

TEXT ANALYTICS FOR HUMAN RESOURCE PROFESSIONALS



»» Voice of the Employee: Find it, Use it, Improve performance

If employees are truly your greatest asset, are you using them to the fullest? Are you capturing their insights, comments and suggestions? Are you attracting and capturing the best and the brightest in the way you manage your recruitment process? Do your employees really connect with your mission, values and culture? Employee engagement can increase organizational commitment and make your business or organization better. Listening to and analyzing the voice of your employees can lead to greater efficiency, effectiveness and profit. As Strauss (2006) observed, getting employees' voice "provides a win-win solution to a central organizational problem — how to satisfy workers' needs while simultaneously achieving organizational objectives" (p. 778) Most companies conduct employee surveys, regular, detailed performance reviews, exit interviews and gather other forms of employee feedback. But are employers maximizing the value of the data they collect? Are they listening to, analyzing and developing a voice of the employee?

We believe that's where Provalis Research text analytic tools can be a difference maker. QDA Miner and WordStat can improve HR's ability to act as a true strategic asset in any organization. They give HR leaders the capability to manage large volumes of data, thousands or tens of thousands of pages of unstructured text, to identify topics, trends and patterns in employee surveys. Careful analysis of employee surveys can identify common themes across departments or divisions, impacting labor relations, contract negotiations, continuity planning, safety issues and customer concerns. These same techniques can be used to analyze exit interviews, employee performance reviews, job applications and other sources of feedback. Comprehensive and ongoing analysis of exit interviews will identify issues in areas of a company or organization allowing one to spot problems and make recommendations for improvements. Text analytics can aid HR departments in recruitment by extracting critical information from hundreds or thousands of resumes and cover letters helping you identify the top candidates for key positions. A similar analysis can help HR professionals craft better job postings by seeing how the best applicants describe themselves and then using that analysis to create job postings that will resonate with and attract the best candidates.

» Text Analysis for Human Resources with QDA Miner and WordStat

The software gives HR managers a powerful tool to perform better and more meaningful analysis using existing processes or by developing new ones. HR managers are able to capture additional insights about their company, its strategies and tactics, and use those insights to propose actionable plans to improve performance.

Surveys

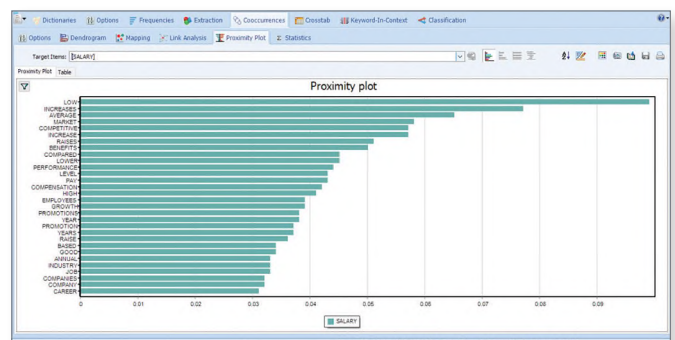
HR managers can import all open-ended responses into QDA Miner and WordStat and explore the results by using exploratory text mining tools like cluster analysis or topic modeling that will allow them to quickly identify the main themes. The proximity plot will identify relationships between a main word and all other words in the document. For example, when people mention the word “salary” what other words do they tend to mention? Words like “low”, “unsatisfied”, “competition” are frequently related to “salary.” Another way to identify insights that might not otherwise be apparent to management is to use the crosstab and correspondence analysis plot of WordStat. The Crosstab feature allows one to measure the relationship between a numeric variable such as rating and all frequently used words and phrases used in the open-ended surveys. It’s a good way to determine if certain concepts correlate with a high or low performance rating.

To classify the open-ended responses of employee surveys, two features can be used: The cluster extraction function of QDA Miner can help group all similar sentences into clusters. One can easily drag and drop similar sentences into a specific category or new category. The other way is to build a categorization dictionary in WordStat based on themes defined by HR managers and those automatically identified by the software. WordStat provides tools like the AutoSuggested button and WordStat Dictionary builder that help to speed up the process of dictionary building. Once the dictionary has been built, HR managers can apply the dictionary to the responses and they will be automatically categorized. The Crosstab and correspondence analysis plots can then be used to assess the relationship between numerical rating and categories and see which concepts are related to high or low rating. Proximity Plots or clusters are also useful to explore relationships among concepts.

Recruiting

HR managers can build their own categorization dictionaries based on words that determine the required qualification for specific jobs. Every organization has its own language and culture and this lets HR leverage its on-the-ground knowledge and show the value of that knowledge. Once the dictionary is built one can upload all resumes received for the job into WordStat. The software will scan all resumes and automatically identify all candidates that are highly qualified for the specific job based on words and phrases. Statistics can be used to assess the relationship between a resume and job description. With the assistance of taxonomies, recruiters can also quickly retrieve specific information from resumes and cover letters like university majors, GPAs, specializations, experience, or other key factors that are critical to selecting the best candidates.

The document classification feature of WordStat can also be used to automatically classify resumes into one or several predefined categories based on an inductive learning process performed on a set of previously classified documents. This machine-learning approach of classification is known to achieve superior accuracy compare to classification performed by people.





Performance Evaluations

Performance evaluation often includes a rating and comments. Depending on the amount of comments to analyze, HR managers can use QDA Miner or WordStat to categorize and analyze the textual data. With the manual approach of QDA Miner, users can define codes based on inductive or deductive approach. The seven text retrieval tools of QDA Miner will help them speed up the manual coding process. Once the coding is done, users can perform several analysis such as code frequency to identify the topics most frequently mentioned during the evaluation, explore relationships between the different themes using the co-occurrence feature of QDA Miner or link numerical rating to concepts using the coding by variable function and see which concepts are highly related to a good or bad performance score. The software can also be used to determine if managers use systematic bias in how they describe candidates. At least one published study (Stetz, T. & Ford, J.M. (2010). Leadership and same-gender bias: A content analysis of promotion recommendations. *Journal of Psychological Issues in Organizational Culture*, 1(3), 6-18) using WordStat determined that by the “numbers” alone didn’t tell the true story.

Interviews

QDA Miner is the right tool to codify all types of interviews. Usually, this type of data needs to be codified manually and carefully. With more than seven text search tools, QDA Miner helps researchers to quickly retrieve all text segments related to a specific concept and carefully codify all sentences or paragraphs related to this concept. These features make rapid categorization of large volumes of responses possible and effective. Once the coding is done, the advanced analysis features of QDA Miner such as clustering, multidimensional scaling, heatmaps or correspondence analysis, allow HR managers to quickly retrieve comments about specific topics and explore relationships between concepts or topics.

These are just a few examples as to how you can use text analytics in Human Resources Management. There are many others. If you would like a demonstration of how our software can be part of your HR strategy, contact us at info@provalisresearch.com.



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