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NEED FOR RECLAIMING INSTRUCTIONAL DESIGN

Necmi Esgi[i]
Assoc. Prof. Dr., Gazi Osman Paşa Üniversity,
Faculty of Education, Computer Education and
Instructional Technology, Turkey

Abstract:
The aim of this study was to identify preservice teachers' opinions regarding instructional design. In order to achieve this goal interviews with the sophomore students, who finished instructional design course, was conducted. Afterwards, interviews were transcribed, categorized and analyzed. Majority of the preservice teachers claimed that instructional design models were not applicable to classroom settings in real life. They also emphasized that technology integration did not included instructional design and there was excessive concentration on technology; and instructional design dimension was overlooked. Participants claimed that Robert Gagne's approach was the most appropriate instructional design approach in classroom settings. They believe the theorist after Gagne was not very successful and instructional design lost its effectiveness. They underlined that the field required new theorists.

Keywords: instructional design, pre-service, teachers, opinion, interview

1. Introduction

Merrill, Drake, Lacy and Pratt (1996) who were some of the leading people in the instructional design field wrote an article claiming instructional design was infertile and needed to be saved because it was in a theoretical dilemma and under the influence of constructivist approach. Same year, Jonassen (1996), one of the leading representatives of constructivist approach, wrote an article in a response to Merrill and colleagues article, claiming that instructional design did not need to be saved and it progresses in its own way. There have been 20 years since aforementioned article and response.

[i] Correspondence: email necmiesgi@gmail.com

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The aim of this study was to gather opinions of preservice teachers who took instructional design course about the past, present and future of instructional design so it could serve to answer the question of whether instructional design needs to be saved as claimed 20 years ago.

2. Method

The participants of this study were 48 sophomore students of Computer and Instructional Technologies Education department. 25 were female and 23 were male. Participants took part in 16 weeks of study activities.

The study was a qualitative study. This type of studies requires analysis of data gathered through qualitative data collection methods such as interviews, document analysis, and participant observation (Creswell, 2013; Glesne, 2010). In this study, students' experiences, information, and habits regarding social media was analyzed. Students' emails and social media posts were analyzed using document analysis method. An interview form with 5 questions was sent to participants via e-mail and 48 volunteer participants sent their responses back by replying to the e-mail message. Interview form had the following questions:

1. Do you think instructional design is an area that had enough work done about? Why?
2. Who do you think about differentiation of instruction design models and their applicability?
3. Which of the instructional design approaches or models is the best? Why?
4. Can you make an overall evaluation of the state of the instructional design considering the previously done studies until now?
5. How do you see the future of instructional design and what should be done?

During the data analysis process, all the interview responses and participants' social media posts were gathered. Later, the data was grouped and coded accordingly. Learning experience, advantages and disadvantages, and time were the main categories during this process. Opinions that did not belong to any of these categories were removed. (Glesne, 2010; Jones, Torres, and Arminio, 2006). Findings were reported based on the categories.

3. Findings

Majority of the students, (38 out of 48) reported that they saw the instructional design field as a discipline with lots of studies. They argue that instructional design is an approach created by combining instructional theories with learning theories; and it was

shaped by learning needs and cases designed for these needs; and so the studies conducted in the field was a lot because of these reasons. Student A summarizes this issue:

> *"As we know, the instructional design theory is based on Robert Gagne's ideas. Gagne came up with his eclectic view, which is the foundation of instructional design, using the previous theorist's approaches. Instructional design can be divided in to learning situations and methods (Esgi, Arslan, 2015). Individuals, learn information concerning certain situations with certain methods. Instructional design can be described as two of these coming together in a certain relationship. Since it includes cases that concern learning in different disciplines and since there are different learning methods there is a great variety of studies. Even it can be said that it is so many that it is confusing."*

Most of the students, (43 out of 48) claimed that they knew most of the instructional design models (at least 8). The reason for the differentiation of the instructional design models was each model was trying to look at the teaching and learning process from a different learning theory perspective; as a result, explanations were different. Most students claim this many differentiations of instructional design models were confusing and most of the models were not practical in real life (40 out of 48). Student "B" explained her thoughts like this:

> *"If instructional design theories were geographical features, instructional design models are maps. In other words, models were scaled down versions of the reality (Esgi & Arslan 2015, 2016). Also, while theories are a wide angle perspective, models are suggestions for applications. As a result, while there were not many theories, there can be a lot of models. Models are like strict prescriptions. Number of different models is like, different prescriptions for the same sickness. It may work or not but, it causes confusion nevertheless.*

Another student "C" explained the same issue like this:

> *"Differentiation of instructional models and increased number of instructional design models is a problem. I don't believe that most of the instructional design models we have investigated, were applicable in real life. Almost all of them looked like fantastical design models that could only be feasible on paper. A designer would experience a lot of difficulties; if we consider s/he had to teach 4 hour courses to approximately 40 to 50 students each week with a midterm and final evaluations in a 16 week period. I think*

very few instructional design models are practical in these circumstances; and most would not allow this with these limitations."

