

CEQuery

Accessing the Graduate Voice

What is CEQuery?

CEQuery is software that allows for the detailed and systematic analysis of the qualitative comments contained in the *Course Experience Questionnaire* (CEQ)¹. Developed by the Queensland University of Technology (QUT) and the University of Technology Sydney (UTS) through funding provided by the Department of Education, Science & Training (DEST), the CEQuery software is being offered free of charge to the Australian higher education sector through the Graduate Careers Council of Australia Ltd (GCCA). The GCCA will also provide initial and ongoing training and support for this exciting new analysis tool.

CEQuery has been extensively calibrated and field-tested with a pilot set of users. Thanks are extended to the ten Australian universities who participated in the development and testing of CEQuery and who have made their initial data available as a national demonstration database.² The pilot project was managed by a Project Management Team³ and a National Reference Group.⁴

“...free of charge to the Australian higher education sector...”

What does CEQuery do?

CEQuery:

- Provides a detailed, convenient and systematic way of accessing and analysing the information contained in the comments provided by respondents to the CEQ.
- Allocates comments to five domains divided into 26 specified subdomains (Figure 1).
- Provides an overall picture of the patterns of responses in the data and then enables the user, with a single click, to access comments of interest.
- Enables results to be presented in graphical, quantitative and qualitative form, allowing the analyst to get an overview of the general shape of the findings as well as access to the detailed textual analysis.
- Enables users to move between a count of where the major areas of response lie back to the comments themselves to allow the reader to see what the graduate actually said.

Figure 1: Existing Domains and Subdomains

Domain	Outcomes	Staff	Course Design	Assessment	Support
Subdomain	Intellectual Work application/ career Further learning Personal Interpersonal Knowledge/skills	Accessibility and responsiveness Teaching skills Practical Experience (current) Quality and Attitude	Practical-theory links Relevance to work/ life/discipline Flexibility/ responsiveness Methods of learning & teaching Structure & expectations	Relevance Marking Expectations Feedback/return Standards	Library Learning Resources Infrastructure/ environment Student Administration Student Services Social Affinity/support

How is this done?

A database containing relevant CEQ and *Graduate Destination Survey* (GDS) data is loaded in to the CEQuery software.

The qualitative CEQ comments are then coded and allocated by CEQuery to relevant domains and subdomains (Figure 1) based on a concept dictionary developed and refined through a comprehensive iterative process using CEQ data provided by ten Australian Universities².

This automatic coding enables users to systematically mine a hitherto unexplored and enormous database of individual comments by students about their university experience.

This is of particular relevance given that

- Students can raise key issues in their comments which are not covered in the CEQ scales
- Quantitative data alone does not always give much insight into what students had in mind when they rated the CEQ items.

CEQuery can quickly and easily retrieve and display the comments which lie behind a selected code.

CEQuery also allows users the flexibility to create new coding domains and subcategories.

“...systematically mine a hitherto unexplored and enormous database of individual comments by students...”

1. The *Course Experience Questionnaire*, which is incorporated in the *Graduate Destination Survey* conducted by the Graduate Careers Council of Australia Ltd (GCCA) each year, not only asks recent graduates to rate a range of course experience items on a five point Likert scale, but also makes provision for them to comment on the best aspects of their course experience and key areas requiring improvement.
 2. University of Technology Sydney, University of New South Wales, Southern Cross University, Queensland University of Technology, James Cook University, Royal Melbourne Institute of Technology, Monash University, University of South Australia, Australian Catholic University, Australian National University
 3. Professor Geoff Scott – (UTS), Alan Richardson (QUT), Professor Boris Kabanoff (QUT), Shane Brown (Project Programmer, QUT)
 4. Professor Dennis Gibson (Chancellor, RMIT), Professor Richard Johnstone (Pro-Vice-chancellor, UTS), Bruce Guthrie (Research Manager, GCCA), Sujinder Badhni (DEST), Alison Morehead (DEST)

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Reporting and Analysis

CEQuery reporting and analysis functions allow users to:

- Count the hits on specific domains and subdomains
- Map and analyse the links between subdomains and domains using a set of graphical features
- Look at the strength and direction of these links
- Examine the relationships between the concept dictionary, subdomains and domains
- Compare current results with previous ones
- Run subsorts to see if there are significant differences between various demographic variables like study area, mode of attendance level of study, fee status, employment status, gender, age, residency status, ATSI status, NESB status
- Critique and enhance the coding domains and subdomains themselves in the light of the emerging analysis and new data.

