

# Igniting Student Interest towards Educational Technology through Interest Driven Creator Theory: A Case Study at Universiti Putra Malaysia

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**Abstract:** This study explores students' interest profile and the extent of their interest towards educational technology over a 14-week period. A survey was used to explore students' interest profile while artifacts from an e-portfolio were used to understand the extent of their interest. The results revealed that students felt good about educational technology and were drawn to it. The findings proved encouraging given that it is crucial to nurture future habitual interest-driven creator teachers who are always excited to discover more about educational technology to enhance their teaching in classrooms.

**Keywords:** interest, educational technology, interest driven creator theory

## 1. Introduction

Today's learners must acquire skills to seek new knowledge on their own and be problem solvers who are able to think creatively. They also need to effectively communicate, identify and analyse existing ideas in order to create new knowledge. Suffice to say, learners must be able to construct their own knowledge without relying too much on their teachers (Yen, Bakar, Roslan, Luan & Rahman, 2005). What remains clear is that the world is fast changing but our education systems are not moving in tandem to keep up with the change. In many countries within the Asian region, high-stakes examination takes centre-stage with important decisions being made about the future of the candidates — key examination results shape students' choice of a future career. Rimfeld, Malanchini and Plomin (2020) warned that high-stakes examinations inadvertently push both students and teachers to focus more on examination preparation, with the common strategies of “working hard”, namely, intensive process of drilling and practicing prepackaged knowledge or past-year examination questions, and “working smart”, that is, seeking tactics and short-cuts for obtaining high grades (Wong, Jan, Toh & Chai, 2012). Consequently, the students' educational experience is shifted away from deep learning and towards academic performances that do not necessarily reflect cognitive achievements.

## 2. Interest Driven Creator Theory

In view of the aforesaid challenges, Chan et al. (2018) proposed the interest driven creator (IDC) theory to address the worrying trends of students' diminishing interest towards learning. Nurturing interest among students to learn is crucial given that recent studies have shown the strong association between interest and learning performance (Wong & Wong, 2019; Huang, Chou, Wu, Y. *et al.*, 2020). IDC hinges on three anchors — interest, creation and habits.

In this study, we focused on the interest and creation loops as they act as an impetus to nurturing

habitual learners. As proposed by the IDC theory, the interest loop comprises three components (that is, three recursively performed learning activities) (Wong, et al., 2015; Wong et al., 2020), namely, triggering interest (through arousing students' curiosity), immersing interest (by enabling students to experience "flow" (Csikszentmihalyi, 1990), i.e., an experience of intense emotional involvement in an activity for its own sake), and extending interest (through implementing learning activities meaningful to students). Similarly, the creation loop encompasses the following three components (Chan et al., 2019), imitating, staging and combining. The subject of study are students enrolled in a teaching degree course at Universiti Putra Malaysia, hence, it makes sense to trigger these future teachers' interests in learning which can then lead them to creating new knowledge and ultimately becoming habitual interest-driven creator teachers in schools.

### 3. Objectives of the Study

This study is based on the assumption that a discrete educational technology course could trigger students' interest in learning about educational technology. The objective of the study is to explore students' interest profile towards educational technology. It also explores the extent of their interest towards educational technology over a 14-week period. Specifically, the following research questions will be answered:

1. What is the students' interest profile towards educational technology?
2. What is the extent of students' interest towards educational technology?

### 4. Course Description

The course, Educational Technology (FCE3401) is a compulsory course for all Physical Education major students at the Faculty of Educational Studies, Universiti Putra Malaysia. These students would progress to teach Physical Education in secondary schools upon graduation. The course aims to provide students with fundamental knowledge and skills of educational technology. The students were exposed to a 2-hour lecture and a 3-hour laboratory session per week. In the lecture, students learned about the concepts, theories, principles, development and practices in educational technology. They also learned to evaluate instructional media. For the practical sessions, students learned to create instructional media.

#### 4.1 Instructional Context in Relation to IDC

Given that students had no prior knowledge about educational technology, the course instructor *triggered* students' interests in the subject in the first week of the semester. Communication with students was done through a social media platform — WhatsApp. Two YouTube video links were given to students prior to the actual day of the first lecture. Students were also directed to visit an educational technology blog. The videos and blog gave bite size information to arouse students' curiosity about educational technology prior to having a face to face lecture with the course instructor. More video links related to subsequent topics were shared with the students in the same way as the semester progressed to continue *triggering* their interests in the subject.

