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CONTENT AND LEXIMANCER ANALYSIS AS METHODOLOGICAL TOOLS TO STUDY FORMAL SCHOOL GRIEVANCES: AN ARCHIVAL STUDY.

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Abstract

Positively addressing and resolving staff grievances within a school is imperative for effective schooling and leadership. Often overlooked in grievance procedures are the role/s of stakeholders especially those in authority (e.g., Principals or School Leaders). Content and Leximancer analysis are two useful methodological tools used in tandem which can specifically assist in understanding the process/es undertaken to positively resolve grievance in terms of procedures, roles of individuals and outcomes in line with policy. Content and Leximancer analysis were used to review 10 formal archival files between the periods of 1973 until 1987 from a secondary school secure repository in Tasmania. Content analysis was used to capture broad themes, essences, and trends common in archived formal grievance files which have led to identifying incidents in terms of their nature and severity. Leximancer analysis was used to look at key ideas, concepts, and common words mandated by Human Resource policy documentation; this assisted in assessing whether appropriate procedures and processes were followed leading up to positive resolution. Content analysis revealed that disputes regarding behaviours (e.g., bullying) appeared to have resolved within five working days and, required no further action from school leadership. However, Leximancer analysis identified that the grievance procedure in this school had a focus on producing measurable outcomes (e.g., reducing the bullying) rather than solutions (e.g., restoring an effective working relationship after bullying has ceased). Content analysis allowed for a multi-layered consideration as it assisted in unpacking the grievance in terms of behaviour, and Leximancer analysis provided a clear link in identifying how outcomes were achieved in line with policy and whether they resulted in positively resolving the grievance.

Introduction

Content analysis provides an overarching framework to qualify and validate the efficacy of Leximancer analysis (Leximancer, 2011; Weber, 1990). Content analysis has been used primarily within qualitative research with regard to analysing results where the focus is to use coding exercises and to determine meaning from recorded or written content (Hsieh & Shannon, 2005; Johnson & Lamontagne, 1993). However, while Leximancer analysis is also used in qualitative research, it is commonly used to explain results with regards to themes concepts in documentation to assess how a certain theme aligns to information in a document, for example, a policy document on school grievances or work place bullying (Cretchley et al., 2010; Grech et al., 2002; Watson et al., 2005). Leximancer analysis is used when multi-level concepts and procedures are under investigation. Therefore, Leximancer analysis complements content analysis of documents as it can quickly identify underlying themes and concepts in documents that may be missed or overlooked in content analysis. Generally, qualitative studies use content analysis to form opinions based on information contained in documents or recordings, and Leximancer analysis to independently identify recurring ideas across data collections, but very few studies have used both forms of analysis to complement multi-level concepts (e.g. bullying at work) alongside procedural directives (e.g. grievance procedures). Using content analysis alongside Leximancer analysis to study multi-level concepts (e.g. formal school grievances) will assist in capturing the many voices and inherent value-added and meaning making in texts, which is necessary in understanding the many themes concealed in the text.

To date, there are no studies that have used content and Leximancer analysis to explore workplace policies and staff interactions. Equally important, no study has focused on school grievances to critically explore and investigate common concerns, themes and trends among formal complaints and the role of various stakeholders. The following paper discusses the use of content and

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Leximancer analysis as methodical tools. Content analysis is used to investigate common concerns, themes and trends among formal complaints and Leximancer analysis is used to explain the link between procedural requirements and obligatory outcomes of workplace grievances. The paper highlights some of the strengths of content and Leximancer analysis and argues that used together, these are the most suitable methodological tools for an archival multi-level and multi-layered study (Lee & Peterson, 1997).

Additionally, this paper looks at Master behaviour as a contributing factor to workplace grievances. For the purposes of this research, masters often use indirect aggression that is largely unnoticed, and they are able to leave their target uncertain as to whether or not the aggression was intended (Clarke, 2005; Kaukiainen et al., 2001). The master is also able to disguise his or her behaviour through these covert actions because they are developed and refined over many years and may also be entrenched in greater historical contexts. School masters do not create conflict, they victimise others. The central concerns are often left unresolved, stress is increased, and the relationship with the school hierarchy becomes strained. This is the product of unsuccessful formal complaints, or even legal processes in some cases, and various unsuccessful interventions designed to resolve the concerns (Keashly, 2010; Silverthorne, 2005; van Heugten, 2010).

