A! Appendix 2: Stating your Purpose

It is important that the purpose statement come towards the end of your introduction, after explaining the relevance/importance of the topic, current research in the field, and the specific problem motivating your study. The purpose statement should not only be presented as providing an answer to this problem but should also arise as the only logical conclusion that can be drawn based on the problem. Therefore, the wording of your purpose statement is important in guiding the content that you will present before the purpose statement in your introduction.

2.1 Topic ≠ Purpose

Avoid the following verbs, since they only announce the **topic** area of the thesis and do not reveal the **purpose** or real **aim** of what your thesis intends to accomplish:

The aim of this thesis is ***to study****… / This thesis* ***studies****…*

be about	consider	elucidate	focus on	involve	research
be related to	deal with	examine	handle	look at	shed light on
clarify	delve into	explore	have to do with	look into	study
concentrate on	discuss	find out about	investigate	make clear	

2.2 Knowledge ≠ Purpose

Similarly, avoid purpose statements that simply claim to *create deeper knowledge /understanding* of a topic. Not only does this make it sound like the writer really had no idea why they did their study, but it also does nothing more than states the obvious. Doesn't all research create new, deeper knowledge?

improves the ***understanding*** of…
contributes to the ***understanding*** of…
offers ***knowledge*** of / ***insights*** into…
provides ***information*** about…

2.3 What is your contribution?

Instead of simply describing your topic area or making a knowledge claim, your purpose statement should emphasize the **contribution** of you work by highlighting the main **outcome** or **product** of your study. To accomplish this, you need to identify the concrete outcome(s) of your study. What specifically is it that your work will offer to the reader?

A. Will you offer your readers a new *theory*, *framework* or *model* to **describe** a phenomenon or system, which you will then *test* and *validate* using pre-defined criteria or requirements?

B. Are you going to **create** a new tool, such as a *device*, *method*, *protocol*, or *process* to carry out specific tasks or functions?

C. Will you **improve** a current solution by adapting or applying a new technology, followed by *evaluation* and *comparison* to an existing solution.

D. Will you evaluate and test a new technology to determine the **feasibility** (i.e., possibility, potential, suitability) of implementing the technology in a specific context?

E. Or will your contribution be a **recommendation** based on identifying relevant *options* followed by *comparing* and *evaluating* these options in terms of particular *criteria* or *requirements*?

F. Or will you **identify** / **determine** / **analyze** the *parameters*, *characteristics* or *features* of a current solution or phenomenon to aid later in its further development or the creation of a new solution.

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2.4 Verbs highlighting the contribution

You should aim to use verbs that describe your contribution or what you either did to achieve your outcome. In engineering, only a small number of verbs are typically used to introduce the goals of masters theses:

Develop	**Determine**	**Implement**	**Evaluate**	**Propose**
Design	**Identify**	**Apply**	**Assess**	**Present**
Construct	**Analyze**		**Test**	

2.5 Elements of Purpose statements

Effective purpose statements can consist of four elements:

1. The **contribution** (What solution, outcome or product?)
2. The **rationale/motivation** (Why?)
3. The **method** (How?)
4. The **scope** (Where? In what context, system or environment?)

Note in the examples below how much clearer the purpose is when the focus is shifted from a focus on the writer's problem to that of the contribution of the study.

Weak:

[what?]
The aim of this thesis is **to find out** how interpolating scaling functions can be used
[why?]
to solve optimal control problems.

Better:

[What contribution?] **[why?]**
The aim of this thesis is **to develop** computational algorithms **for solving** optimal control problems
[How?]
using interpolating scaling functions.

Weak:

[what?] **[how?]**
The aim of this thesis is **to find out** whether geothermal production is sustainable **by developing**
[why?]
sustainability indicators and to **apply** these to a geothermal system under production **in order to**

test their effectiveness.

Better:

[What contribution?]
The aim of this thesis is **to develop** sustainability indicators and to **test** their effectiveness
[**how?**] **[where?]**
by applying the indicators **in** a geothermal production system.

Weak:

[what?]
The aim of this thesis is **to study** an injectable delivery system based on 5- ethylene ketal ε-caprolactone
[why?]
in order to find out whether it can deliver vascular endothelial growth factor (VEGF) and hepatocyte growth
[Where?]
factor (HGF) **for treating** critical limb ischemia.

Better:

[What contribution?]
The aim of this thesis is **to determine** the feasibility of an injectable delivery system based on 5- ethylene
[why?]
ketal ε-caprolactone **for** local **delivery of** vascular endothelial growth factor (VEGF) and hepatocyte
[Where?]
growth factor (HGF) **in treating** critical limb ischemia.

2.6 Sentence Structure

Unlike research articles, master's theses tend to favor the following two sentence structures for expressing purpose statement, as they emphasize the contribution of the thesis. Note also that English has many synonyms for both "purpose" and "thesis":

The	**purpose** **aim** **goal** **objective**	of **this**	**thesis** **study** **work**	is **to**	develop determine identify model optimize	[your contribution]	**in order to** …[why?] **for –ing** …[why?] **that /which can**… **by –ing**… [how?] **using**… [how?] **in** … [where?]
Therefore, **in order to….,**		**this**	**thesis** **study** **work**		develops models	[your contribution]	**for –ing** …[why?] **in** … [where?]
					determines assesses evaluates	the feasibility of… the potential of…	

The following table lists in alphabetical order typical "contributions" in engineering, with the most common highlighted in yellow.

Algorithm	Formula	**Method**	Scenario	**Solution**
Approach	Framework	Metric	**Strategy**	**Technique**
Architecture	Heuristic	Model	Structure	Technology
Design	Materials	Procedure	System	Theory
Equation	Mechanism	Process	**Scheme**	Tool
Extension	Measure	Protocol		