Students then were engaged in learning activities that would *immerse* students in the learning process where they go into a flow state. For example, in a learning activity about a topic on Technological Pedagogical Content Knowledge (TPACK) model, students learned about the principles of TPACK by playing a game. In this game, where they were challenged to think about which "T" (technological tool) matches a given "P" (pedagogical approach) and "C" (content) best. Through this game, students were exposed to a concrete experience where they had to decide the most suitable technological tool for a Physical Education topic. They then aligned it with the teaching approach that they would adopt in the classroom. This was where they *extended* their learning interest by making sense of TPACK and applying the model in a concrete and realistic situation.

During the *creation* stage, students were encouraged to generate ideas and construct artifacts for better learning outcomes. The stage comprises several tasks, one of which is described below as an

illustration. The task required students to work in groups of four to five students to produce a video (five to seven minutes duration) that could enhance school students' understanding of a Physical Education topic offered in secondary schools. Students were given five weeks to complete the assignment. To help students better understand the expectations of the assignment, the instructor showed examples of educational videos on YouTube where students could *imitate* to form their background knowledge about the video contents. The students were also guided to prepare a story board before creating their video contents. The instructor encouraged the students to explore the various free video editing software available and choose the most appropriate one that suited their needs.

To produce an appropriate video as a teaching tool, the students needed to retrieve what they have learned about visual media and TPACK. They had the choice of either acting in the video themselves or to search for appropriate available video clips that they could put together. This stage required students to *combine* their newly acquired background knowledge with existing knowledge to create their own videos.

The students were given the opportunity to present their videos in groups at the end of the semester. They received feedback from the course instructor and peers at this *staging* phase. They also responded to questions posed by the course instructor and other group members.

## 5. Methods

### 5.1 Participants

A total of 29 Physical Education major students participated in this study. At the time of data collection, they were in their fifth semester (ages ranged between 22 and 23 years). All of them reported that they had no prior knowledge about educational technology before enrolling in the course.

### 5.2 Instrumentation

A survey was used to explore students' interest profile towards educational technology. The survey used was adapted from the Mathematics Interest Inventory (MII) by Stevens and Olivárez (2005). The context of the items was changed to suit the educational technology course. MII is a seven-point scale, ranging from 1= Not at all true of me to 7= Very true of me, was used for all items in this instrument. The instrument used for this study comprised 23 items to measure students' interest towards educational technology as shown in Table 1. There were nine negative items. The survey comprised three subscales — items 1 to 9 measured students' positive attraction with educational technology (positive valence), items 10 to 17 measured students' negative experience with educational technology (negative valence) and the remaining items 18 to 23 measured the time and effort students committed to educational technology. The Cronbach's alpha of the items was .85, indicating good internal consistency for the items.

Artifacts from an e-portfolio were used to reflect the extent of their interest. Students also shared their feelings and thoughts about their educational technology journey throughout their 14 weeks course in a blog.

## 6. Results and Findings

### 6.1 Students' interest profile towards educational technology

The overall interest mean score is 5.31 (SD = 0.85). The overall interest is much higher than the mid-point of the scale (4.00) indicating that the students had some interest in educational technology. Table 1 presents the students' responses in regard to their interest towards educational technology measured by 23 items. Within the first sub-scale measuring their attraction with educational technology (items 1 to 9), the majority of them agreed the descriptors were very true of them. It is notable that for the descriptor "Knowing a lot about educational technology is helpful", 65.5% of the students agreed

that this is very true of them, 72.4% agreed that it is very true that “I want to learn more about educational technology”.

In relation to the second subscale (items 10 to 17), measuring students’ negative experience associated to educational technology, the majority did not agree that the descriptors were either true or very true of them. For example, 34.5% of them felt it is not at all true while 20.7% of them felt is not true of them that they are wasting their time on educational technology. However, it should be noted that there were 24.1% and 17.2% of the respondents who felt it was very true of them and true of them respectively that they would rather be learning about something else than about educational technology. The third subscale (items 18 to 23), measuring the amount of time and effort students committed to educational technology, the majority agreed that the descriptors were either true or very true of them. For instance, 44.8% and 17.2% of the students felt it is very true and true respectively of them to be involved in educational technology activities so that they can know more about the field.