Content Analysis

Content analysis is argued to be a valid and reliable tool for qualitative inquiry (Kohlbacher, 2006; Weber, 1990) as it has a number of strengths, particularly in relation to examining information in documents for patterns and trends in quantifiable behaviours (Stemler, 2001), for example, in an archival study, where formal documentation of an event (i.e. staff grievances against their Principal) is recorded over a period time. Such an investigative study requires a unique way to analyse information, to not only appreciate the incident and its context but to identify how it was resolved and to capture common concerns, themes and trends among formal complaints. Content analysis helps the researcher to explore documents to be categorized, and separates documents in line with particular topics being researched, to develop an effective and valid coding system (Hsieh & Shannon, 2005). For example, in the case of school grievances, this system may include type of grievance, the seriousness of the grievance, length of time it took to resolve, and the outcome of any investigation by leaders.

More specifically, if bullying as a formal complaint has been recorded as part of an archived personnel file, content analysis has the ability to identify how bullying may have occurred, and it can identify the content of the bullying behaviour. Bullying is used as a case example in this paper. Content analysis does this by allowing the researcher to explore all of the raw data to gain a complete picture of all aspects of the incident. Further, content analysis: can deal with complex levels of information; be guided by theory; can integrate different types of data; and t is unobtrusive. These aspects are discussed below with reference to archival review of formal grievance complaints.

Firstly, content analysis is authentic and has an ability to deal with complex levels of concealed information, for example, it allows the researcher to observe behaviours in terms of criteria across levels of escalating conflict without the added complexity of emotions (Weber, 1990). It is comprehensive because it can break complex concepts such as bullying into a list of actual behaviours, both overt (e.g., physical abuse) and covert (e.g., exclusion from events). It is holistic in that it is able to draw on many forms of data for information by examining a variety of source documents around an event. Workplace procedures, interview transcripts, newspapers, and case files are just a few of the possibilities. Content analysis also uses a methodologically controlled style because it allows the researcher to explore the array of complex social situations contained in the data, and then reduce it until the main points are filtered into an analysis (Kohlbacher, 2006; Weber, 1990). For example, the term bullying is often used within schools when a teacher may dislike the approach their Principal uses when interacting with them; though the teacher may also dislike their Principal for other reasons as well. Content analysis can take the whole social situation of the workplace that these individuals are in and separate the actual behaviours from the perceived behaviours (Weber, 1990). This assists the researcher in determining if the interaction was bullying in terms of an applied definition and behavioural concepts or whether the implication of bullying was a result of the teachers' perception of the Principal's behaviour. This brief example indicates how content analysis can assist in

understanding complex social phenomena's (i.e. interactions in the workplace) contained this study (Kohlbacher, 2006).

Secondly, content analysis refers to theory-guided analysis where the researcher is continually comparing the results inferred from the data with theory (Kohlbacher, 2006). A researcher could explore the documents for concepts that are common in reported grievances from a specific theoretical lens. The theoretical lens that the researcher is looking through will guide the analysis and the results obtained may confirm, or refute the perspective being considered, thus allowing multiple levels of analysis through different theoretical lenses. Content analysis has the ability to review a workplace grievance (e.g. harsh, deliberate and intrusive micro-management) using a theoretical lens. For example, using Social Conflict Theory can assist in determining whether a positive process was followed to address grievances with regard to the this theories notion of conflict resolution (Dalton & Cosier, 1991). Similarly, with regard to Feminist theory, it can assist in determining whether grievances between staff are an unnecessary result of patriarchy (Knudsen, 2004). In this, content analysis allows researchers to critically look at a workplace grievance from a particular theoretical lens, so that it can compare and contrast concepts that may emerge within the literature and assist in developing hypotheses to enhance the validity and generalisability of the results (Eisenhardt, 1989).

Therefore, the technique of guided analysis is useful for contributing to current theory when used by content analysis methodology for confirming the assumptions of the theoretical perspective being used in the research (Hsieh & Shannon, 2005). These concepts can then be compared to an applied definition of bullying, such as one from the Work Health and Safety Act (2012), or other associated legislations. This comparison helps the researcher to distinguish bullying cases from the more general cases. Once data in relation to behaviour has been located within the files, data around bullying can be confirmed by other researchers using the same selection of files and behavioural data. This process of verification guarantees that results obtained by analysis are accurate because the same results can be reproduced and therefore verified by other researchers. Content analysis allows the possibility of comparing   research results with similar results, interpretations, and conclusions with that of existing research and theoretical perspectives to validate results and to comment on their generalisability (Kohlbacher, 2006).