Most of the students, (38 out of 48) suggested that Robert Gagne's 9 events of instruction, is the most practical design model in real life. As a model Dick and Carey model, which reflected principles form the Gagne's approach, seemed more realistic and applied more by designers. Student "D" summarized the situation like this:

"As we now, the father of instructional design is Robert Gagne. Gagne formulated his view by reviewing the previous work done on learning and instruction. As a result Gagne reflected the most reasonable and mindful solutions up to his time in his 9 events of instruction. For example, he used the declarative knowledge form John Anderson as verbal information (Gagne, 1967). This means using the best studies up to his time. I believe there is nothing better than this even now, the studies on learning and instruction approached to fulfillment point with Gagne. The researchers persuaded fantastical goals in their studies, after this point. As a result different models appeared; instruction became more complex in the name of making it richer."

Another student "E":

"I don't this it is possible to teach in a traditional classroom without informing the students about the objectives, reminding the previous knowledge, connecting to real life situations, and designing everything to be able to reach every student in a limited time period in a defined classroom conditions (Gagne, 1985, Gagne & Medsker *1996, Gagne & Briggs, 1974). Success of an instruction depends on the application of the steps defined in the 9 events of instruction by Gagne".*

Another student "F" adds:

"I believe models that are built on Gagne's views had a better chance to succeed in real life. Because Gagne reflected the educational, instructional and learning theories up to 1950s and 1960s in a mindful way in his approach. In another words, if we put the computer and internet technologies aside, the most successful examples of traditional classroom setting came from the Gagne lead approach as a result the most realistic instructional design model is the model based on Gagne's views."

Most of the students (43 out of 48) students claim that instructional design went into a monotony, and few theorist came after him, and people who followed him such

as Merill and Reigeluth couldn't contribute much upon his work. Student "G" claims that:

> *"There were important gains in the instructional design field u until 2000s. However, since Constructivism was influential all over the world instructional design got influenced by it too (Merrill, 1991, 2002). Researchers such as Merrill and Reigeluth was influenced by this approach. However the approaches they put forward was not realistic and concrete as Gagne's."*

Student "H" explained:

> *"Merrill came with alternative models in Component Display Theory andComponent Design Theory to Gagne's work. Merrill tried to fulfill the gaps from his point of view. Reigeluth influenced by Merrill, used the previous studies came before him like Gagne and came up with his eclectic model (Reiserve and Dempsey, 2006). However, I do not believe neither Merrill's nor Reigeluth's models are practical in real life such as Gagne's. As a result Instructional Design went in to a monotony after Gagne. I even think that there is not a serious study done on it anymore"*

Student I claims that:

> *"Reigeluth for his Elaboration Theory evaluated the previous studies and combined them. For example, the foundation for the instruction is the simplest unit. The simplest unit determines the next step in the instruction. In another words, while learning which steps were taken how you move ahead is determined, this is called sequencing. Reigeluth suggested that sequencing can be done in four ways. These are Gagne's hierarchy, Ausbel's Advanced Organizer ', Bruner's spiral, Merrill's pathfinder. (Reigeluth, 1983, 1987, 1996, 1999). However he did not fundamentally contributed to Gagne's work. Since his theory is mostly for project development, I don't think it is applicable to traditional classroom.*

Most of the students (38 out of 48) claimed that, nowadays, instructional design was ignored and there was not any significant theorist in the field. They, also, claimed that because of the nature of the instructional design; it is surrendered by technology. Students also claim that, nowadays, most of the applications do not incorporate instructional design in a meaningful way; they were just technological applications.

Student "J" explained his thoughts:

"In my opinion, instructional design is not taken in to consideration when educational programs for traditional classrooms are being prepared. Which instructional design models are applied in the real sense? None of them! Because nobody has the motivation or sense of responsibility to do instructional design. Educators are in a hurry to complete the curriculum they were given to. Nobody has time and energy for fantastical models."

Student "K" explained her thoughts:

"I think instructional design lagged behind of the technology. Nobody is interested in the content (Richey, Fields, Foxon, 2001). For almost everybody, the earned degree or the finished program is important. Although it is opposite to constructivism, unfortunately, this is today's reality."

Most of the students (44 out of 48) were very pessimistic about the future of the instructional design. They thought, the field needs new theorist. They claim, unless this condition is met, the field won't move forward.

Student "K" explains:

"I think instructional design halted after the 2000s. The instructional design movement, started with Gagne and continued with Merill and Reigeluth, did not move forward because of lack of significant contributors. Since there were not any significant theorist after Reigeluth instructional design stop progressing. I believe if the educational scientist spent their time on teaching and learning processes, instead of the models we would be talking about different things."

