

[ Exam Assignment ]  
**Theories and Traditions**

[Heba Mohamad-Baker Card No. 178256]

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## **ABSTRACT**

In this assignment I will show my understanding of the theory that we got presented in lectures by describing, discussing and analyzing the content.

I will give an explanation of the four paradigms presented by Hirscheim and Klein.

Then I will explain what ontology and epistemology means. I will show the theory behind each part of the Hirscheim and Klein model. I will give examples of how we can use the theory in practice in information studies.

In the next part i will describe and discuss the Sociocultural perspective (Kolb,Wenger, Engeström and Hooks). I will Start by explaining each one of the theories and end up by summarizing the difference and commons.

In the second part I have chosen to look more into the study of mobile user engagement (MoEN). I will explain the theory behind the study and how the professors have analyzed and collected data for the study. Further I will look into how the study measure the user engagement and clarify the way they have used to end up with the results of the study.

## THE FOUR PARADIGMS PRESENTED BY HIRSCHHEIM AND KLEIN.

### 1. Hirschheim and Klein

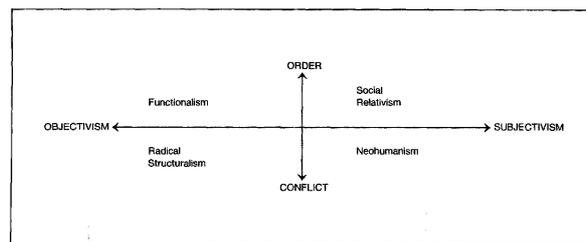


FIGURE 1-INFORMATION SYSTEMS DEVELOPMENT PARADIGMS

To explain the four paradigms in information systems we need to understand what an information system really means. I found a good description of what an information system is written by Dave and David bourgeois. They write that an information system means:

*“Information systems are interrelated components working together to collect, process, store, and disseminate information to support decision making, coordination, control, analysis, and viualization in an organization.( Dave Bourgeois and David T. Bourgeois)”*

#### WHAT IS A PARADIGM?

The reason why paradigms is used is to allow social philosophers have a framework. A paradigm is kind of an agreement between scientist (Kuhn,1970).

In the field of research there is some basic assumptions. An example is students in the information studies, we already have some basic tools in the information science that we need to use in order to take part in this field. As an example, we can take a look at a specific research made by a scientist. It is obvious that that there is some common rules and ways of writing the research paper to be recognized as a reliable scientist/professor.

Hirshheim and Klein have developed a model called the four paradigms. These paradigms are useful as an analyze tool.

The four paradigms are:

- Functionalism
- Social relativism
- Radical structuralism
- Neohumanism

- a. Explain how the four paradigms represent different understandings and implicit and explicit assumptions of reality (ontology) and how to obtain knowledge about the reality (epistemology).**

#### ONTOLOGY AND EPISTEMOLOGY

The four paradigms represent four different but related understandings of ontology and epistemology.

#### ONTOLOGICAL ASSUMPTIONS AND EPISTEMOLOGICAL ASSUMPTIONS.

1. Ontological assumptions
2. Epistemological assumptions

Ontology and epistemology are part of the approaches presented in information science. They are used to describe a way of thinking and learning. Ontologies in information science is different from in philosophy (Frederico Fonseca). If we take a look at an organisation, the ontology (reality) is that there is a manager and an employee.

The epistemology in this case is to understand (gain knowledge) the relation between these two objects within the organisation and the relation between them.

Epsitomology and ontology are two types of related assumptions.

Ontology deals with realism. When we talk about Ontology, we talk about something that is a reality and exist. Ontological assumptions are those that relate to the same view of the social and technical world.

Within ontology we have two positions. Realism and nominalism.

Epistemological assumptions are associated with the way in which system developers acquire knowledge.

*“There are three significant branches within epistemology: empiricism, rationalism and transcendental philosophy.”* (Stainton, 2019)

If we take a look at a specific reality, we can see that it contains a mix of the four paradigms.

This way of learning tool gives us as information students a new understanding of how we can gain knowledge, and not take any information forgiven. We need to go deeper in any reality and be specific with the methods and the methodology that we use to investigate a certain problem or research topic.