Thirdly, content analysis has the ability to integrate different material/evidence (Yin, 2003). This means that the same technique can be used to analyse different data types; a significant advantage from a practical and quality criteria point of view. An archival study, which documents personnel details is an excellent example of integration because it permits the researcher to address a comprehensive range of issues relating to historical, attitudinal, and behavioural data (Yin, 2003). To illustrate this, a researcher may find an incident where an employee is reprimanded because of the colour they dyed their hair. Through exploring the content of Human Resources policies concerning dress and behavioural expectations of staff, the researcher is able to understand why that reprimand took place, what occurred historically in relation to the colour of hair dye, or the act of dying hair, to be a concern now, and if the reprimand was relating to a behaviour of personal expression or deviance, for further illustrations.

Finally, the unobtrusiveness of content analysis is an advantage because it can uncover complete and non-biased records of data without requiring lengthy interviews that may not capture all of the required detail (Weber, 1990). An archival study allows for this because the process provides for all voices with no biases and without emotion. Generally in grievance issues a number of variables are involved. For example, a staff member being interviewed by a researcher in regards to a recent grievance or bullying case may not have the time to provide all of the information or they may consciously or unconsciously fail to provide details that can be crucial to the research, and their interpretation of the incident may be clouded by their emotional response to the incident under investigation. Therefore, by analysing content, the researcher can obtain the material that they require without also gaining information that may be irrelevant, inappropriate, or inaccurate. Consequently, content analysis allows the researcher to evaluate raw documented data without taking into account interpretation of individuals with heightened emotions. An additional advantage is that the research can be undertaken by one researcher on a few files or several researchers using large files for systematic evaluations (Weber, 1990).

In summary, content analysis allows a rich examination of archival files as it is clearly able to distinguish layers of information against a theoretical lens and formal material/evidence, allowing for

a critical insights into a context which otherwise may have been lost. Thus, content analysis is a technique for systematically compressing multiple words of text and large volumes of data into coded categories in an attempt to identify and quantify concepts, ideas, patterns, and trends in the data over time or within specific groups (Krippendorff, 2004; Stemler, 2001). It can be a useful technique for allowing researchers to uncover and describe social attention, or explain the focus of individual, group, or institution (Weber, 1990).

Leximancer Analysis

Content analysis can be further supported by Leximancer analysis (Mayring, 2001) as Leximancer analysis identifies concepts within documentation. For example, Human Resource policy and procedures are common-place tools that are used to resolve conflict in the workplace and Leximancer analysis is able to identify the underlying thinking of the policy or procedure. However, such tools fail to identify potential conflict (Lewis et al., 2008; Roscigno et al., 2009). For instance, a person may continually be unpleasant to a person they work with. This may be due to manipulation, gossip about an individual, exclusion from activities, lying, or a range of other behaviours that seem minor when observed as single incidents. The behaviours may eventually lead to a conflict, but a Human Resource procedure cannot recognise this potential; it can only attempt to resolve the concern after it has developed into a conflict. However, Leximancer analysis has the ability to unpack the focus of the grievance procedure, wherein we can learn what needs to be included in future versions of the procedure to improve identification of potential conflict.

Leximancer has several other notable advantages. It can: quantify concepts, split and then analyse documents in sections, and generate its own dictionary based on the content of the document. Firstly, Leximancer is a tool that analyses text and its content in any combination of documents that the researcher uses, to quantify and display the conceptual structure of the document it has been asked to analyse (Leximancer, 2011). The researcher is then able to explore the conceptual nature of documents or direct a text search, because it extracts themes and concepts. Leximancer Analysis has the ability to identify word frequencies and relationships between concepts in terms of foundations that a document (e.g. a grievance procedure) has been developed with, and then displays the extracted information in a visual form in an interactive concept map (see Figure 1). The map summaries the interconnected themes and demonstrates any inter-dependencies. Such analysis allows the researcher to explore concept examples, the connections between the concepts, and link back to the original text. Therefore, a conceptual or relational analysis is found.

For example, a document that is used to resolve conflict can be loaded into the Leximancer computer program. As part of the analysis Leximancer will search for themes and concepts in the document, and it will uncover commonalities in the text similar to grievance, issue, or complaint. This demonstrates that integration of context is not only evident in content analysis of physical documentation, but it is also present within a computer program (Cassell & Symon, 1994). In order to achieve a comprehensive and holistic data analysis the obvious and the covert context is also taken into consideration as part of Leximancer analysis.

Secondly, Leximancer analysis is able to deconstruct documents by splitting them into blocks of two sentences, identifying nouns and compound words, and removing weak semantic and non-verbal information. Concept seeds are finally determined by words and relationships that are used most frequently (Leximancer, 2011). Once a document is uploaded into Leximancer, the researcher can also direct the tool to search for a concept, ignore concepts, or edit concepts.

