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Managing Research: Developing conceptual framework

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# *Managing Research: Developing Conceptual Framework*

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**Research Festival**  
8 March ~ 18 March  
**2010**

[www.hud.ac.uk/researchfestival](http://www.hud.ac.uk/researchfestival)

My name is Kusnadi. This is the title of my presentation today.

As a first time Phd Student, it has been a challenge for me to understand clearly how all parts of PhD research: literature review, research questions, methodology, analysis should fit together. I believe that having this understanding in a clearer and coherent way will help to anticipate the changes and the dynamic of doing a PhD research. So, this presentation is about my approach to gain a coherent view of doing a research study.

I divide my presentation into three parts. In the first part, i will give definition of some key terms used in this presentation such as concept and conceptual framework. In the second part, i will explain the my perspective about conceptualization and its position in a research process.

In the final part, i will illustrate my approach using my own study as an example.

The image is a promotional poster for the University of Huddersfield Research Festival. It features a white rectangular box in the center with the text "Part 1. Definition" in a large, bold, blue font. The background is a soft, abstract design with pink and orange wavy lines. In the top right corner, the University of Huddersfield logo is displayed, consisting of a stylized 'U' and 'H' icon, followed by the text "University of HUDDERSFIELD" and the tagline "Inspiring tomorrow's professionals". In the bottom left corner, the text "Research Festival" is written in a pink font, with "8 March ~ 18 March" and "2010" below it. In the bottom right corner, the website address "www.hud.ac.uk/researchfestival" is provided in a small black font.

Ok, first part: definition. To do this, i will need your participation.

I believe most of you are currently doing or have done your PhD research. So if i mention PhD research, there might be some words/phrase that come across your mind directly. Could you mention one or two of it. Any volunteer?

## Concepts, Conceptual Framework & Model

**Concept (*conceptum* – something conceived):**  
“abstract or general idea (in mind) of things (in the world)”

**Conceptual Framework:**  
“a network of related concepts to construct the understanding of a phenomena”

**Conceptual model:**  
“a representation/snapshot/visualization of a conceptual framework”

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What we just doing is we are conceptualizing our PhD research experience.

We have here, Concept as the key term and define it as: “abstract or general idea, which is in mind, of things in the world”.

So, ... is an abstract or general idea about our PhD research experience.

Next, i would like to introduce another key phrase “Conceptual framework” as: “a network of related concepts to construct the understand of a phenomena”. To understand this definition, lets back to our concepts of PhD research experience. Here we have an separate concepts, now we want to make links between these concepts. For example, if I want to link between this and this, what linking concepts or term i may use? Volunteer?

Now we have a network of related concepts to help us to understanding the PhD research experience. You can add more concepts and linking concepts into this. But i will stop here for now.