Table 1: *Students’ Interest towards Educational Technology*

	Not at all true of me	Not true of me	Somewhat not true of me	Not sure	Somewhat true of me	True of me	Very true of me
	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
1. I like working on educational technology assignments	0 (0)	0 (0)	0 (0)	3 (10.3)	6 (20.7)	6 (20.7)	14 (48.3)
2. I enjoy going to the educational technology classes	0 (0)	0 (0)	0 (0)	2 (6.9)	3 (10.3)	7 (24.1)	17 (58.6)
3. I am interested in educational technology	0 (0)	0 (0)	0 (0)	3 (10.3)	2 (6.9)	7 (24.1)	17 (58.6)
4. Knowing a lot about educational technology is helpful	0 (0)	0 (0)	0 (0)	2 (6.9)	0 (0)	8 (27.6)	19 (65.5)
5. I feel good when it comes to working on educational technology assignments	0 (0)	0 (0)	0 (0)	2 (6.9)	4 (13.8)	6 (20.7)	17 (58.6)
6. I want to learn more about educational technology	0 (0)	0 (0)	0 (0)	2 (6.9)	3 (10.3)	3 (10.3)	21 (72.4)
7. I feel excited when a new educational technology topic is announced	0 (0)	0 (0)	0 (0)	2 (6.9)	8 (27.6)	5 (17.2)	14 (48.3)
8. I feel excited thinking about educational technology	0 (0)	0 (0)	0 (0)	2 (6.9)	3 (10.3)	7 (24.1)	17 (58.6)
9. I enjoy working on educational technology activities in class	0 (0)	0 (0)	0 (0)	5 (17.2)	0 (0)	6 (20.7)	18 (62.1)
10. I am wasting my time on educational technology*	10 (34.5)	6 (20.7)	1 (3.4)	3 (10.3)	0 (0)	4 (13.8)	5 (17.2)
11. I am bored when working on educational technology assignments*	7 (24.1)	7 (24.1)	1 (3.4)	5 (17.2)	2 (6.9)	2 (6.9)	5 (17.2)
12. I would rather be learning about something else than about educational technology*	6 (20.7)	3 (10.3)	3 (10.3)	4 (13.8)	1 (3.4)	5 (17.2)	7 (24.1)
13. I give up easily when I do not understand something about educational technology*	8 (27.6)	5 (17.2)	3 (10.3)	2 (6.9)	3 (10.3)	3 (10.3)	5 (17.2)
14. When working on educational technology assignments, I want to stop and start working on something else*	8 (27.6)	4 (13.8)	4 (13.8)	4 (13.8)	2 (6.9)	1 (3.4)	6 (20.7)
15. I am always thinking of other things when working on educational assignments*	7 (24.1)	3 (10.3)	3 (10.3)	7 (24.1)	2 (6.9)	1 (3.4)	6 (20.7)
16. I have difficulty paying attention during the educational technology lectures*	7 (24.1)	3 (10.3)	5 (17.2)	5 (17.2)	1 (3.4)	3 (10.3)	5 (17.2)
17. I struggle to understand about educational technology*	7 (24.1)	4 (13.8)	2 (6.9)	3 (10.3)	6 (20.7)	1 (3.4)	6 (20.7)
18. I spend as little time as possible working on educational technology assignments*	6 (20.7)	5 (17.2)	2 (6.9)	3 (10.3)	4 (13.8)	3 (10.3)	6 (20.7)

19. I spend many hours working on educational technology assignments	1 (3.4)	2 (6.9)	0 (0)	4 (13.8)	7 (24.1)	4 (13.8)	11 (37.9)
20. I work on my educational technology assignments in my spare time	2 (6.9)	0 (0)	1 (3.4)	5 (17.2)	5 (17.2)	6 (20.7)	10 (34.5)
21. I spend more hours studying about educational technology compared to other courses	0 (0)	1 (3.4)	4 (13.8)	9 (31.0)	5 (17.2)	5 (17.2)	5 (17.2)
22. I discuss about educational technology with my friends for many hours	0 (0)	2 (6.9)	2 (6.9)	5 (17.2)	7 (24.1)	6 (20.7)	7 (24.1)
23. I am involved in educational technology activities so that I can know more about this field	1 3.4	0 (0)	0 (0)	4 (13.8)	6 (20.7)	5 (17.2)	13 (44.8)

\*Negatively worded items

## 6.2 Extent of students' interest towards educational technology

The infographics as shown in Figure 1 captured two students' feelings during the first five weeks of the course. Student #28 started in the class feeling confused and nervous but felt happy as the class progressed. She found it interesting to gain new knowledge about educational technology. Student #29 was happy and enjoyed acquiring new knowledge about new technologies especially about Metaverse — an augmented reality creation app. Students also wrote reflections about their learning experience. Most of the students felt excited because they gained new and interesting knowledge as seen from the following comments:

*I am so tired today but I still have to continue with the educational technology class today at 2pm, but thank God I still survived because we learned something interesting although all sorts of problem cropped up.*