Finally, the complex definitions found in the example grievance procedure document is provided by the analysis, and represents concepts that are determined by Leximancer analysis which has the ability to generate its own dictionary and thesaurus based on the content of the document. Therefore, a coding scheme is not required by the researcher as Leximancer constructs and formulates codes according to information that it is able to identify from. The researcher is then able to analyse concepts and investigate the nature of the relationships between concepts from the document being analysed, and to review what the concepts denote in terms of meanings relevant to the research. Such a process allows the researcher to undertake a complete conceptual analysis where a document is measured for the frequency and presence of words. In due course, the thesaurus identifies each concept in the document from the evidence of a weighted list of words. For instance, the concept of

complaint also includes associated thesaurus items such as grievance and issues.

To illustrate, Leximancer analysis can look at a grievance procedure from a school and identify that a Principal and Vice-Principal may be used interchangeably as the person responsible for solving issues between teachers. Therefore, the researcher can use and classify a more accurate wording (e.g., Leader) rather than search the document to find that Principal and Vice-Principal have the same meaning and use for the purpose of the document being studied. This leaves the researcher time to analyse other concepts and questions within the document, such as those of 'how?' and 'why?' which are central to the analysis and interpretation of the material.

In summary, Leximancer analysis is able to clearly map how mandates, policies, rules, guidelines and/or procedures are developed in a particular way by identifying common themes and concepts that can assist the researcher to uncover surplus information. This can aid in the development of an improved conflict resolution and prediction instrument. This device would require an ability to minimise individual negative, covert, manipulative behaviours that appear as minor conflicts, but are not resolved with a standard grievance procedure (Randle et al., 2007; Sinclair, 2005).

Current Study

A co-educational Tasmanian College (Grade 7 to 12) with 800+ students agreed to participate confidentially as the case study for this inquiry. The staffing approximates vary from year to year, but historically remained the same around 70 teachers and 35 general staff members. Content analysis was used to review formal archival files and Leximancer analysis was used to evaluate the documented grievance procedure.

Method

Participants

Formal archival files available for this research commenced in 1970 up until the present day. There were 194 formal files available that included staff members who had left the school on or before 21st December 2001. Files from 2001 were not part of the study in line with Privacy Legislation and to ensure that any privacy legislation and any ethical considerations were addressed at the outset. Ten formal archival files between the periods of 1973 until 1987 were used for this research.

Eight files with identified and recorded incidents were chosen, with assistance from the school archivist, for use in the pilot study. Two files without incidents were also included in the analysis as a reference starting point. The researcher has assumed that any incident determined by any party as requiring a file note is perceived as serious by the person who documented it. The number of incidents recorded, the duration of the incident, level of seriousness, and the outcome were logged by the researcher as themes were present across all four criteria. All 10 files were read from commencement to end, to ensure every possible incident was noted. These files contained information on incidents in terms of demographics, person/s involved, nature of the incident and severity of the incident and the outcome. Some files did not always contain information with regard to the concern at the outset, so the issues that were recorded were not documented thoroughly and so were unable to be used in the study. Consequently the issues that provided the clearest notes were used to define the analysis framework that is outlined below.

Five of the subjects in the files were female, and five were male. Three of the male files contained incidents and all five of the female files contained incidents. More than one incident was found in one male and in one female file. In total, there were 13 recorded incidents that were able to be used for the pilot study.

All subjects were teachers from a range of disciplines including accounting, art, consumer studies, speech and drama, English, geography, mathematics, physical education, religious education, science, and social science. Classes taught were from grade 6 through to 12. Non-teaching staff were not included in the pilot study.

The initial descriptive analysis included recording the background of the person raising the incident, and who the incident was initially reported to. The analysis provided more background

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information so that a baseline could be determined for this individual inquiry, and to assist in the analysis framework that is being developed as a result of this study. The content of the incident was then explored in further detail to uncover the type, duration, level of seriousness and outcome of the incident. This factual information determined the framework that is illustrated in Table 1.

Measures

The incident was divided into four categories to assist the researcher in developing codes that could be analysed. The categories included type of incident, duration of incident, level of seriousness, and the outcome of the incident. Table 1 outlines the categories, and the sub-categories that were also included.

Table 1. *Analysis Framework*

INCIDENT							
Type		Duration		Level of seriousness		Outcome	
1	Industrial	1	Short	1	Weak	1	Resolved
2	Behaviour/Action	2	Medium	2	Mild	2	Resigned
3	Interaction	3	Ongoing	3	Strong	3	Continued

The type of incident described is of particular interest as it is an aspect of the definition of *master* behaviour and how it presents in the type of incident. Definitions vary across research (Coyne et al., 2003; Einarsen & Skogstad, 1996; Salin, 2001), and the variety of methodologies used (Hoel et al., 2001) may also lead to inconsistent results. It has also been problematic to ascertain what the most accurate method is to identify (Coyne, et al., 2003) a *master* or a person who is their intended or unintended target.

