Keywords in vocational education policy analysis

Chris Corbel
Centre for Vocational and Educational Policy
Melbourne Graduate School of Education, University of Melbourne

Abstract
Drawing upon keywords in the conference theme – collaboration, innovation and prosperity - this paper introduces the notion of the keyword as an analytical tool in VET policy analysis.

VET researchers sometimes provide intuitive accounts of certain words which are central to the debate they are engaging in. Examining these words in more detail as keywords can enhance researcher impressions by providing evidence of the words’ linguistic behaviour and patterns of use.

Although the notion of the keyword is well established in cultural studies as a result of the work of Williams, in critical discourse analysis through the work of Fairclough, and in applied linguistics through the work of Stubbs, it is rarely referred to explicitly in Australian vocational education policy analysis. Yet keywords can serve as a bridge for researchers from everyday notions of vocabulary to more nuanced notions from lexical semantics, thus enhancing the analysis of policy as discourse.

Four senses of keyword are discussed – vocational, cultural, category and corpus. Based on an examination of two collections of documents, one specialised and the other general, the paper gives a preliminary indication of how each of the four keyword senses can contribute to an improved understanding of both conceptual and associative meanings of keywords in vocational education debates.

Introduction
Most policy analysts recognise that language plays a role in policy debates, but they differ in how rigorous an examination of language they undertake as part of their analysis. No matter how detailed an examination of a policy text is taken, however, one aspect of language that is frequently invoked but rarely examined is vocabulary. Words are recognised as significant by some policy analysts, but their treatment is usually impressionistic and unsystematic. Other commentators may simply dismiss issues of vocabulary as ‘just semantics’.

It is indeed a matter of semantics, but the use of just masks the influence of the meanings of words on policy debates. Certain words and phrases shape and are shaped by the dominant discourse. They provide insights into the way the assumptions underlying dominant discourses are naturalised and internalised through frequent and unconscious patterns of use.

In this paper I argue that the notion of the ‘keyword’ can provide an entry point to a more rigorous analytical approach to vocabulary in policy. My aim is to provide initial support for this claim by using four different notions of keyword to examine the three words that are ‘key’ to this conference - collaboration, innovation and prosperity. My intention is to provide a keyword ‘taster’, a hint of how a keyword analysis might provide insights into vocabulary. Such an approach would complement,
not replace, other approaches to language and discourse analysis which focus more on grammar, genre and social power.

Background

There are three broad approaches to the examination of language in policy. Each deals with vocabulary in a slightly different way. Writers adopting a ‘policy sociology’ approach (Rizvi & Lingard, 2010) are almost wholly concerned with the social context of a policy rather than the text of the policy document itself. Ball (1993) made a distinction between policy as discourse and policy as text which has remained influential ever since. Writers in this tradition make reference to the functioning of certain words in texts but do not undertake a rigorous analysis of them (see, for example, Young, 2009). Some, such as Taylor (2004), have called for a more “fine grained linguistic analysis” (p. 435).

Those policy analyses that do undertake a linguistic examination of actual texts frequently invoke critical discourse analysis (Fairclough, 1992). Critical discourse analysis (CDA) focuses on the structures of texts and a critical interpretation of selections made from the grammatical system (see for example, Fairclough, 2001). However CDA has been criticised for relying too heavily on interpretations of small pieces of decontextualised text (Widdowson, 2004). It also lacks a systematic treatment of vocabulary.

A third approach to the analysis of language in policy comes from the field of corpus-assisted discourse studies. Analysts in this tradition examine patterns in large numbers of texts to provide evidence into the kinds of introspective claims made by CDA (see, for example, Hardt-Mautner, 1995; Stubbs, 1996; Piper, 2000a, b).

Within these three approaches analysts often refer to the words on which they focus as being ‘key’ in some way. There are four different, though related and overlapping, ways in which the notion of the ‘keyness’ is used within these three analytical approaches.

The first notion of a keyword is what I will call a ‘professional’ keyword. Professional keywords are those which are particularly salient in a particular field of endeavour. For members of AVETRA the field is vocational education. In the remainder of this paper I will therefore refer to the keywords in vocational education as vocational keywords. Vocational keywords are important elements of the dominant discourses within the vocational education policy field. No detailed examination has been undertaken of vocational keywords. The closest is the work of Tight (2002) in his examination of what he calls ‘key concepts in adult education’. In his discussion Tight includes words familiar to those in vocational education such as quality, competence and flexibility.