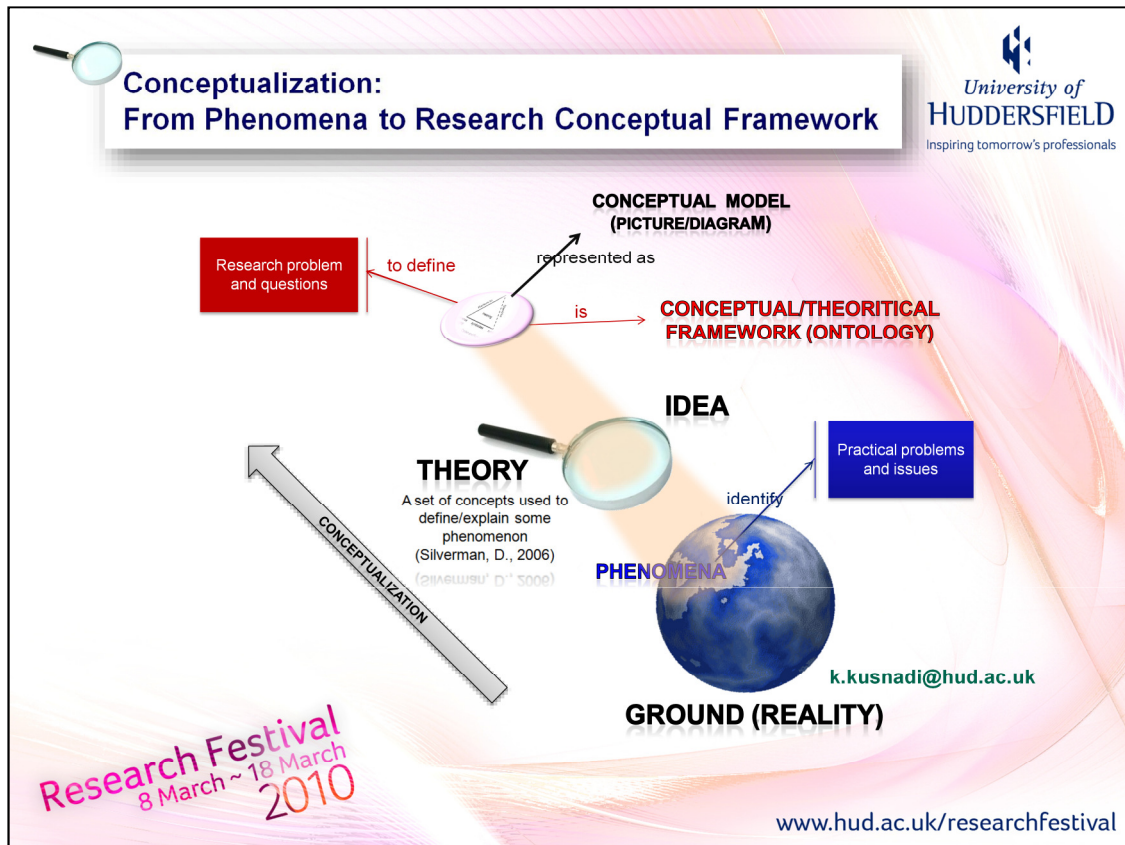
Finally i define conceptual model as “a representation/snapshot/visualization of a conceptual framework”. By my definition, a conceptual framework as a construct in our mind. To communicate it, we can use a diagram of picture. This is what i refer as a conceptual model. The process of identifying concepts, linking them into a network of concepts and represent them as model is called conceptualization.

# Part 2. Conceptualization & Research

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Right, In this second part, I would like to talk about conceptualization in the context of research process.



Most research will at some point link with the observation of the phenomena in the reality (natural world)

And most likely that PhD students will start their research by identifying practical problems and issues of interest in the reality.

This phenomena in the reality provide a context for the research and target for data collection.

However, to contribute to body of knowledge, a PhD research is more interested in the general idea or conception behind the phenomena rather than any individual instance of the phenomena. We are also expected to discuss our study in relation to existing body of knowledge.

To achieve this, we need to project the phenomena in the reality into a conceptual frame using existing theories or our own idea.

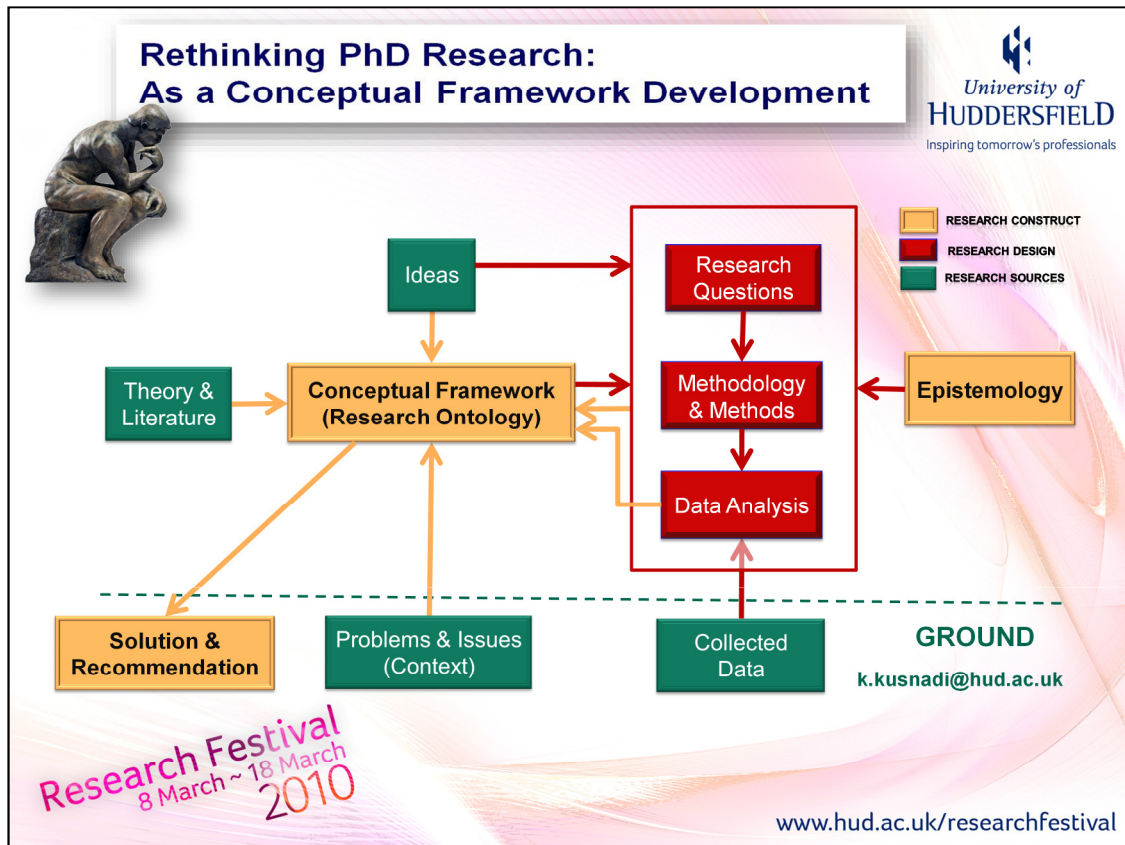
In other word, we borrow the concepts or network of concepts from theories to define or explain the phenomena.

