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MENDELEY

## What is dissertation?

A rigorous written manuscript of a scholar research, prepared by a candidate as a partial requirement to get a doctoral / master degree.

Also known as a THESIS!

## 1. Original

## Did you do it independently?

(Old school – something not been done before)

## **DECLARATION OF ORIGINALITY**

This dissertation contains no material previously written by another person, except where reference has been made in the text.

### **SIGNATURE**

## 2. Novel and Significance

What else need to be done?

Why scholars care about it?

(What is the research gap – So what ?)

- Validate / develop model / instrument
- Develop prototype / simulation / instrument
- Mathematical formulation / algorithm
- Contribution to the knowledge

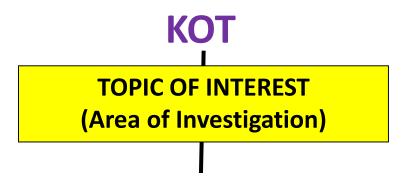
## 3. Significance

Why scholars care about it? (Old school – So what ?)

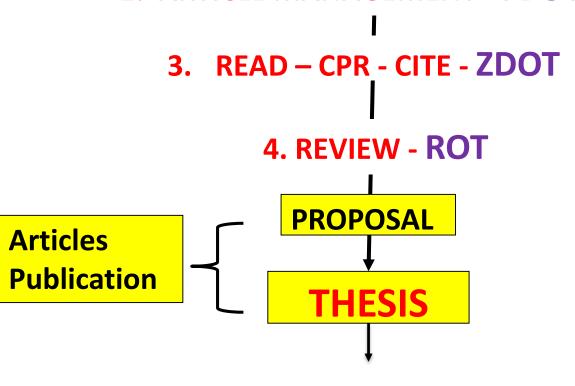
- Validate / develop model / instrument
- Develop prototype / simulation
- Mathematical formulation / algorithm
- Contribution to the knowledge

### 3. Publication

- Evidence of contribution to knowledge
- Potential impact to scholar community
- Possible implication
- Scope + readers + hot (current / recent)
- Disseminate, collaborate, network



- 1. LIT SEARCH FOR LEADING / TOPICAL JOURNALS MOT
  - 2. ARTICLE MANAGEMENT FBOT



## Literature Search

Risk, management, risk management, test

- 1. Risk AND management
- 2. "risk management"
- 3. test\* = tested, test, testing, testable
- 4. \*test = pretest, posttest
- 5. \*test\* = pretested

+

### My Own Territory (MOT) Othman Talib

	Leading topical journals	Q / IF / Indexed	Main handbook / Main theories related to multimedia in learning	Leading authors
1	Leaning and Instruction	Q1	The Cambridge Handbook of	R. E. Mayer
2	Computers and Education	Q1	Multimedia Learning	R. Moreno
3	Educational Technology Research and Development	Q1	Cognitive Learning Theory of	R. E. Mayer R. Moreno
4	Australian Journal of Educational Technology	Q1	Multimedia	
5	British Journal of Educational Technology	Q1	Information Processing Theory	Atkinson Shiffrin
6	Teaching and Teacher Education	Q1		
7	Journal of Educational Multimedia and Hypermedia	Q3	Cognitive Load Theory	Sweller
8	Educational Technology & Society	Q1		
9	The Turkish Online Journal of Educational Technology	ERIC	Media Richness Theory	R.L. Daft R.H. Lengel
10	Journal of Computer Assisted Learning	Q1		

## **ZDOT**

- Zeigarnik Effect start with something seem manageable and systematic
- The combination of ZDOT and Mendeley will help you to start writing unstoppable simply because you have already started!

