, so they were encouraged to talk freely and share their opinions. Dr. Alice was interviewed once and the three teachers were each interviewed twice during the course of this study. Besides the formal interviews, I also spoke informally with Innovation in the Classroom 10 the teachers on several occasions about their lessons and what they had planned for upcoming classes

Data Analysis

The study focuses on the processes and structures that influence the teaching practice of three teachers and their approach to using the design thinking process in classroom learning. The interpretivist nature of this study means that the researcher is bound up in the situation, rather than being a detached,

objective observer, reflecting the belief that “knowledge is constructed by the individual and is socially negotiated” (Guba & Lincoln, 1989, p. 13). The careful use of source material is thus imperative, and the perspective of the outsider researcher is balanced with the views of the participants – teachers, students and school leader – so that the truth is more likely to emerge when all these perspectives are synthesized. Data sources included field notes, audio and video recordings of the lessons and interviews. The interviews were transcribed verbatim, data-coded and analyzed using the comparative procedure of open coding (Glaser and Strauss, 1967), where every sentence in the field notes and transcripts was labeled with terms that best captured what the main idea and concept was about. An initial set of codes was developed and then applied to the remaining data. Codes that shared more abstract qualities were amalgamated into broader pattern codes (Tables 2.1 and 2.2 in Appendix 2 capture the codes developed for the observation field notes and interview transcripts respectively). The data was analyzed at three levels: the individual case studies of teachers, a comparison across the case studies and a generic inductive qualitative analysis to consider the data in the wider schooling context. Finally, the data was triangulated among the participants' responses as categories emerged. During the development of codes and categories, memos were also written to interpret the material, especially in light of how design thinking was being used to intersect with the teaching and learning of academic content. As the key concepts and themes emerged more distinctly, I also looked up relevant literature to further clarify and integrate with the analysis that has developed. This proved

important in ensuring that the assumptions made were not solely the result of interpretation, but also grounded by actual data and literature to demonstrate that the analysis is grounded in lived experience (Charmaz, 2006).

Conclusion

From the above discussion we conclude that The school as a credible institution of learning had begun to emerge, and the attention to the holistic development and growth of the students also ushered the adoption of design thinking as a new pedagogical tool. I remember marveling at the teachers' open-door policy, which appeared to be deeply entrenched in the school culture "MULTIMEDIA "is the best method to enhance the teaching and learning skills. It is the fact that our mind grabs pictures more quickly as compared to learning and reading any concept. Visualization helps us in clear understanding of all concepts. Smart classes are the best example of Visualization that is being used by most of the teaching organizations to improve learning skills of the students. "FEEDBACK" plays an important role for the evaluation of teaching and learning skills.

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