The theory developed by Hirscheim and Klein have two dimensions. There are four sides on one side we have:

Order vs conflict and on the other side we have objectivism vs subjectivism.

- Order vs conflict is ontology.
- objectivism vs subjectivism is epistemology.

Those are the basic assumptions in the four paradigms.

The four paradigms present a philosophical way of thinking.

#### IMPLICIT AND EXPLICIT ASSUMPTIONS OF REALITY

Implicit and explicit assumptions seem to be related, but in fact they are the opposite of each other.

**Explicit** assumptions describe something clear and complete.

**Implicit** assumptions mean the opposite and describes something that is understood, but not described very clear (Hayley Stainton).

The implicit in information studies is the hypothesis of some reality (ontology) that is incomplete or not described clearly.

The explicit is how we will gain knowledge to describe the hypothesis and make it clear and complete. This would be by making new research and studies and use methods that gives us a statistical knowledge to make the hypothesis complete and clear.

- c. **Explain how the four paradigms are organised in relation to the ontological dimension of “order” and “conflict”, and the epistemological dimension of “subjectivist” and “objectivist” dimension.**

#### ORDER AND CONFLICT

The four paradigms are organized in relation to the ontological dimension of order and conflict. We have the ontological dimension on one side and the epistemological dimension on the other side.

To understand the four paradigms, we can describe them more by:

- d. **Functionalism** is objective order.

In that way we can see that functionalism is objective order functionalism is a reality and to know more about this reality we have to be objective.

- e. **Social relativism** is subjective order.

Socialism is also a reality as functionalism, but it is subjective because we have to include experience to know more about it.

- f. **Radical structuralism** is objective conflict.

The reality is that there is a conflict and to learn more about the conflict we have to be objective.

- g. **Neohumanism** is subjective conflict.

On the other side we have neohumanism, which also is a reality, but because we need some experience to know more about it, it is subjective conflict.

#### PART CONCLUSION

By the end of the first part of the assignment some conclusions can be conducted. The four paradigms are based on ontology and epistemological assumptions. Each paradigm represents an understanding of ontology (reality). They are all organized in the way of the ontological and epistemological dimension.

Explicit and implicit reality describes two different understandings of reality. The first one is complete and the second one needs more research to be clear and complete.

#### LEARNING APPROACHES

##### SOCIO-CULTURAL PERSPECTIVE

(Kolb, 1984; Wenger, 1998; 2000; Engeström, 2001; Hooks, 1994)

I have selected the socio-cultural perspective learning approach. I will briefly describe each one of the theories. Make a comparison of every theory. And in the end discuss their learning approach in relation to information science.

### What is socio-cultural perspective?

The exact definition of socio-cultural is relating to or involving a combination of social and cultural factors<sup>1</sup>. Socio-cultural perspective is a way or theory to describe people's behavior. Everyone is affected by their social surroundings. The focus in this learning approach is on how these social circumstances effects people's daily life. It could be the cultural background, nationality, gender etc. how all of these factors affect their way of living and communicating.

We have many social scientists that have made study's on how humans think and behave. Each one of them have a different understanding and theory.

In this part i will describe and explain Kolb, Wenger, Engeström and Hooks theory briefly, and compare them. This will give an understanding of the theory and show the difference and commons between them.

### WENGER

“Groups of people who share a concern or a passion for something they do and learn how to do by interacting regularly” (Wenger, Communities of Practice, 1998)

People that share same interest have made a kind of agreement/contract. An example is people who play a specific game. They all know the rules and agreed on them. In this way they share the same view and interest and have all something in common. They are all a part of the same gaming community. To get knowledge is built on social learning.

Wenger create a framework for students/communities in practice to collect, systematize data, formulate and test hypotheses, make pre-understandings of the subject and produce knowledge and a meaning about a specific subject.

Wenger defines learning as a mix of social competence and individual experience. Human activities are always embedded in social and cultural contexts and can not be understood in isolation(Wenger1991).



