

## Example of an outline

### Using worked solutions in undergraduate mathematics

<b>Introduction</b>	
1.1 Background	Foley on pedagogical practices defining teaching. Transmitting mathematical knowledge to learners - McCray et al. Contrast Bloggs with Nurk on transmissionist theories
1.2 Aims of study	
1.3 Rationale	
1.4 Organisation of thesis	
<b>2. Literature review</b>	
2.1 Worked solution research	Compare Williams and Smith's studies
2.2 Learning theories applicable to teaching and learning of mathematics	Data from Sweden (Smith, 234), contrasts with Germany's experience (Jones 236)
2.3 Engaging in learning	What constitutes learning engagement? Blogg's (2004) paper- but see Thomas (67) on deconstructing problems
2.4 Mathematics and language	Studies on linguistic structures in Canada and France show ambiguous results (Allan & Jones; Smith and Willis)
2.5 Extending high achievers	Classic studies on high achievers vs low achievers (Harris,p567) but see more recent studies on the role of anxiety around complex tasks (Smith 2012)
<b>3. Methodology</b>	
3.1 Overview and research design	Exploratory work in relatively unstudied areas (contrast Hughes and Jones)
3.2 Participants	Literature backing participant selection and sample sizes (both Lee and Mustafa)
3.3 Phase One: designing a set of worked solution formats	Description of six formats, with underpinning theory
3.4 Seeking student feedback	Background on survey feedback - Johnson p. 546 - contrast with an earlier study by Jackson
<b>4. Results and analysis etc</b>	