

Tutorial 6 transcript - Research Process (Part 1)

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Now before I use several of the search engines displayed within the Library resources tree here, it's important that you understand the basic logic and mechanics that underpin each search engine. And in order to do that, I first need to demonstrate a brief overview of the research process.

Now at its most basic, all you're doing when you're doing research is you're taking keywords from a question, placing them in a search engine, and yielding information. So let's start from the beginning there with the keywords. Where do we get those from?

Well, we've got a question here – most likely an assignment question – and we need to extract the keywords. Now there are various schools of thought on how to extract keywords from a question. I won't go into those. Sufficed to say, if you think about when you were learning English, and you were asked to identify the subject, the object, and the verb of a sentence: if you can do that, then you'll be on your way to getting the keywords.

So this sample question we've got here – does it matter if some plant and animal species die out? – I'm just going to show you how I broke that down. So just into three parts here that have been colour coded. Does it matter if; some plant and animal species; die out? Okay, so does it matter if – that's a keyword: it's too long, it needs to be condensed. So, if we think about other alternative terms for that little phrase there we might think, okay, what are the consequences, what are the implications, what are the affects. Some plant and animal species – a better condensed term there would be life forms, perhaps flora or fauna. And then the term die out – clearly a better term there would be extinct, and you might also use non-existent and dead. If you have any trouble getting these keywords: easiest thing to do is just go to a thesaurus and just kind of start making a bank of different keywords that are similar. So what you ... effectively what you are trying to do is get that bank of keywords so when it comes to going to the search engine you've got back-up words that you can use and then combine. And that's what we need to do now. Once we've identified our keywords, we need to think about combining them. And there are various ways that we can do that within a search engine.

So there are three what we call operators that I want to talk about here. They're coloured in black there. The first operator on the first line there is: AND. You've got the second one: OR. And the last one is: NOT. Now the one that you'll use most often – and it's usually the default search on most search engines – is the AND operator. So if you put in the word consequence AND life forms AND extinct, effectively what you're doing is asking the search engine to only information sources that have the word consequence and life forms and extinct in them. Just a quick tangent here: if you see the word life forms that I've written there and I've put it in quotation marks, what I'm doing there is I'm asking the database to treat that string of words together. So if you have a keyword that's more than one word long and you want to treat it together – like for example if you have a name (Thomas Jefferson) and you want to keep that together, best thing to do is to put it in double quotation marks. Really, really useful when using search engines.

The second line there – the extinct or non-existent or dead – those are our keywords within one kind of bracket. And what we're doing is: we don't know that the information sources we're looking for whether they use the word extinct, whether they use the word non-existent, or whether they use the word dead. So what we're doing is kind of covering our bases there.

The last one there is an exclusion operator, which is the NOT operator. So, for example, if I did a search: life forms and extinct, and I started to get all this information about prophesising how humans are going to be become extinct and what the world is like and all that sort of stuff, it's not really relevant to my question. So I could put in: NOT humans. That might be not actually be the best search to do, because there might be results that talk about the human impact on the extinction of life forms. So you've got to consider that as well. But there is that option to exclude certain terms from your results.

So let's just have a look finally at what that first search would look like. So, if you, the life forms and extinct and consequence, which is written up the top there. By the way, if you put this in a search engine – life forms space extinct space consequence – most search engines will treat that space as an AND. So the AND is the default operator – the keyword-combining operator. And you can see there from the visual diagram – life forms in red, extinct yellow, consequence blue – they're all the results that are returned by those particular keywords. And in the period of overlap there – in the middle – those are the results that you are going to get. So it's just a matter of going to a search engine ... sorry, taking your question, extracting the keywords, thinking of alternative terms, then combining them in different ways with operators in a search engine, and analysing the results seeing if there's anything good. If there's not anything good, you go back and start again. It's just trial and error. There's no right or wrong way to do this. And it takes time. And that's the basics of it.