Our conceptual framework can help as to identifying our conceptual research problem and questions.

And we make a conceptual model to visualize our conceptual framework.

Representing phenomena in the reality into a conceptual framework is a conceptualization process.

And this is what actually happens we do our literature review.



Next, my proposal is to think the PhD research is constant conceptual framework development from start to the end.

And make this explicit will help us to manage the dynamic and changes in the PhD research process.

The phenomena in the reality with its practical problems and issues provide us a context and starting point to develop

our conceptual framework. Then as we discussed before, we can borrow concepts and network of concepts from existing theories and idea

to refine the conceptual framework. This conceptual framework together with our epistemology position will guide our research design such as:

Research questions, choosing and evaluating our methodology, data collection methods and data analysis method. During the process, it is possible to adjust the conceptual framework to the research design.

Afterward, the collected data from the ground is analyzed and the findings are used to refine/extend our conceptual framework. The extended conceptual framework is used a basis for the theses and to provide solution and recommendation to the practical problem and issues in the ground.

In summary, the conceptual framework is constantly developed and refined during the research process.

# Part 3. Example

## Conceptual Framework Development

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Finally, I will illustrate what I have explained using my own PhD study as an example. Because of the limited time and the complexity of my study, I will not focus much on the detail of my study, but on the conceptual framework development process.





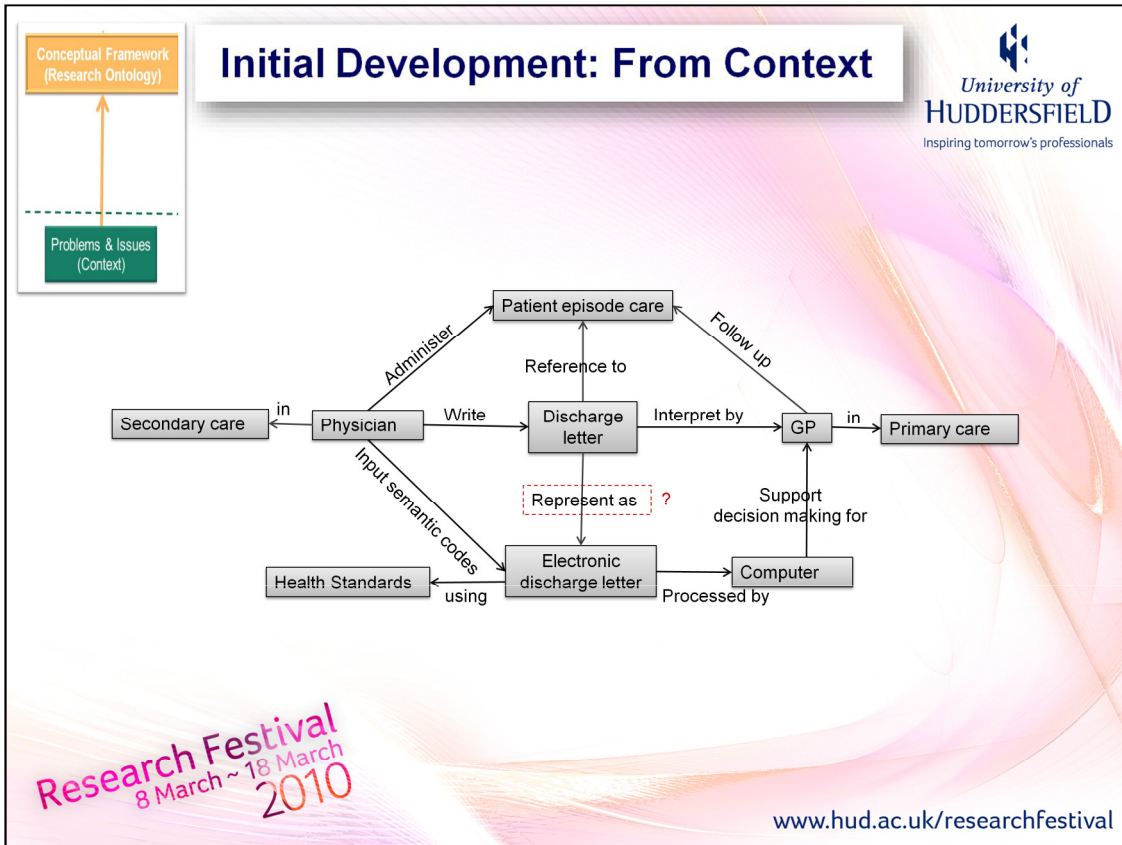
*Context: Patient care transfer from Secondary Care (Hospital) to Primary Care*