The second notion of a keyword has a broader scope. A cultural keyword is “a socially prominent word...that is capable of bearing interlocking, yet sometimes contradictory and commonly contested contemporary meanings” (Keywords Project, 2011-14). This notion of keyword was exemplified in the work of Williams (1976), who used comparative and historical sociological analyses of the ways in which certain keywords captured “certain forms of thought” (Williams, 1967, p. 13). These patterns of vocabulary use become naturalised patterns of thought which shape what Bourdieu called ‘habitus’ (Thompson, 1992). This notion of keyword explicitly or implicitly permeates an extensive range of language-oriented policy analysis (see, for example, Leitch and Davenport, 2007; Holborow, 2012).

The third notion of keyword, that of the corpus keyword, comes from corpus linguistics, the study of language patterns in very large collections (corpora) of texts. A corpus is a collection of texts which is able to be analysed according to the frequency of certain words as well as their recurring patterns (collocations) with other words. These analyses reveal language patterns unobservable to the individual reader of a single text. Corpus keywords are of two kinds. A corpus keyword can be the
word that is the focus of a corpus search. A corpus keyword can also be a word which is found to be relatively prominent in a corpus (Adolphs, 2006).

The fourth notion of a keyword is one which has become prominent with the rise of large databases, which use keywords to organise subsets of content into categories. A category keyword is one which identifies or names a particular semantic field. It is this sense of keyword that accompanies the abstract of an academic journal article, or is an organisational element of databases such as VOCEDPlus.

To summarise, within the dominant discourses that surround vocational education policy there are four kinds of keyword, each with a particular distinguishing characteristic: vocational keywords are those which are particularly salient to vocational policy analysts; cultural keywords are words which are influential and contested in wider public debates; corpus keywords those which are the focus of corpus searches or are frequent in large numbers of texts; and category keywords serve a framing function for a particular discursive field. This paper draws upon each of these keyword notions in a brief examination of what I will call the ‘conference keywords’ – collaboration, innovation and prosperity – in vocational education policy.

**Methodology**

My necessarily brief examination of the conference keywords is based on their occurrence in two corpora, a specialised corpus of vocational education policy documents, the Knowledge Corpus, and a generalised corpus, Google Books. The Knowledge Corpus is a specialised corpus (Adolphs, 2006) created with a particular focus on vocational education policy as part of a PhD study (Corbel, 2016). Created from VOCEDPlus, the Knowledge Corpus comprises 24 vocational education policy texts dating from 1969 to 2013. They are broadly representative of the discourse surrounding the keywords knowledge and skills in this period. They all share a focus on vocational education, which makes them suitable for an examination of other keywords in vocational education policy, such as collaboration, innovation and prosperity. My other corpus is the largest general corpus of all - the Web itself (Fletcher, 2011), as it is presented in Google Books.

In order to provide the additional rigour I am claiming for a keyword approach, my examination focuses on the conference keywords not simply as vocabulary items but as lexical items. This involved a consideration of two types of meaning (Leech, 1974). The first type of meaning is conceptual, the ‘dictionary sense’ in which a key word is used. This type of meaning is well understood and is assumed by many analysts to be the source of uncertainty about the meanings of words in debates. This is not necessarily the case, however. Another type of meaning is associative, which is rarely recognised but is equally if not more significant.

Associative meaning is the meaning that comes from the connotations of a word for an individual or groups. It also comes from the use of metaphors, particularly those no longer recognised as such, such as training package. Most importantly, associative meaning comes from collocations, the other words typically found, or ‘co-located’, with the keyword under examination. These unobservable and unconsciously used patterns of collocations shape and are shaped by the dominant discourse. In the case of vocational education, the dominant discourse is ‘vocationalism’ (Grubb, 2006). It is based on a set of assumptions according to which education functions in the service of the economy and the individual is assumed to make educational choices as an informed consumer.

1 http://www.voced.edu.au
Findings
The following examples have been chosen from the findings to provide an indication of the type and potential of the data. Data and interpretations are presented for frequency and the lexical semantic categories of connotations, metaphors and collocations. The focus is primarily though not exclusively on associative meanings since it is these types of meanings that lack systematic attention in much existing analysis of policy vocabulary.

Frequency

<table>
<thead>
<tr>
<th>Word</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>innovation</td>
<td>480</td>
</tr>
<tr>
<td>prosperity</td>
<td>278</td>
</tr>
<tr>
<td>collaboration</td>
<td>132</td>
</tr>
</tbody>
</table>

Table 1 The frequency of the conference keywords in the specialised corpus
Table 1 shows the ratio of occurrence of the conference keywords to each other to be roughly 4:2:1 in the corpus. The order of frequency does not match the order of the words in the conference title. None of the words is particular frequent. The three most frequent words in the corpus are training (13,275), education (10,907) and skills (6,052), which are immediately recognisable as vocational keywords. It is helpful to compare the findings of the specialised corpus with the general corpus to see how words in the specialised discourse vary from their wider use. The results of a comparison of frequencies of the conference keywords on the Web over time are presented in Figure 1.