FIGURE 2-WENGER'S (1998)THEORY OF SOCIAL LEARNING IN COMMUNITIES OF PRACTICE

DAVID A. KOLB

Kolb states that Humans/users are all learner therefor he has invented experimental learning. Kolb have analyzed the learning by expanding a cycle which involves four stages.

Experiential learning theory gives a different understanding of the learning process. He says that the experience has a central role in the learning process (Kolb, Page 20)

If we take a look at the model of structural learning, we can see that there is a way of learning in the educations.

This differs from the personal learning inventory that Kolb describe. He mentions that each and every individual person learn in a certain way that is not the same as others. Everyone learns on his own way.

He mentions four ways in his circle: Feeling,

Doing, watching and thinking. This is important because how we absorb information change many things in the way we learn. We actually experience this in our daily life without really thinking. We do not even question why everyone behaves in a certain way in a certain situation. If we take a classroom as an example, we can see that even though 20 students are in the same school and have the same teachers, they learn in different ways. The teachers should try to consider which way of formulating knowledge is the best.

For some people experiencing things gives the best output for others it could be better to watch or feel how to learn how things should be done.

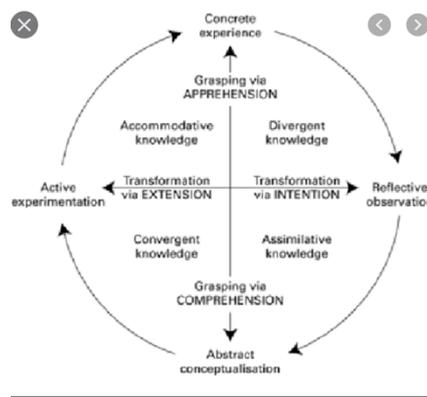


FIGURE 3- (KOLB,1984)

ENGESTÖM – Activity theory  
(Learning by expanding 1987)

After several generations of research, Engeström's theory was developed. Engestöm model illustrates how the interplay of some different factors affects learning, and the way the learning process takes place. It can be used both in business, but also in various fields of research and in the science of information. The model is used freely in different contexts.

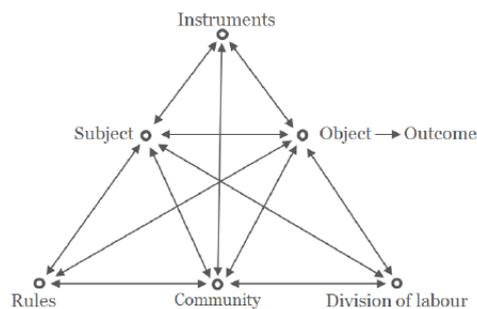


FIGURE 4-ENGESTROM

Engeström explains the human life form is developed through meditation of three relationships:

Instruments, Community and meditation of rules, traditions and norms.

- **Instruments:** conditions that make it possible to carry out a specific change or learning of a new method, etc.
- **Subject:** companies, schools etc.
- **Object:** employees, students etc.
- **Rules:** could be economical expansion
- **Division of Labour:** how the work is divided in for example a company.
- **Community:** the community you are a part of.

## BELL HOOKS

Bell Hooks was born in Hopkinsville, Kentucky. She came from a poor working-class family and worked her way up[1].

Bell Hooks has published numerous books and written countless articles combining her personal experience of learning and practical knowledge. She describes teaching in a slightly different way. She sees a classroom as a place of contrast between control and power.

“The academy is not paradise. But learning is a place where paradise can be created. The classroom with all its limitations remains a location of possibility” (hooks 1994: 207).

## COMPARISON

All those professors have developed some analytical tools or models to use in information research. These are used to describe and learn about how to give information to individuals or a group of people sharing the same way of thinking or interest. They give us the basic considerations.

If we compare their analytical tools, we can see that they have different opinions regarding the learning process, but at the same time they share the fact that any human is affected by the community and social environment. Wenger and Hooks both agree that the community an individual is living in has an impact on the way people learn. The difference is that Hooks sees the learning space “classroom” as a place where power has a role. At the other hand we have Engeström that defines almost the same concept with control and power in his activity theory but in another way.

