MSc Project Background Report

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Table 1.5

# List of Tables

# Abstract

# Chapter 1: Introduction

* 1. Project Objectives
  2. Project Scope
  3. The Challenge
  4. Report Structure

# Chapter 2: Background

This chapter explains the background behind this project. Significant learning theories are introduced which generally specify ideal ways to learn and teach. This is followed by discussion on Virtual Learning Spaces. We then turn to the importance of usability in virtual learning spaces and finally conclude with reviewing related work in this area of research.

## 2.1 Learning Theories

A Learning theory attempts to help us understand the complex process of learning by describing how people (and animals) learn. According to Hill (2002), learning theories have two chief values:

* Providing a vocabulary and a conceptual framework for interpreting the examples of learning we observe.
* Suggesting where to look for solutions to practical problems.

Interestingly, the theories do not provide solutions to practical problems. However, it should be noted that they do direct our attention to important variables that are crucial in finding solutions. Before I dive deep into learning theories, I would attempt to define the term “Learning”. Being a complex process, it is not easy to define learning, [so many have attempted but cannot, show examples here]. Illeris (2000) defines learning as a process that brings together cognitive, emotional, and environmental influences and experiences for acquiring, enhancing, or making changes in one's knowledge, skills, values, and world views (Illeris, 2000; Ormorod, 1995). This definition attempts to capture the process as well as the product. A noteworthy fact in the definition is that learning is a product of the interplay between the cognitive, the emotional and the environmental. However, the environment can affect both emotion and cognition, positively or otherwise. It therefore becomes a very important factor in learning.

Learning theories are generally categorized under three philosophical frameworks namely:

* Behaviourism
* Cognitivism and
* Constructivism

BEHAVIORIST THEORIES

Behaviorism is a learning theory based on the idea that all behaviors are acquired through conditioning which occurs through interaction with the environment. J. B Watson, widely regarded as the father of Behaviorism [@Ref], defined learning as a sequence of stimulus and response actions in observable cause and effect relationships [@Ref]. Thus behaviorism assumes that the learner is essentially passive, responding to environmental stimuli (@Ref, Learning Theories). According to Learning Theories [@Replace], “the learner starts off as a clean slate (i.e. *tabula rasa*) and behavior is shaped through positive reinforcement or negative reinforcement.” Positive indicates the application of a stimulus while negative indicates withholding of a stimulus (@Ref, LT), thus learning is observable by the change in the behavior of the learner in response to the stimuli. There are basically two kinds of conditioning in Behaviorism namely classical conditioning and operant conditioning.

**Classical Conditioning**

This is a behavioral training technique in which a naturally occurring stimulus (**S1**) is associated with a response (**R1**). Then a previously “neutral” stimulus (**Sn**) is associated with the naturally occurring stimulus. Eventually, the previously neutral stimulus after some time, begins to cause the response (**R1**) even in the absence of the naturally occurring stimulus (**S1**). Thus **Sn** and **R1** are referred to as the conditioned stimulus and conditioned response. An example of this is the case of Ivan Pavlov’s dogs (@Ref). [@Expand if necessary page-wise, else delete]

**Operant Conditioning**

In this case, learning or behavioral change occurs through “rewards” and “punishments” for behavior. Through this kind of conditioning, an association is thus made between a behavior and a consequence for that behavior. According to this model, rewards are supposed to increase the likelihood of the behavior recurring while punishments are supposed to reduce the likelihood. Consequently, a punishment is not applicable if it does not result in reduction of the behaviour.

[@Diagram Here, Too Many Words huh?]



Behaviorism has been applied in the fields of psychology and medicine but here we are more interested in its application in learning improvement. Educational approaches such as applied behavior analysis; curriculum based measurement; and direct instruction have emerged from this model [@Ref Kim T & Axelrod, 2005, See Refs Note]. We discuss this further in later sections.

Many scientists have worked on behaviorism enriching it with new concepts and experiments. For example, Edward C. Tolman, Clark L. Hull or Burrhus F. Skinner who produced theories about reinforcement, language and problem resolution.

The original theory of behaviorism is now more commonly referred to as “classical behaviorism”. New lines of thought have been extracted from classical behaviorism thus giving rise to Neo-Behaviorism (second Generation) and Social-Behaviorism (Third Generation) (@Ref from PLE Group p. 21, Deaudelin & Lefebvre, 2005). Of these two, Social Behaviorism focuses more on learning. It considers learning as a relatively stable behavior modification arising from experience.

COGNITIVIST THEORIES

CONSTRUCTIVIST, SOCIAL, AND SITUATIONAL THEORIES

Hello

Relationship between Learning Theories and Learning Spaces

Learning spaces are basically designed to promote learning

2.2 Virtual Spaces

2.3 Whatever

2.n Related Work

# Chapter 3: Research Methods

3.1 Project Description & Delivery Strategy

3.1.1 Project Description

3.1.2 Expected Deliverables

Put this in a tabular format

Sn, Deliverable, Recipient, Due Date, Delivery Method, Remarks

3.1.3 Assumptions, Dependencies, and Constraints

3.1.3 Project Plan

3.1.4 Evaluation Plan

3.2 Project Tools

3.2.1 Development Tools

3.2.2 Communication & Collaboration Tools

Prepare communication plan tables as done in the Plan Template p.8

3.2.3 Evaluation Tools

3.2.4 Reporting Tools

3.3 Project Management Tools

3.3.1 Project Management Plan

Include description for intermediate project goals or milestones

3.3.2 Agile Project Management

3.3.3 Risk Management & Issue Resolution Plan [Contingency Plan]

# Chapter 4: Summary

# List of References

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**SCRAPS:**

**Background report - Structure**

The structure should be decided with your supervisor but typically will be something like:

* Abstract (summary of report)
* Introduction (outlines scope of investigation)
* Background (survey of relevant literature, related approaches, sets wider context)
* Research methods (what the project involves, project plan, evaluation plan)
* List of references (using accepted format)

Scrap ends