These variations suggests that participants across studies would benefit from a similar definition to enable a precise measurement of the socio-psychological and interactional phenomenon determined to be *master* behaviour (Einarsen & Skogstad, 1996). How this can occur remains a challenge. Although, for a study of this type, Table 2 shows three possible incident types, all of which could be present in *master* behaviour or use to assist in the identification of a *master*.

Table 2. *Incident Type*

Code	Incident type	Definition
1	Industrial rights	Refers to incidents relating to perceived entitlements and/or terms of employment. Leave entitlements, for example
2	Individual behaviour	Refers to an incident relating to something a single individual has done or is doing. Theft, for example.
3	Interaction with others	Refers to incidents and/or concern involved at least one other person. An argument, for example

In relation to the duration of the incident, mediators that attempt to deal with incidents often confuse the differences between bullying and conflict (Hutchinson et al., 2010; Lewis & Orford, 2005; Saam, 2010). Conflict may take place between equal parties but this is certainly not the case with master behaviour, or for this research, as the individual at fault is often the one that holds the power (Saam, 2010). However, master behaviour can frequently signify an unresolved social conflict that has spiralled to an imbalance of power (Silverthorne, 2005; Zapf & Gross, 2001). Qualitative data from studies explored by Zapf & Einarsen (2001) indicated that any constructive passive and active conflict solving strategies initially used by victims, and modified as time goes on, did not work.

Consequently, the duration of the incident can provide important information on the behaviour of those involved. Due to the nature of master behaviour, it may be proposed that master behaviour is presented in multiple incidents that are classified as short or long. Rarely would it be expected to be resolved within one or two weeks. Table 3 outlines the classifications that apply to the duration of the incidents.

Table 3. *Incident Duration*

Code	Incident duration	Definition
1	Short	A one-off incident that is resolved within 5 working days of its commencement
2	Medium	An incident that has occurred once or more and takes 6 to 25 working days to resolve
3	Lengthy	An incident that has occurred once or more and takes 26 days or more to be resolved, or fails to be resolved.

For the category, level of seriousness, the level often depends on how serious one or more parties perceive the incident to be. Perceptions of behaviour (Einarsen & Skogstad, 1996) and of the work environment (Coyne et al, 2003) appears to make a difference to results (Aquino, 2000; Kaukiainen et al., 2001), and may even provoke negative behaviour (Strandmark & Hallberg, 2007). All relevant studies consulted for this research, bar one, gave a definition of *master* behaviour before the participant contributed to the study, and this may alter the perception of *master* behaviour and/or incident itself.

Therefore, to remove the perception variable, this study does not focus on perceptions to determine the level of seriousness. Table 4 outlines how this pilot study has used a grievance-type procedure as an indicator rather than perceptions. The further that the incident progresses, the more serious it is determined to represent.

Table 4. *Level of Incident Seriousness*

Code	Level of seriousness	Definition
1	Weak	Incident documentation by principal and/or other involved with no further action required.
2	Mild	The incident required leadership intervention, mediation, or conciliation to obtain a resolution.
3	Strong	An external advocate (union, external mediation, arbitration) was required for a resolution to be reached.

For the purposes of this analysis, the outcomes of the concern are significant, as it would be hypothesised that *master*s would have a personnel file that contained a range or minor resolved incidents. It also appears that acceptance of ability to perpetrate *master* behaviour is limited to the place the individual holds in the organisational hierarchy. For example, Strandmark and Hallberg (2007) found that the perpetrators in their study were jealous of the qualifications of their victims rather than appreciated and valued them to facilitate the professional development of the organisation. Similarly, most of the respondents in a later study by van Heugten (2010) were in middle leadership and were bullied by superiors. These superiors were often supportive of the victim until they were promoted into middle leadership; often after completion of qualifications. This was the triggering situation that signalled the starting point of the *master* behaviour, as triggers are characteristically the motivator for the typical *master* (Zapf & Gross, 2001). Table 5 outlines the classification used for the outcome of the incident.

Table 5. *Outcome of Incident Investigation*

Code	Outcome	Definition
1	Resolved	There is evidence that a resolution was reached or the incident required no follow up.
2	Resignation	One or more people involved in the incident resigned within 6 months of the incident/s occurring.
3	Continuance	There is an absence of documentation outlining a resolution.