Figure 1 The frequency of the conference keywords on the Web over time
An examination of the conference keywords in Google nGram viewer\(^3\) (Figure 2) shows their changing relative frequencies. The relative frequencies in the specialised corpus do not match the current relative frequencies on the Web, with the exception of *innovation*.

The absolute and relative frequencies on the Web indicate very broadly changing professional and social concerns with the issues captured by the keywords. A comparison of the specialised and general corpuses can reveal opposite tendencies. *Prosperity*, for example, only becomes frequent in the most recent years in the specialised corpus, whereas it was highly frequent in the past in the general corpus. This may also indicate changes in the meanings of words like *prosperity* over time.

The emergence and rise of *innovation* on the Web is striking. Within the narrower timeframe of the specialised corpus *innovation* also becomes prominent (relatively frequent) in 2001 and 2002a. *Prosperity* becomes prominent in 2011. *Collaboration* is never prominent in the specialised corpus.

Are the conference keywords typical of the vocationalist discourse shaping vocational education policy? The words that occur in the titles of the documents in the specialised corpus are considered to be broadly indicative of the vocationalist discourse. There are 66 indicator words in the corpus. *Innovation* and *prosperity* both occur in the titles of documents in the corpus. *Collaboration* does not, suggesting collaboration is not central to vocationalism, perhaps due to a clash with the essentially individualist focus of that discourse.

**Connotations**

*Prosperity* and *innovation* would seem likely to have positive connotations, yet more critical reflection raises questions about both. *Innovation* is presented as a positive thing, yet is it really able to be undertaken by everyone? *Prosperity* connotes benefits for all, but do all members of society benefit from it, however it is measured?

*Collaboration* has a more chequered past. *Collaboration* has changed in its connotations from negative (to work with an enemy) to positive (to work with another person or organisation). The rise in frequency in the late 1940’s revealed in Figure 1 may reflect a concern with the issue as it was manifested in occupied countries during wartime. The sense of working with the enemy (your competitor) remains today, but the result is beneficial for both (as it is during wartime). *Collaborators* does not occur until 2009, late enough for the stigma attached to the word to have dissipated\(^4\).

**Metaphors**

Two of the conference keywords, *innovation* and *prosperity*, are particularly frequent in a metaphorical sense in the knowledge corpus.

*Innovation economy* is dominant in Victoria at the turn of the millenium (DEET, 2001; Kosky, 2002a; Kosky 2002b). The phrase is used instead of *knowledge economy*, which is more frequent in broader discussions of neoliberalism, though no clear explanation is ever given why *innovation* is preferred to *knowledge*. It is possible that the connotations of *innovation* were seen as more positive than for *knowledge*, which is occasionally positioned negatively in contrast with *skills*, in the sense of being theoretical and out of touch with practice.

It is often unclear in the specialised corpus whether *innovation economy* is intended as a description of reality or of a social imaginary that is coming into being. This reflects the process whereby a phrase becomes descriptive rather than metaphorical and the entity it evokes becomes naturalised.

\(^3\) https://books.google.com/ngrams

\(^4\) Whatever its connotations, researchers are already questioning the value of the “cult” of collaboration (Trouble with collaboration, 2016).
and unchallenged. Given the current use of innovation in policy matters (see below) the Victorian government may have simply been prescient, or may have actually assisted discursively in bringing the innovation into being.

The phrase roadmap to prosperity is typical of the language of Skills Australia, a government-sponsored advisory agency. A comparison of the concordance files for the three conference keywords shows an intense focus for the word prosperity in 2011, whereas the others are more spread out. This suggests that prosperity is essentially a marketing term, consciously introduced as a communicative strategy.

Collocations

Collocations are the words that most frequently occur within a small range either side of a keyword. They indicate the semantic field(s) of which the keyword is a member.