## Develop subtopics - OOT

Organize articles and look for patterns – subtopics Organization Of Topic - OOT

Article	Α	В	С	D	E		
	(Don,	(John,	(Siti, 2016)	(Ali,	(Tan, 2017)		
	2013)	2015)		2016)			
Main topic / issue	1 4 5	1 3 5	3 6 7	2 3 8	289		
Most frequent topic / issue	1 5	1 3 5	3	2 3 8	2 8		
PATTERN	1 2 3 5 8						
ООТ	3 2 8						

CHAPTER 1

#### INTRODUCTION

#### 1.1 Background

The visualization depicted in an animation dynamically changes over time. These animations may pour a large amount of information to an individual in a very short period of time (Author, 2011)\*



The integration of animation in classrooms has become a phenomenon around the world as schools expand their IT facilities. Conventional forms of teaching have to accommodate this new influence because animation is now widely recognized as an effective way to teach and learn. Animation which can be described as a visual presentation, provide huge quantity of information to students in a short span of time (Author, 2011). Therefore, animation is believed to provide an opportunity for the students with different level of achievements to comprehend more difficult concepts taught to them in the classroom.

### Article [A, 2012]

When the zero flow scenario cannot be accomplished, the winds kinetic energy may not be utilised [B, 2010] as wind turbine efficiency cannot be predicted [C, 2011]

### References:

- 1. [B, 2010]
- 2. [C, 2011]

### Your paragraph [2015]

The kinetic energy obtained from the wind cannot be utilized because of the difficulty to determine the effectiveness of wind turbines [A, 2012]. However, D [2013] found that the wind kinetic energy can be revised.....

### References:

- 3. [A, 2012]...... 1. [B, 2010] + 2. [C, 2011]
- 4. [D, 2013]

Cartrette, D. P. (2009). Non-mathematical problem solving. JRST, 47(6), 643-660.

The research community has studied many skills of problem solving, including: memory and its organization (Simon, 2000 & Staver, 2000); describing the problem space (Ernst & Newell, 2000; Mayer, 2004); categorizing problems (Bunce, 2001; Camp, 2003; Smith, 2003); testing conceptual understanding (Gabel, 1999; Bunce, 2001); and teaching problem solving by a variety of methods (Dods, 1996; Friedel, 2004; Phelps, 2001; Smith, 2002; Towns & Grant, 2001)

### 5 skills of problem solving:

- 1. memory and its organization (Simon, 2000 & Staver, 2000)
- 2. describing the problem space (Ernst & Newell, 2000; Mayer, 2004)
- 3. categorizing problems (Bunce, 2001; Camp, 2003; Smith, 2003);
- 4. testing conceptual understanding (Gabel, 1999; Bunce, 2001)
- 5. teaching problem solving by a variety of methods (Dods, 1996; Friedel, 2004; Phelps, 2001; Smith, 2002; Towns & Grant, 2001)

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The term problem solving is used in many disciplines, sometimes with different perspectives, and often with different skills. Generally, there are five skills of problem solving as suggested by Cartrette (2009) but this study will only discuss the ability to (i) classify problems into categories, (ii) evaluate conceptual understanding (iii) teach problem solving using difference approaches. However, the focus in this study is to consider shifting the focus of problem solving from solution generation based on problem categorization to understanding of the process by which problem solving occurs.

# 2D animations and students' with different academic background in understanding of science concepts

## Analysis + Synthesis = Critical Review

- <u>Idea1</u> ... 2D simulations are not always better than traditional approaches....(Russell, 2010)
- <u>Idea2</u> ... low achiever children faced difficulties to extract scientific information (Don, 2010)
- <u>Idea3</u> ... slow learner lack of existing knowledge, low selfesteem and low motivation level... (Sweller, 2009)

More info: <a href="http://drotspss.blogspot.com/2010/10/tajuk-14-mensintesis-lr.html">http://drotspss.blogspot.com/2010/10/tajuk-14-mensintesis-lr.html</a>

2D animation has increasingly played an important role in science instruction. However, there is not enough empirical support that 2D animation has more positive effects compared to conventional instruction (Russell, 2010). For example, the use of 2D animation is not suitable for weak students due to their difficulties to analyze information from the 2D animation because the lack of their previous concepts (Don, 2010; Sweller, 2009).

However, there is not enough empirical support that 2D animation has more positive effects compared to conventional instruction (Russell, 2010)

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slow learner lack of existing knowledge, <del>low self-</del>esteem and low motivation level... (Sweller, 2009)