Data Collection

All data was qualitative and was part of archival files. Data was collated from several sources, ranging from hand written notes, to formal typed documents that were prepared by the courts. Data was collated by the researcher with assistance from the archivist that was employed one day per week at the school that agreed to be part of this case study. Each file was studied closely by both the researcher and archivist.

Data Analysis

Both content and Leximancer analysis were used to review formal archival files.

Results

From the 10 files, 13 incidents were identified. These were contained in eight of the files. Two of the files had more than one recorded incident. A summary of the incident examination is illustrated in Table 6.

Table 6. *Examination of Incident*

INCIDENT							
Type		Duration		Level of seriousness		Outcome	
1	(5) 38.5%	1	(5) 38.5%	1	(10) 77%	1	(9) 69%
2	(5) 38.5%	2	(3) 23%	2	(0) 0%	2	(3) 23%
3	(3) 23%	3	(5) 38.5%	3	(3) 23%	3	(1) 8%

Types of incidents found in the personnel files varied but more than one third (38.5%) were related to pay disputes and more than another third were linked to individual behaviour.

Interpretation of the Industrial Award that governs the case study school clearly differed between staff members and the leadership team, and this resulted in a in a number of Principal to staff member documentation about disagreements.

Behavioural concerns of individuals were equally prevalent, with staff members involved in doing something or acting in a way that was not in accordance with the expected norms or regulations of the school. For example, inappropriate dress or using school property for personal use appear to be occurrences that may be uncovered repeatedly in the larger study.

Similarly, interactions with others were a concern on three occasions (23%). These included negative interactions with others. For example, disciplining a student, or offending another person or people with a comment.

Incidents were either resolved quickly (38.5%), or continued for some time (38.5%). If the incident was not resolved within the week, it was likely to last more than a month. In more than one case in the pilot study, the incident went on for several years. However, some incidents that take more than a month or close to a month to resolve may take a little longer due to school holidays. Therefore attention to the matter may be delayed.

The majority of the incidents recorded were minor incidents (77%), but three became larger issues (23%). The pilot study revealed that incidents were also resolved quickly or would become a serious issue. There was no evidence of intervention at a school level by leadership. For example, in-house mediation with assistance from other leadership members, or use of a grievance type procedure may have assisted in some incidents. In these recorded incidents, no such middle step was used, so each incident was either minor or went to the industrial court as there was never an occasion where a staff member from leadership may have attempted to intervene before the industrial commission became involved.

The outcomes of this study identified that in the majority of cases (69%) there was clear evidence of a resolution being reached that was documented in the file. In this study, 'resolved' refers to the availability of further information. Alternatively it may mean that the recording of information in regards to the incident ceased and therefore 'appeared' to be resolved.

Only one incident was ongoing, but three were clearly concluded as the result of the staff member resigning from their position. Quite often, it appeared that documentation decreased as the incidents were resolved.

Leximancer analysis was applied to a grievance procedure to highlight the common themes and concepts that are contained within written documentation designed to resolve grievances. The procedure and results are interpreted in accordance with the constraints of content analysis methodology.

Document Analysis

The document being analysed for the purpose of this research is the grievance procedure. This version of the procedure has been in operation since 2008 and this analysis is of version 2 from 2009. It was impossible to ascertain if a formal grievance procedure was in place prior to this date, and records would indicate that the previous procedures were informal. This document is essentially a policy and procedure rolled into one document, as it commences with a policy statement and then offers a procedure to follow should a grievance be presented.

The document outlined the definition of grievance and who is available within the school to discuss any concerns which are identified. It followed the standard guideline that if you have a grievance, you are required to initially discuss the matter with the person you have the issue with. If that failed to resolve the problem, then support from a more senior level of staff was required. Mediation was an option if recommended by the senior staff member or the principal.

This procedure was scheduled for review every two years by leadership team and was ratified by the board of management. It was available to all staff members via the staff intranet and this document was provided to new staff members as part of an induction package. It was also available to the public via the school web page.