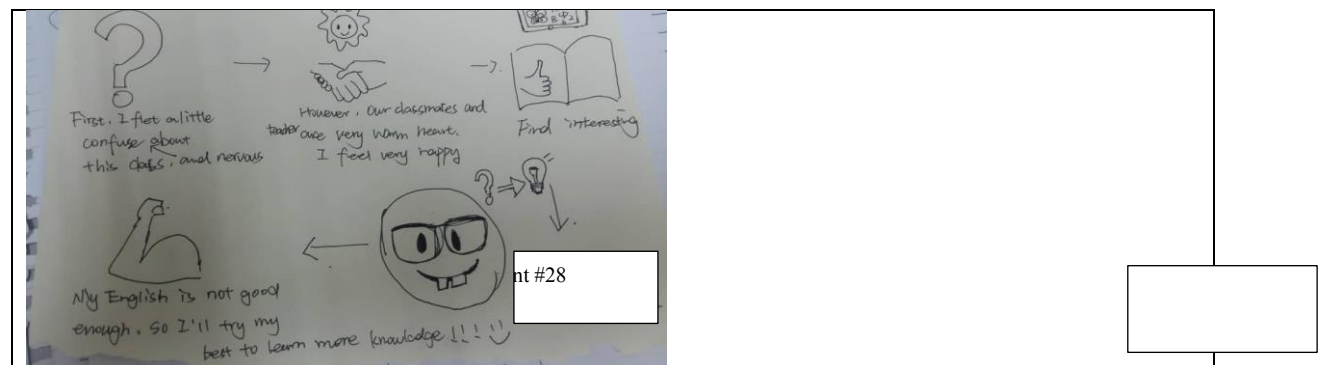
*Student #8*

*We started our class feeling happy. We are learning about VR again, yay! A guest lecturer from the Engineering Faculty taught us. She created a very interesting VR app.....this attracted our interest. We were really excited when we got to experience VR. Wow...*

*Student #5*

*Today, I went to the Putra Innocreative Carnival in Technology and Learning.....I acquired a lot of new experience such as designing a task. I also got to try a gadget called VR Class. This gadget is so sophisticated and made me excited. Wowwwwww..*

*Student #15*



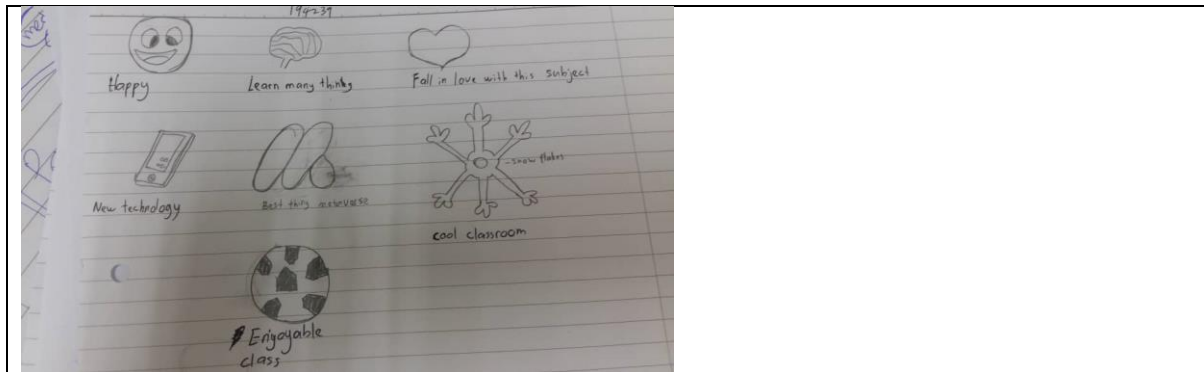


Figure 1. E-Portfolio Artifacts

## 7. Discussion and Conclusion

The present study explored students' interest profile and delved more to understand the extent of their interest towards educational technology. Students felt good about educational technology and were drawn to it. The finding of this study seemed to suggest that having new experience with the subject matter appeared to have stimulated their interest. Experiencing such positive valence suggests that students have positive feelings towards educational technology which leads them to wanting to learn more about it and be involved with it (Su, Stoll & Rounds, 2019). They spent a big portion of their student learning time working on the educational technology course compared to other courses they were enrolled in. When students are engaged in tasks of interest, they develop positive feelings that reinforce that experience so that they desire to reengage in similar experiences (Su et al., 2019).

It is important for instructors to respond to what students find interesting so that more learning activities can be designed and tailored to them. Although this require more effort on the part of the instructors, it is a crucial step to take in order to nurture future habitual interest-driven creator teachers who are always excited to discover more about educational technology to enhance their teaching in classrooms.

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