**« How to specify the objectives of the thesis work and initiate the collaboration between PHDstudent and thesis supervisor ... »**

**What doctoral students say:** *« I think this guide can save a lot of time in focusing your goals. » ; « Interesting approach, which allows the perception of a thesis to be subdivided into understandable elements. » (French translation)*

**When:**: This document must be used to introduce the thesis work to the PHD student. It’s a prerequisite to use the cyclic scheme of the THEDRE method.

**Why:** To present the type of scientific contribution tant the PhD student will produce and whether he or she must develop tools associated with this contribution (e.g. digital platform, robot, etc).

**Who:** Items 1 to 5 are to be prepared by the thesis supervisor. Then, they are to be discussed between PHD students and supervisors. PHD student can use them to ask his or her supervisor for further information.

**Contributions:** To clarify what is expected from the thesis work and to present the field to PHD students.

Items :

1. Present the scientific contributions of the fiels to the PHD student.
2. Introduce main authors of the discipline and provide reference literature.
3. Provide a list of journals and conferences in which the PHD student will be required to report on his or her literature review and in which he or she may publish.
4. Present what is expected as a type of contribution and as associated tools with the contribution (if necessary)
5. Present methods for constructing and evaluating scientific contribution and associated tools.

In scientific fields where a tool is developed to support the scientific contribution (computer science human centered, Technique enhanced learning, Robotics, ... ), you can complete the list of questions with the table below. (The activatable tools are the tools that humans will be able to manipulate, they are bridges between the scientific contribution and the human - (Artificial Sciences, H.Simon, 1964).

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| --- | --- | --- | --- | --- |
| Scientific  contribution(s) | Activatable tool(s) that carry the scientific contribution(s) with them | Division of activatable tool(s) into component(s) | State of this tools  Do they exist?  If so, are they in digital version? Or static version? | Which user?  Why? |
| Example: Learner’s Model – V1 | LMS type platform – V1 - | Terminology used  Features  Resources provided  Learning analytics indicators | Available in paper version | Teachers, evaluate and improve components |
| Example: Learner’s Model – V2 | LMS type platform – V2 - | Features  Resources provided  Indicators of learning analytics | Available in numerical version | Teachers, evaluate with them |
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