Outcomes of the analysis

For the purpose of this analysis, no alterations were made to the settings of Leximancer, as the project was to identify all of the concepts and their frequency within the document. The concept map below (Figure 1) was generated as a result of loading the grievance procedure into the Leximancer. Each balloon contains a concept seed word at the centre, though they have been blurred here to maintain the confidentiality of the school. Related concepts are then automatically placed by Leximancer in accordance with its relationship to the concept, and the number of times they appear together in the same text block. The most common 'hot' concept appears in a red balloon, and the remainder concepts are distributed according to their weight, corresponding in the map with lighter cool colours (i.e. blue). The following themes and concept sections provide further detail and analysis.
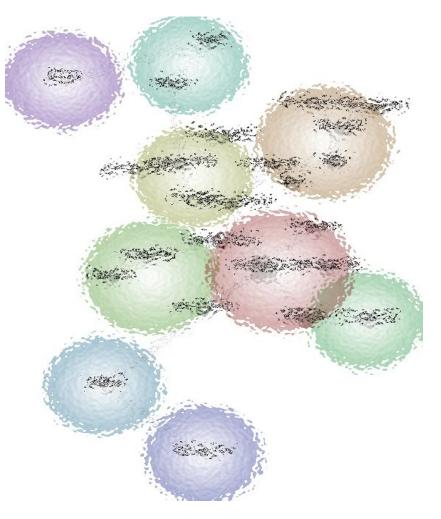
Figure 1. Leximancer concept map.

Themes are higher-level groupings of concepts appeared often in the same document (Leximancer, 2011). Connectivity was evident through Leximancer as it presented the researcher with a percentage as an estimate of theme coverage across the data, because it referred to the total number of co-occurring counts of each concept within the theme.

In the analysis of the grievance procedure, *complaint* was the most common theme across the document. The terms that are most closely connected with the complaint theme are *staff*, with a 62% connectivity, *procedure* 34%, and *possible* with 20% (i.e. it is 'possible' to resolve a grievance). Other less significant themes were identified in their connection to the main theme of complaint, those being *Principal*, 16%, *issues* 10%, *action* 6%, and *outcome*, 5%. *Complaint* was also the most important theme in the document according to Leximancer. This was indicated by the number of times it appears in the document and its position in the red balloon, meaning it was the 'hottest' concept. This accurately suggested that the theme of the document was about complaints, and this was expected, as it was a grievance procedure.

The theme most connected to complaint was that of *staff*. This indicates that the document referred to staff complaints, rather than complaints regarding students, parents or other stakeholders; and the procedure theme, being the third highest, indicates that there are clearly steps to be taken when there is a complaint that needs to be resolved. The final theme of *possible*, suggests a positive stance in a document that could be otherwise seen as negative. Alternatively, probabilities were present rather than definite in terms of outcomes and resolutions to grievances.

Principal, issues, action, and *outcome* do not weight high in the themes of the document, indicative of a lower focus on the practical implementation of the procedure and a higher focus on the theoretical terms of the document.

Concepts in Leximancer were collections of words which mostly travelled together in the document being analysed (Leximancer, 2011). Relevance percentage, which was a representation of the count value of each concept was divided by the single highest count value, and was also included in the final analysis. The count value identified the entire number of context blocks across the data that every single concept is identified within. For example, the most common concept was *complaint*, at 47 occurrences in context blocks in the document. The second most common concept was *person*, with 23 occurrences. Therefore, 23/47 = 49%, signifying that the concept of *person* is 49% relevant to the concept of *complaint*.

Similar to the themes, the most common concept was that again of *complaint*. Not only was it indicated by the red cloud, but it was also indicated by the highest number of counts/occurrences in the document. As stated previously, this theme was followed by *person* with 23 counts and 49% connectivity.

Grievance was the third most common concept with a count of 14, with 30% relevance followed by *staff, student*, and *procedure*, all with 10 counts and 21%. A number of other concepts were identified, weighing in at 19% and below, none of which are significant in the current analysis.

Considering that the procedure relates to grievances, it was not surprising that the second most common concept was *grievance*. However, it was interesting to note that the Leximancer thesaurus did not group the concept of *grievance* with *complaint*, and left it as a concept in its own right. Further analysis may provide very different results should the user decide to manually identify concepts and group grievance and complaint together.

Interpretation

Firstly, of particular note was that the concept and themes are heavily weighted toward that of complaint and procedure. This can be expected, as the document analysed was one that provides a procedure to follow when there is a complaint. So it does contain information that it claims to contain. However, no attention is given to identifying grievances at an early stage. This would be identified in themes and concepts such as prevention or identification. Therefore, the document focusses on a grievance already in progress.

Secondly, by analysing the concepts, one would believe that it may be possible to resolve complaints relating to staff with a procedure. However, by clicking on terms within the interactive map in the program, it is possible to explore where themes and concepts connect; and what is of interest in this analysis is that resolution does not connect to outcome. In fact, the concept of resolution was not highlighted in any of the analysis. Nowhere in the analysis is there an indication that an outcome is the result of an effective resolution, only an action.