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Innovation</th>
<th>Prosperity</th>
</tr>
</thead>
<tbody>
<tr>
<td>between</td>
<td>skills</td>
<td>skills</td>
</tr>
<tr>
<td>industry</td>
<td>economy</td>
<td>roadmap</td>
</tr>
<tr>
<td>government</td>
<td>knowledge</td>
<td>VET</td>
</tr>
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<td>industry</td>
<td>Australia</td>
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<td>business</td>
<td>future</td>
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<td>state</td>
<td>development</td>
<td>vocational</td>
</tr>
<tr>
<td>greater</td>
<td>productivity</td>
<td>education</td>
</tr>
<tr>
<td>should</td>
<td>creativity</td>
<td>economic</td>
</tr>
<tr>
<td>Australian</td>
<td>Australia</td>
<td>social</td>
</tr>
<tr>
<td>education</td>
<td>workforce</td>
<td>our</td>
</tr>
</tbody>
</table>

Table 2 The most frequent collocations of the conference keywords

Table 2 shows that the semantic field surrounding collaboration contains the entities that should be collaborating. This is reinforced by words outside the top ten, such as increased (seven occurrences). There are also five occurrences of providers. VET occurs twice and TAFE three times. Collaboration is associated with governments, industry and universities, rather than with VET and TAFE. Neither innovation nor prosperity collocates with collaboration in the knowledge corpus.

Collocations of innovation are influenced by the frequency of the phrase knowledge and skills for the innovation economy, which occurs in the title of several Victorian documents in the early 2000s. The lexical field for innovation is richer than for collaboration, which was essentially about processes. Prosperity occurs in 15 texts, but occurs mainly in Skills for Prosperity: A Roadmap for Vocational Education and Training (Skills Australia, 2011). The use of our is an inclusive use intended to engage the reader (Mulderrig, 2012).

Some collocations form phrases, entities that function as grammatical structures in their own right. Frequently-occurring phrases, like keywords, both shape and are shaped by the dominant discourses in way of which we are mostly unaware. These ‘key phrases’ matter because the meanings of the keywords may change as a result of their membership of the phrase. Such changes may not be obvious to users.

A comparison of the collocations that are also phrases is presented in Table 3.

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5 For reasons of space, only three-word phrases are included.
Collaboration | Innovation | Prosperity
---|---|---
the innovation economy | skills for prosperity
knowledge and skills | social and economic
skills and creativity | 
knowledge innovation skills | 
an innovation economy

Table 3 The most frequent three-word phrases involving the conference keywords

Of the three conference keywords it is *innovation* that is most strongly associated with key phrases in the corpus. *The innovation economy* was at the heart of Victorian policy for a decade. *Innovation* is commonly associated with *knowledge, skills and creativity*, all words with positive connotations. The presence of both *the* and *an innovation economy* reflects the presentation of the notion as both a fact and an imaginary, noted earlier.

The locking together of *skills* and *prosperity* is reflected here. There are many other variations on in the title of document, *Skills for prosperity: A roadmap for vocational education and training* (Skills Australia, 2011), within the document itself. There are no phrases containing *collaboration*, only sequences of words as part of larger phrases. In *collaboration with* is usually with the some form of government. *Collaboration between* relates to a wider range of entities.

Discussion

*Collaboration, innovation* and *prosperity* are the conference keywords. Are they also examples of the other four kinds of keyword – category, corpus, vocational and cultural? If so, what does that imply about their use and influence?

Category keywords are central to VOCEDplus, the primary database of vocational education policy documents in Australia. It has 52 subjects and 620 keywords. *Innovation* is a subject (1,952 occurrences) and *educational innovation* is a keyword (570 occurrences). Neither *collaboration* nor *prosperity* is a keyword or a subject. The evidence from VOCEDplus reveals *innovation* to be a category keyword, one which marks out and shapes an area of activity. Neither *collaboration* nor *prosperity* does this. They may come to do so over time, but not yet. Only *innovation* is part of the shaping of vocational education debates as a category keyword.

Corpus keywords can be one (or both) of two kinds – the targets of a corpus search, and/or highly frequent in a corpus. *Collaboration, innovation* and *prosperity* are corpus keywords in the sense that they were the targets of the search of the specialised vocational education policy corpus. Yet none of the conference keywords is highly frequent in the corpus. They are thus not corpus keywords in the sense of being highly frequent and hence more influential. In relative terms, *innovation* is the most frequent of the three. This may be the result of the actual documents chosen for inclusion in the corpus, the limited size of the corpus, or the fact that its most recent entry is now three years old. Yet it may also reflect the challenging tone of the conference title, with its attempt to capture emerging trends. Of the three, it is *innovation* that is closest to being a corpus keyword, indicating its greater influence within vocational education debates.