## PART 2

## 1. WHAT IS THE FOCUS OF THIS EMPIRICAL STUDY?

- a. **User behavior:** Kim, Y., Kim, D., & Wachter, K. (2013). A study of mobile user engagement (MoEN): Engagement motivations, perceived value, satisfaction, and continued engagement intention. *Decision Support Systems*, 56, p. 361–370. [[AUB link](#)]

### FIRST OF ALL, WHAT IS AN EMPIRICAL STUDY?

A description from Penn state university library says:

*” Empirical research is based on observed and measured phenomena and derives knowledge from actual experience rather than from theory or belief (university, u.d.)”.*

I picked this study made by Young Hoon Kim, Dan J. Kim and Kathy Wachter. The focus of the study is to give an impact of how users engage in mobile technology. They use tools to explore and investigate mobile users’ engagement and behaviour. The study focusses on direct or indirect perception of the commitment using mobile. The study identifies the user engagement motivation in different stages. They have divided them in three:

1. Cognitive stage
2. Affective stage
3. The social motivation in between the cognitive and affective stage

The increasement of mobile subscribers worldwide opens eyes on why users involve in this technology.

As I mentioned they use a number of different methods to describe and collect data. At the end they provide an explanation of how users of new technology, especially smartphones, behave and engage in the use of their mobiles.

The research indicates how users of mobile technology are becoming more motivated in their use because mobiles have become more user-friendly. The user gets a feeling of involvement to continue using it. The technology should be catching and give the user the willing of using it furthermore and take part in the development.

### What are, from your point of view, its strengths and weaknesses?

#### Strengths and weakness

I will in this part highlight the strength and weakness in the study of mobile user engagement.

Every study or article has strengths and weaknesses. I will in the following part go deeper with what I think are the strengths and weaknesses of this study.

#### Strengths

- Various analytical tools have been used to substantiate the study.

- The study is clearly objective
- The study leads to a discussion
- Gives some measurement to those who work within the field of mobile technology.
- Focus on a topic on which very little research has been done.
- An in-depth analysis of mobile user engagement has been conducted

The researchers stand objective to the study by showing data that is tested. And draw statistics from the collected data. This is done by using different analytical and data collecting methods. People who work within mobile technology, gets a better understanding of how users engage. This is due to the increasing use of mobile technology and smartphones. That will gain the development of new mobile technology applications.

### **Weakness**

- The study does not mention any limitations while providing data.
- The study does not show the advantages and disadvantages of using a questionnaire/survey (Quantitative research method).

One of the main weakness from my point of view is that the study does not mention any limitations. To mention out which limitations they had, could be helpful for further studies on the same topic. It could be a point of consideration for those who want to make a new research.

However, I personally think that the conclusion of the article opens up for a further and more in-depth analysis of a mobile user's engagement. As we can see today, mobile technology is constantly evolving, therefore we need to analyze and adopt new methods to gain a better understanding of user engagement and behavior. The biggest benefit of reading this article is that it opens up a discussion. while giving us an insight with both measurement, data and analysis of the users' attitude.

### **WHY IS THIS IMPORTANT TO KNOW?**

According to the study, companies need to understand how customers use the different mobile technologies for development. It could be they use it for work, study or entertainment. Even more important to know is how they engage to further involve in the technology. Which leads to customers use more time using their smartphones/mobiles.

The study mentions that the motivation could be driven by the mobile technology being functional, hedonic and social.

## **2. THEORY & MODEL**

The study is based on some background theory which is previously made research studies. The studies have identified some different factors that affect the use of mobile technology. Therefore, this research goes more in depth with the specific factors that, among other things, show that if it remains relevant for the user, they will continue engage in the mobile phone. i.e. in other words, it means that the mobile technology content has to be exciting and relevant to continue satisfy the user.