Student "L" explains:

"We need new people working on the field, for instructional design to progress. Like instructional design, also, technology is at stagnant period. I believe instructional design will have an increased role after this point on. I, also, think this is related to number of researchers interested in the field of instructional design. When we cannot utilize the technology to move ahead, we would use instructional design to teach effectively."

4. Discussion

Preservice teachers, studied about the definition of instructional design, which disciplines instructional design is interested in, the models that instructional design discipline put forward, and how these models are applied by reviewing the literature

provided during the courses. When we take that there were approximately more than 40 models up until now, it is only natural for instructional design to be seemed hectic. Which model would be used for which instruction? This type of questions arises in the realm of instructional design, and the preservice teacher in this course also expresses these questions. Also, the students expressed that after Gagne, Merrill, and Reigeluth, instructional design went in to stagnation, because there was not any significant educational technologist or educational psychologist after them.

5. Conclusion

The logic for finding cognitive psychology answers to behavioral psychology problems put by Gagne (Gagné, & Driscoll, 1988), was abandoned after him; people lost interest when constructivism emerged and there were not any prestigious theorists and practitioners. Although it seems like, fallowing Gagne, work done by Merrill and Reigeluth was recognized and spread in the field this had limitations. In his own words, Merrill in his ID1, ID2, First Principles of Instruction, and Component Display Theory works tries to express Gagne's work with different words (Merrill, 1991, 2002). Reigeluth in his Elaboration theory brought the ideas of the theorists before him. The most important contributions of Reigeluth is use of closing objectives, macro level elaboration for sequencing instruction, and advocating for project based learning for instruction. However, just like Merill's approach, Reigeluth's approach stayed only as a theory and did not influenced the practice for general population.

Another reason for very low acceptance of instructional design can be attributed to wide effect of constructivism on worldwide instruction. The transformation from instruction facilitation caused instructional design to change its tracks and, in a sense, to be lost. Especially after 2000s, the wide influence of constructivism wave in the world may have affected the progression of instructional design. With the influence of constructivism, the educational programs focused on what we are learning rather than what we should teach and as a consequence the role of the instructional designer was transformed. The instructional designers lost their ways because of the indeterminations on the instructional design field related to constructivism (Reiser, & Dempsey, 2006; Rothwell, 2006). In other words there was not a clear explanation how we could create a constructivist within the instructional design framework. Although principles like, evaluating the process rather than the result, awarding everybody as much as they learned, providing equal opportunities to learn, enriching classroom environment, guiding the student during the learning process sound nice in theory; with the limitations such as 30 students in each classroom, educational curriculum that needs to be completed in 16 week periods with a midterm and final exams in current

schools is not realistic. However, still, almost in every school systems even in national educational system in Turkey the question of which learning and instructional approach are you adopting is answered with the Constructivism response. In reality, the practice is different from the conversation. There aren't any concrete examples in the instructional design field that encompass the previously mentioned conditions, limitations and processes.

Another reason is creation of too many models even starting during the Gagne's time. Some people may see the many models as enrichment. However, this shows that instructional design is not on very clear foundations. As a result, instructional design harmed because of too many models. This situation was seen as a trend and every instructional designer tried to create a model.

Andrews and Goodson (1980) mention 40 models as of their publication. There were not any current studies about the number of models. However it is thought that the number increased by the passing years. Even the number 40 is very high for a model number in a scientific discipline. With this number of models, comparing the reporting advantages and disadvantageous properties seems impossible. The answer for the question of which model is used the most is "none of them". Because most of them are designed on paper. They were not practiced, or practices on very limited samples, during limited time periods, for very specific objectives. Since they were not generalizable most people did not adopted them and they did not spread. The widespread used one is the Gagne's 9 event of instruction. And that is not a model it is more of an approach for instructional principles. Whether they accepted or not educators and designers use the Gagne's steps and activates in real classrooms. The participating preservice teachers also thought the most applicable to real life, practical and realistic approach was Gagne's 9 events of instruction and the most successful models were created utilizing Gagne's ideas.

Merill, who claimed 20 years ago that instructional design needs to be saved was right. The attempts done by Merill and Reigeluth were not enough as of today. Still instructional design needs to be saved.

6. Suggestions

Instructional design needs new faces. Both from institutional perspective and practical sense it is more mindful to design instruction utilizing principles that Gagne expressed in his instructional approach. In reality almost in all healthy instructional activity, there are Gagne's 9 event in one way or another. Could there be learning without expressing learning objectives, reminding previous knowledge, knowing learners' previous knowledge, motivating to learn, combining previous knowledge

with new knowledge, using clues and feedback? Could not. As such, instructional design should stop chasing fantastical practices and return back to its roots. Young researchers, theorist should return back to Gagne's ideas and produce new studies.

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