Vocational keywords are those which shape and are shaped by the professional conversation of vocational education practitioners. Although none of the conference keywords is frequent in the specialised corpus, one, *innovation*, appears as a category keyword. It therefore appears that *innovation*, but neither *collaboration* nor *prosperity*, is a vocational keyword. Yet frequency and categorising are not the only indicators of salience. The occurrence of the conference keywords in the conference title indicates their relevance in the eyes of the organisers, who in effect represent
the profession. Whether they become part of the professional conversation remains to be seen. For now, innovation is the strongest as a vocational keyword.

Are collaboration, innovation and prosperity cultural keywords? Are they a part of broader social debates? None occurs in Williams (1976) or in the Keywords Project list\(^6\). An indication that the three words may be emerging as part of a broader imaginary, however, comes from their occurrence in the title of a workforce and productivity summit in December 2015\(^7\). The summit keywords, which appear directly after its title, are participation, collaboration, innovation, prosperity. The remarkable similarity with the title of the present conference indicates the possible emerging status of the conference keywords as part of wider debates which both conferences are addressing.

Of the three conference keywords, it is innovation that has been found to be a keyword in each of the other senses examined. Of the three, innovation seems most strongly to be part of a broader social conversation, appearing in policy discourses beyond vocational education. It is currently part of an ‘innovation agenda’ being discussed in the media in Australia, for example. Yet one of the indicators of cultural keyword status is that it is contested\(^8\). There appears to have been little contestation about the words at the productivity summit, at least as revealed by the summit blog\(^8\). It will be interesting to see how much contestation there is within the present conference. In both cases like-minded groups are using shared and unspoken assumptions about the meanings of the terms. Their associative rather than conceptual meanings underlie the shared assumptions. A combined gathering of both groups, with their possibly different shared assumptions about the same keywords, might generate some real contestation!

The conference ‘key phrase’ is collaboration, innovation, prosperity. This phrase does not occur in the specialised corpus. The three words do not occur as a phrase or even in association with each other in the corpus. Nor does the phrase in this form occur in the results of a Google search. As we have seen, there are a number of other keyword phrases containing innovation and prosperity, yet none with collaboration.

The order of the words in the title does not reflect their relative frequency. A detailed discussion of the ordering of phrases is beyond the scope of this paper. However, the order of words in a phrase like knowledge and skills can reflect underlying semantic and social constraints (Motschenbacher, 2013, Corbel, 2014). The title order conforms to what is known as an iconic ordering constraint, whereby the order reflects the idea that collaboration leads to innovation which results in prosperity. The question remains whether this ordering is intended to be descriptive or aspirational.

Conclusions
My purpose in this paper has been to show how impressions about vocabulary in policy documents can be made more rigorous and systematic by examining them as keywords and in key phrases. Elements from the notions of corpus, category, vocational and cultural keywords have provided a broad framework for a preliminary investigation of the three keywords at the heart of this conference. Innovation has been revealed to be quite different linguistically from prosperity and collaboration, with characteristics of all four keyword types. Space precludes a detailed examination of these characteristics, but I have given a brief indication of what might be revealed by a keyword examination. I have not addressed other aspects of language or other corpora or text types, nor

\(^6\) http://keywords.pitt.edu/index.html
\(^7\) https://www.informa.com.au/conferences/hr-conference/workforce-productivity-summit/P15K32WEBPDF.pdf
\(^8\) Further details on such indicators are at http://keywords.pitt.edu/whatis.html
made comparisons with other keywords, or other treatments of the conference keywords. This paper is intended to be introductory and indicative rather than definitive. Further work along these lines would be necessary to provide a fuller examination of the lexical semantics of collaboration, innovation and prosperity.

Such an examination is worth doing because the very keyness of keywords means that they have become naturalised and may therefore be unexamined. Examining contentious words as keywords provides insights into the nature, scope and significance of their influence. It can show how they fit into larger patterns of change, and how they shape and are shaped by the dominant vocationalist discourse. This can potentially assist the policy analyst by revealing how discourse works at the micro-level of lexical semantics of their own texts and the texts they study.

I have also suggested, without attempting to show in detail, that associative meanings – connotations, metaphors and collocations – are more important in debates than is usually recognised by commentators, who may see the debates as being essentially over conceptual meanings, or as being ‘just semantics’. Nothing is just semantics: meanings matter, but more specifically, associative meanings matter more than we realise in the social and civic discourse with which policy analysts engage. Adopting a keyword analytical perspective as part of the interrogation of any policy text, using one or more of the techniques described in this paper, can provide insights into conceptual and associative meanings, which is an important step towards engaging with and potentially changing them.

References
Keywords Project. (2011-14). Keywords Project [collaborative research initiative]. Pittsburgh: University Library System, University of Pittsburgh