This may suggest that the procedure demands an outcome, but ignores a resolution. The wording of the document therefore focusses on obtaining outcomes, but does not focus at all on the concept of resolving a complaint, that may be of use for future grievance resolutions. For example, a grievance between two staff members may cease (outcome), but they may not necessarily be able to continue working together effectively (resolution). Therefore, it may be argued that the grievance has had an outcome, but not a resolution. Further, one of the staff members may have felt it necessary to resign. This too can be considered an outcome, but may not necessarily be a good outcome and may certainly not be a resolution. Consequently, Leximancer has assisted the researcher to recognise that an argument exists for linking a resolution to an outcome, not only in practice, but in documented procedure. With that thought, the researcher may be well on the way to developing an improved procedure.

Finally, and related to the above, actions and outcomes are identified concepts within the document, though they are not weighted very high, with connections to complaint only six and five percent respectively. Considering the document is a grievance procedure, one would expect there to be a high focus on actions. If it were a policy document there would be an expectation of an increased focus on theory. This is indicative of the need for a separate policy and a separate procedure relating to staff complaints and grievances within the school.

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Discussion

The study found that content and Leximancer analysis used in combination to review formal grievances in archival files provided a holistic understanding of a school grievance and the constraints a Principal had to deal with as a result of formal procedures. As methodological tools, the findings overall have presented a number of key themes when using content analysis alongside Leximancer analysis. These themes includes defining the behaviour, tools used to define it, perceptions of individuals, understanding of concepts, and interventions. In this, content analysis found that there are a variety of documented concerns in archival files that have needed to be resolved by the Principal, predominantly in relation to minor industrial disagreements that were resolved within a week. Similarly Leximancer analysis found that the grievance procedure of the school required the Principal to intervene. Most incidents were minor incidents that were resolved quite quickly, though the pilot study indicates that there is a possibility that the case study school has had *master*s on their staff at least during the time period before 1998. In this the pilot study has warranted a full study using the 249 available personnel files.

Data being analysed through Content and Leximancer analysis meant that data was rich and allowed the researcher to explore multilevel interactions between people in a workplace and multi layered procedures designed to resolve any conflict that was present between the people.

Furthermore, in analysing the Content and Leximancer results it was apparent that there were some themes that are worthy of consideration. Those include coding of the incidents, person recording incidents, use of files, and the interpretation of outcomes. Firstly, this study has looked at each incident in isolation. Ongoing multiple issues from one individual has not been captured or coded during the pilot study, and this would provide further information in regards to *master* behaviours. Analysing multiple issues from single individuals could have specific relevance to the research. However, difficulty may also result in a second concern, particularly as the incidents in this study were recorded by a range of Principals, depending on the time that they held a Principal-ship. Alternatively, it could reveal that one or more Principals presented with *master* behaviour, but validity of that analysis would be questioned. It is more likely that incidents were generally recorded by the Principal, as they were most probably considered irrelevant until they came to the attention of the school leadership.

In addition, most incidents recorded were resolved by the Principal. Consequently it may be argued that the level of seriousness should be 100% rather than 0% as the incident was already at leadership level when recorded in the personnel file.

A third consideration is the challenges of using personnel files. Data this pilot study is based on available written documentation. In many cases the researcher could not determine if the incident commenced some time, or in some other form before the documentation commenced, or if there was adequate resolution of incidents.

Further, a number of files were missing. The archives in the case study school contain files from staff members that commenced employment in 1970. However, files for those that left the school during 1980 or 1981 were not able to be located. It is unknown if these files were lost in a natural disaster that allegedly occurred in the early 1980's, or if they were removed for some reason during a time in the school's history.

The fourth consideration refers to what has not been recorded. For example, what has not been recoded here is information about the person dealing with the incident, except that it was a person from leadership, mostly the Principal. The effect the incident has had on others was also not able to be observed. Clearly, the three teachers that resigned because of the incident would have experienced at least some distress, and a great deal of this was not documented.

Interpretation is the final consideration for discussion. For example, the outcome 'resolved' does not always mean all parties are happy or that transparency and fairness was present. It simply means that documents in the personnel files indicate that the incident ceased to be an issue. And any interpretation here would only be relevant to the case study school. It may not be a general reflection of all schools, or success of the use of a grievance procedure. Especially as there was no evidence that a grievance procedure was used in these incidents.

The strengths and limitations of content analysis are closely entwined and need to be discussed and considered for future research. For example, it can be a low cost methodology, but it

requires a significant amount of time and strict criteria need to be applied to analysis and coding. The resources must be available, and data distortion processes need to be in place to ensure that data is not compromised due to the researchers interpretation. If interpretations and differentiation of meanings are misconstrued, the information obtained can mean little and the results of the research can be slanted or skewed (Jenner & Titscher, 2000). As with all research, thought needs are to be given to strengths and limitations of the methodology chosen.

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