*Issues: How to represent clinical information in electronic discharge report accurately and reliably?*

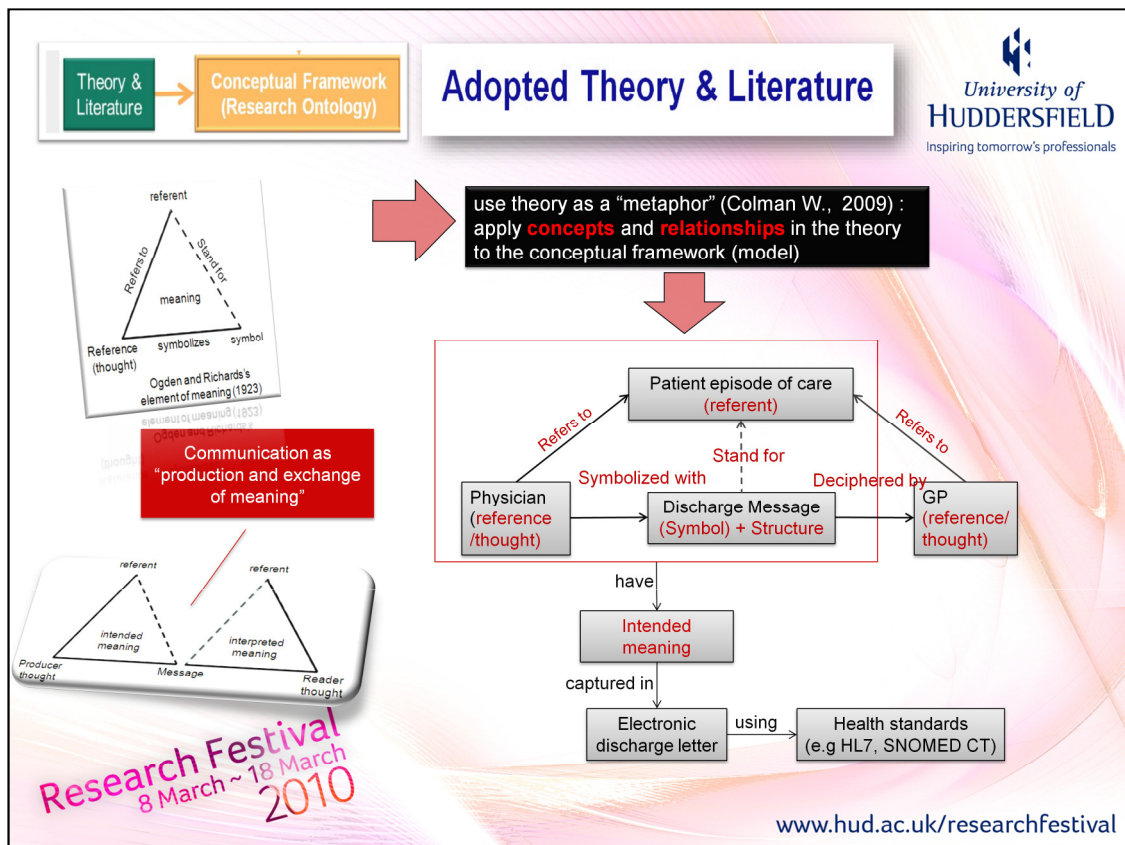
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First, the context of my study is patient care transfer from secondary(hospital) to primary care (GP). When patient is discharge from hospital, the physician will write a discharge letter to the GP to inform what happen to the patient during the hospitalization. The challenges in current health informatics development is about how to represent clinical information in transfer document such as discharge letter, as accurate and reliable as possible.