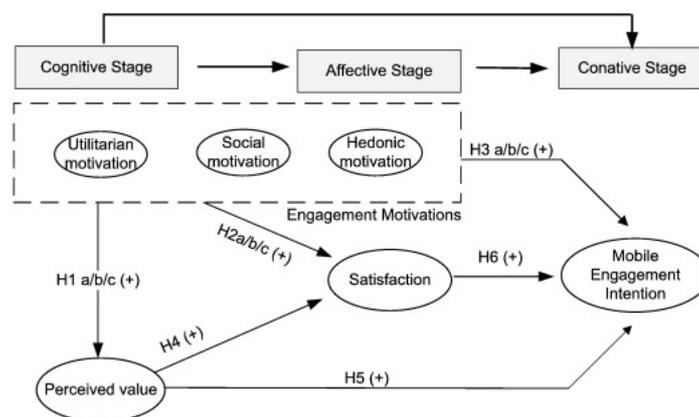
The professors in this study investigates and test by using (MOEN). MOEN is used to as a model to explain the mobile technology user engagement and hypothesis.

The model divides the motivation of mobile users in three: Cognitive, affective and conative stage. To ensure the validity of the measurements they have used several of other research tools for example EFA (exploratory factor analysis). The data analysis is based on the use of SEM (structural equation modelling).

### 3. HOW IS THE STUDY OPERATIONALIZING THE THEORY/MODEL? ANALYSE WHICH PARTS OF THE THEORY GET MEASURED AND HOW?

It is important in any study to be precise and define exactly what they want to measure in the research. Especially because they use quantitatively method. This is because there could be some irrelevant data if they do not specify.

The study evaluates mobile users' engagement. As I mentioned above, they do that by looking into three components, cognitive and affective motivation on their continued smartphone engagement. They illustrate what they want to measure and the process in the study in figure 5 bellow.



**Figure 5- Research model and hypotheses.**

The three parts that is measured in this research are closely connected to the. All those three has an effect on mobile users' satisfaction and continues engagement.

#### 4. METHODS AND METHODOLOGY

Methodology and methods are how we can collect data in the best way and describe exactly how to do it. It is the description of why and how we will use a specific method. It could be the reason why a study collect data by using quantitative or qualitative data.

##### METHODS

There are different research methods used in academic articles(Megan Sumeracki). Each method has some different advantage and disadvantage. The study is based on a descriptive method of research. They have used a survey as the main tool to measure the user's mobile technology engagement. By using this method, they try to get as many possible participants and boarder answers, and then measure user's engagement and behaviour. A survey is a descriptive method usually the descriptive research method is used describe something specific and tell us what there is going on.

##### RESEARCH DESIGN

By designing a survey, the professors tried to collect as much data as possible. This gives an overview of how the participants behave while engaging in mobile technology. They started by making a pre-test of the survey. They collected data from ninety-one undergraduate students, to make a sample and then prepare the final survey.

There is advantages and disadvantages by using quantitative research methods, (GIGI DEVAULT - Advantages and Disadvantages of Quantitative Research).

One of the disadvantages that Gigi Devault points out is that quantitative data method could be misleading because the opinion of the researcher has an impact on the way of information gathering.

The method they have used to analyse the collected data, is a model called SEM (Structural equation model). It is a methodology used to analyse statistical data.

*"Structural equation modeling (SEM) is a collection of statistical techniques that allow a set of relationships between one or more independent variables". ( JODIE B. ULLMAN AND PETER M. BENTLER, 2003)*

They describe clearly why they use this particular method to analyze the data, and this is due to a connection between the hypothesis test and analyze of theory.

## CONCLUSION

Through my answer to all the questions asked in this assignment, I can conclude that in-depth analysis and discussion of each theory that has been reviewed, one can conclude that there are different understandings of learning.

I have through answering the first part of the assignment, went more in depth with the understanding of ontology and epistemology which describes a reality. Hirscheim and Klein describe them very well in the model the four paradigms, which are built on ontology.

In the part about learning approaches I have chosen to look more into the socio-cultural perspectives. I found out that everyone has their very own point of view from which one can build an entire theory. Ultimately it is up to oneself to pick out the important parts and deepen them further to promote understanding.

In the last part of the assignment I chose to analyze the study of mobile user engagement (MoEN). We can conclude that all three parts that is measured in the study are closely connected to the effect on mobile users' satisfaction and continues engagement.

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*Figure 1: Activity theory (Engeström,*

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