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Implementation of a Game Based Learning Model using Sequence Square Box (SSB) Technique

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Abstract: ***This paper presents the systemic approach to education and educational innovation practices. A new approach and alternate view of game model used to customize learning experiences. It uses intelligent data, analysis models to find how the students learn and improve on their experience. The way of teaching aims to deploy the animations and easy way of understanding the concepts through game based learning. The main aim is to design interactive tool usage for simplicity and less complexity. The proposed gaming strategy is deployed for the purpose of easy way of understanding to arrange in ordered fashion called Sequencer Square Box technique. Using this technique, players or learners can have the ability to find, share the information through friends. They can easily explore, collaborate their ideas and progress towards multiple literacies in any domains and readiness to build any challenges in future.***

Keywords: Game based learning, Computation, Intelligent data tool.

Index Terms*: *Intelligent Data, Gaming strategy, Sequencer Squar, literacies.

I. INTRODUCTION

In general, everyone needs a platform to study, learn and understanding the concepts, towards the growth of digital era. One of the electronics field plays a vital role in the form of entertainment in TV. Further PCs, Laptops and mobiles are used as education tools to get the information and customized learning experiences. The electronics system deploys more interactive device/resource, has been used all over the world for their needs and requirements. Generally, it is hard to translate the knowledge about traditional classrooms to an online environment. Here a platform is developed for teaching through gaming technique. In recent years, these competences are fundamental for personal and professional development as they enhance anyone well-being and provide education and training opportunities [5].

It is a key level for more effective learning and reducing barriers in education field. Nowadays, Online Education and MOOC are part of the learning through technology mode of structure developed in higher education. Some dropouts may be happening, while the courses are running, due to the less interactive, doubts and basic requirements.Over the years, designers have explored many learning processes, but few strategy brought out for best results. Some time it may fails or leads to new model. Any user have put considerable energy into the design and implementation of experimental instructional programs. However, the fields support different literature and theory bases, communication is often lacking. Cognitive teaching model plays an important role to bring out new dimension for learning practice [7].To improve quality, access, and equity in education and training. A simple interactive tool developed for slow learners and fast learners. Identifying their strength, determines the course level. In this situation, game related workout is implemented and solving through interactive way of learning[4], how they can responds, responding few questions to make them to learn and grab the knowledge[3]. Easily identifies that level of learners, how they want to improve on their each and every stages of the course. Thus teaching models are just instructional designs. They describe the process and producing particular environmental situations which cause the student to interact in such a way that specific change occurs in his behaviour. The Collins framework of epistemic games [2] provides a structure and language to articulate what teaming communities do when they work together to generate new knowledge. Such a framework can become useful to understanding classroom and workgroup processes, but it also can serve a prescriptive or heuristic role for teachers and designers. Many teachers complain that they want to teach critical thinking, but they have failed to find a suitable set of strategies.

Objective

Learning can be done through simplified game model. It is an easy way of an understanding the concepts and analysis through the set of sequence order.

II. IMPLEMENTATION

The proposed model consists of three modules, implemented through web based visual programming tool. First, Opener square box is simply called as OSB. An interface of the user, creates an identity which provides the access, intention of study, technical information are listed with simple questionnaires.

The second module which is called Smart Design Opener act as intelligent and smart design pad which consists of keypads representation listed from 1 to 9 Pads.

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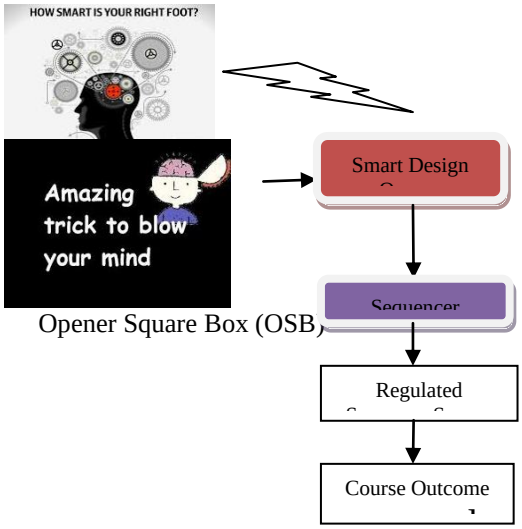
Here the keypad touches each and every number of the pads gives the information guidelines. The sequential arrangement gives the clarity of subject model to propose and continuous review activity can be easily formed.