From the context in ground, we can develop initial conceptual model that identify key elements in the context.




In my case, I adopted theory from communication field which treat communication as production and exchange of meaning rather than transmission of message.

The easy way to transfer from context to theoretical plane is to use the adopted theory as a metaphor, or in other word apply or import the concepts and relationships in the theory to the context model. Additionally, we also can use theories to extend, or add network of concepts, to the initial context model.

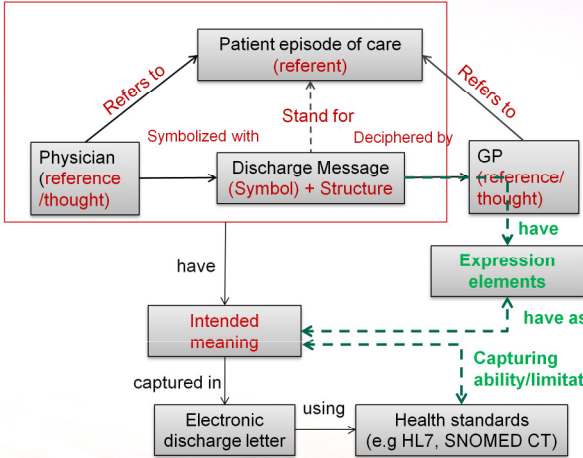
We can discuss our practical issues and problem in a conceptual term and link them with existing literature and theories, which is all operates on the conceptual level. Both the concept terms and relationship structure can change due to the adoption of theory.

Conceptual Framework (Research Ontology) ↔ Research Questions



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## Defining research questions



```

graph TD
    PEP[Patient episode of care (referent)]
    PM[Discharge Message (Symbol) + Structure]
    IM[Intended meaning]
    HS[Health standards (e.g HL7, SNOMED CT)]
    GP[GP (reference/thought)]
    PE[Expression elements]
    PL[Physician (reference/thought)]
    EDL[Electronic discharge letter]

    PEP -- "Refers to" --> PM
    PM -- "Symbolized with" --> PL
    PM -- "Stand for" --> PEP
    PM -- "Deciphered by" --> GP
    GP -- "Refers to" --> PEP
    PM -- "have" --> IM
    IM -- "captured in" --> EDL
    EDL -- "using" --> HS
    PE -- "have" --> IM
    PE -- "have association" --> GP
    HS -.->|Capturing ability/limitation| PE
    
```

*Q1. What are the **relationships** between the **expressions in the discharge summary** and their underlying **meaning (semantic)**?*

