Knowledge Gaps and What to Do with Them

Novice researches are commonly confronted by gaps in their knowledge. Knowing how to locate, define and address these gaps efficiently can significantly streamline your research and learning process.

Identifying the Gap

Have you ever started writing an assignment only to discover you have a gap in your knowledge? Perhaps you do not really understand a concept beyond a basic definition; maybe you cannot explain *why* something happens, or under what conditions. Whenever you hit a wall like this, you have found a **knowledge gap**. This suggests that the best way to identify your knowledge gaps is to try to communicate ideas in your own words by writing or speaking. The assignment drafting phase is an obvious opportunity, but you could also try the following to identify your gaps:

- Write summaries of important new concepts, including the what, when, why and how (as applicable). Make a note of any aspects you don't fully understand.
- Try to explain the concept to a friend. You will soon discover what parts you are fuzzy on. A study group is a good opportunity for this, because you will get immediate feedback.
- Daydream about how you would teach the concept to someone younger and less experienced than yourself. Only when you understand a concept fully can you simplify it.

Defining the nature of the gap

Once you know you *have* a gap, you need to understand its extent, so that you can address it in a targeted way. If you took some notes during the 'identifying' phase, you are half way there!

Try phrasing your gap as a set of questions that need answers. Can all of your questions be answered through further research alone?[1] Using your prepared questions as a basis for further reading, you can ask yourself 'does this answer one of my questions?' as you search for information to fill your gap. This helps you to check that you are on the right track, reducing wasted research time.

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[1] If you are an undergraduate, you should be able to fill most of your gaps through further reading alone; however, you need to appreciate that not everything is *known*. Indeed, if you stumble across a gap that the literature doesn't seem able to fill conclusively, you have found a **research gap**, and a possible future Masters or PhD project!

Filling the gap

Some good places to start in answering your knowledge gap questions are:

- Your prescribed textbook or readings
- Any suggested readings provided for your course
- Some Google searches (to provide background information, as a springboard to locating more reputable sources).

How to dig deeper:

- Boolean searches of academic databases or Google scholar
    - If you are unsure how to turn questions into effective searches, you should arrange to attend a library-hosted tutorial on this skill ASAP. All Australian university libraries offer this service.
- A search of your university's library catalogue.

Complementary options:

- If your unit has an online discussion board, you could post your questions and initial findings for discussion with your peers and tutor. This may give you some clarification and point you to further resources.
- If you are studying on campus, you could raise your questions in tutorials at the appropriate time. If you don't get the opportunity, you could try speaking with your tutor, or starting conversations with other students before or after class.

Summary

By actively searching for, rather than ignoring, your knowledge gaps, you will accelerate your learning, while also developing some stellar researching skills. Phrasing your identified knowledge gaps as questions will allow you to search for the necessary information in a targeted manner. You can also use your questions as the basis for discussions with your fellow students and tutors. As an active participant in your own learning, you will set yourself up for success, both in your academic life and beyond.