Also analysis of any model can be reviewed and framework gives detailed description of any design can be put forth on his/her own ability. Individual creativity, Problem solving and critical thinking are the metrics [5], [1] & [6] recognizes and justify simultaneously in the Smart Design Opener (SDO) module. The general block diagram as shown in fig. 1.



Opener Square Box (OSB)

Figure 1- General schematic view of Sequence Square Box (SSB) Technique

Now, the user allowed accessing and opting the level of learning window. Next, automatically they generate random number keypads, as shown in fig. 2.

Figure 2 - Opener Square Box

This methodology and practices can be implemented in various streams of branches like civil, mechanical, Physics, electronics and so on. In the above figure 2, numbers are not arranged in ordered fashion. Now, the user have to arrange by number wise, starting from 1, 2, 3 as upto 9.

Collins and Ferguson (1993) suggest three important types of epistemic games [2]. along with several categories. For SSB technique, suitable three gaming models are :

1. Structural analysis games. What are the components or elements of a system?
2. Functional analysis games. How are the elements in a system related to each other?
3. Process analysis games. How does the system behave?

Each of these general game types is found in every subject matter. Additional knowledge-building games and activities are found in Collins and FergusonFor an example in the stream of circuit branches like electronics. The design is intended for differentiation operation. Once they arranged, they formed a new structure. By flipping the Open Square Box (OSB) key pads, projected the expected design. Thus, the conversion takes place from OSB to SSB. The converted number formats into simple Differentiator circuit as shown in fig 3.

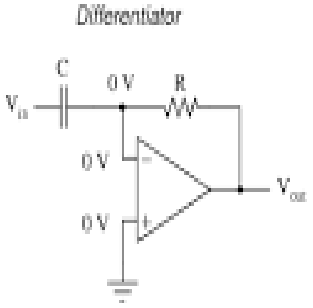


Figure 3 – SSB conversion to Circuit Model

Now if opting the odd numbers arrangement, the circuit behaves like one form of structure, and another choice as even number produces as another form of structure based on first order and second order function. In this way the methods of analysis can be put forward and extended, based on their course outcomes [1], by playing or arranging the Regulated sequence Square box.

In this next game, the figure shows that path tracer by tracing the source to destination. By trail and error can be used to find the path as shown in fig. 4.

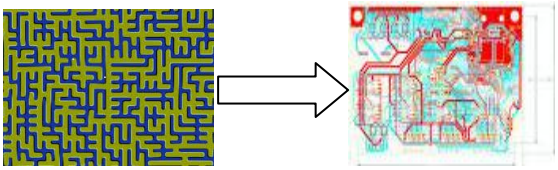


Figure 4 – SSB conversion to PCB Model

Now in Electronics design as PCB model, PCB layout can be demonstrated, and also easily predict the shortest path (Algorithm), by covering all the connecting nodes. Here any basic learner (diploma student) can learn the concepts and can spent less time by using the model.

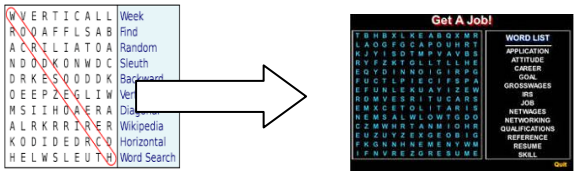


Figure 5 - Needs of HR

Instead of using the sequence method, another game can be used, a word arranger gives the basic terminologies for job oriented model.

The simple design is generation of word list based on the HR needs. It is easy to implement in job searching criteria, requirements and the needs of recruiting procedure to recruit the candidates in the management level. The fig. 5 explains the needs of HR

III. CONCLUSION

In this proposed method, a simple game model is presented learning experiences towards app design through web based visual programming tool. For virtual learners are benefitted, enhance their own creativity, and realistically useful. This work shows that possibility and practically encourages the educators to explore potential through e-learning mode. Using the framework as a diagnostic or interpretive device. Existing learning activities can be interpreted from an epistemic-game perspective, providing valuable insights into processes and interactions. Finally, this proposed model outcomes are Thinking skills and learning to learn, multiple literacy, Entrepreneurship Participation and the readiness to build sustainable future through interactive Learning Practice.

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