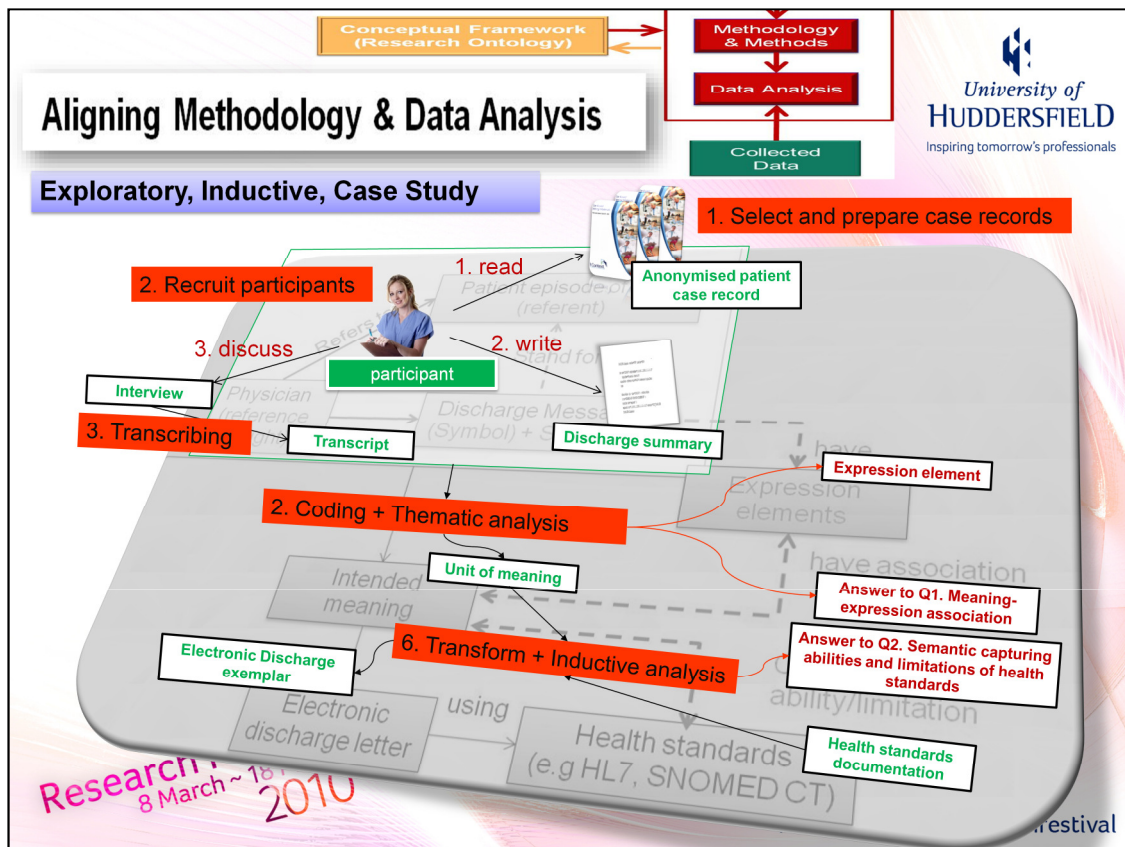
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*Q2. What are the **capabilities and limitations** of current **health information technology and standards** to **capture the semantic aspects of clinical communication**?*

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After incorporated theories into our conceptual model, we can use it to define our research questions.

In one way, we used our constructed conceptual framework or model as a heuristic devise to give us a context to define our research questions. On the other way, by defining research questions we extend our conceptual model with new concepts or relations. In my example, i add a new relation between discharge message and intended meaning and also capturing ability of health standards.



After defining the research questions, we can align our methodology & data analysis with to the conceptual framework. Doing this will enable us to understand our data and how to position them in our analysis.

My study is basically exploratory, inductive and using a case study approach. First, I select and prepare case records to generate simulate clinical event and communication. The case records are data that represent the referent in my conceptual model. Then I recruit participants, which are doctor in medical and surgical department, to read the case record and write a discharge summary letter. After that, they will be invited into an interview to capture their intended meaning and intention underlying the discharge letter they wrote. This interview record will be transcribed as data.

The transcription, discharge summary and case records will be coded and thematically analysed and resulting in a network of concepts that will answer to my first research question. The coding of the data will be also compiled into a list of unit of meaning, which together with health IT standards, are transformed into electronic discharge exemplar. The process will be inductively analysed to provide answer to my second research questions.

In summary, the methodology , including data collection methods and analysis methods are aligned with the conceptual framework. And the findings from data analysis will effectively extend and refine the conceptual framework. This conceptual framework then become a basis for our thesis writing as well as for recommendation to the practical problems and issues we start with.

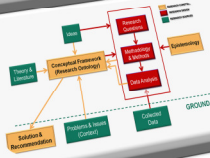
# Summing Up

**Concept** (conceptum - something conceived;  
"abstract or general idea (in mind) of things in the world")

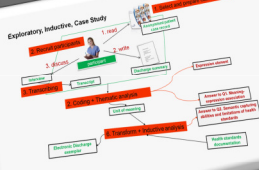
**Conceptual Framework:**  
"a set of related concepts to construct the understand a phenomena"

**Conceptual model:**  
"a representation or graph visualization of a conceptual framework"

## Definition: Concept, Conceptual framework



## Conceptualization and Research



## Illustrating Example from my Study

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Summing up

## References



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- Colman, W. (2009). **Theory as methaphor: Clinical knowledge and its communication.** *Journal of Analytical Psychology*, 54, 199-215.
- Earp, J. A., & Ennet, S. T. (1991). **Conceptual models for health education research and practice.** *Health Education Research: Theory & Practice*, 6(2), 163-171.
- Dortmans, P. J., Curtis, N. J., & Tri, N. (2006). **An analytical approach for constructing and measuring concepts.** *Journal of the Operational Research Society*, 57(8), 885-891.
- Silverman, D. (2006). **Interpreting Qualitative data. 3th Edition.** London: SAGE.

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