"...Provides institutions with a powerful tool for gaining greater insight into and value from the open-ended comments made by their graduates."

The Benefits of CEQuery

CEQuery:

- Provides institutions with a powerful tool for gaining greater insight into and value from the open-ended comments made by their graduates.
- Provides readers who are familiar with a course or institution a more contextualised, richer understanding of graduates' concerns.
- Makes access to the graduate voice both more structured and more convenient. It provides those interested in enhancing the quality of the total student experience with an additional tool to complement the wide range of tracking and improvement systems already in use.
- Enables institutions to move beyond quantitative indicators of course quality to listening to what students actually say about their university experience.
- Assists local academic staff in their quality improvement efforts – for example, an institution or unit in which where is a large number of 'Needs Improvement' (NI) comments in a particular subdomain may work with another where these are lower with a view to figuring out what is being done differently. The process works best when it is done at the program level and where the institutions/units have similar missions, contexts and resources.

Validity of CEQuery

- CEQuery enables users to check the validity of its coding by enabling them to view all of the comments which make up the count for a particular domain or subdomain.
- Graduates' open-ended comments are meaningfully related both to their sub-scale scores and to their reported satisfaction, giving greater confidence in the meaningfulness of both sets of measures.

"...CEQuery also allows users the flexibility to create new coding domains and subcategories."

Technical and User Requirements

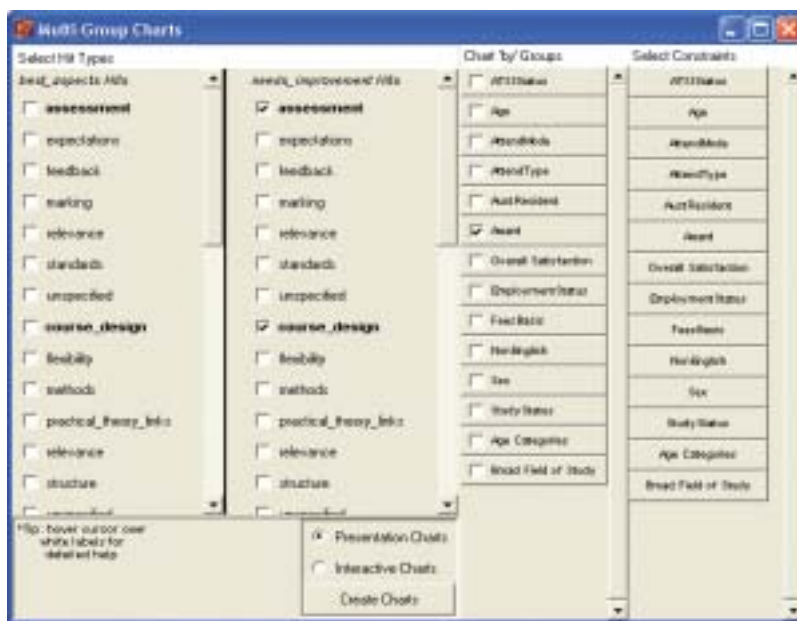
- Windows Platform (98, NT, 2000, XP tested). Extraction and charting speed will vary depending on the amount of system memory available and processor speed.
- Microsoft Access (2000, 2002 tested) locally installed, along with the ODBC drivers for Access.
- Internet Explorer
- Microsoft Graph is required for some charting functions (installed as part of the Office Suite)
- Microsoft Excel
- CEQuery User Manual: The Manual has been field tested with university users new to the product. It is designed to enable anyone with basic knowledge of a PC to load data and successfully run analysis.
- A file containing GDS and CEQ data, including the qualitative comments present in the CEQ.

Illustrative Examples

When using *CEQuery*, users are guided through the process of selecting the required databases, tables and dictionaries. Users can then select whether to analyse comments, produce charts or view statistics. Easily navigated input screens provide for the selection of desired areas and attributes.

Example 1: Input Screens and Presentation Charts

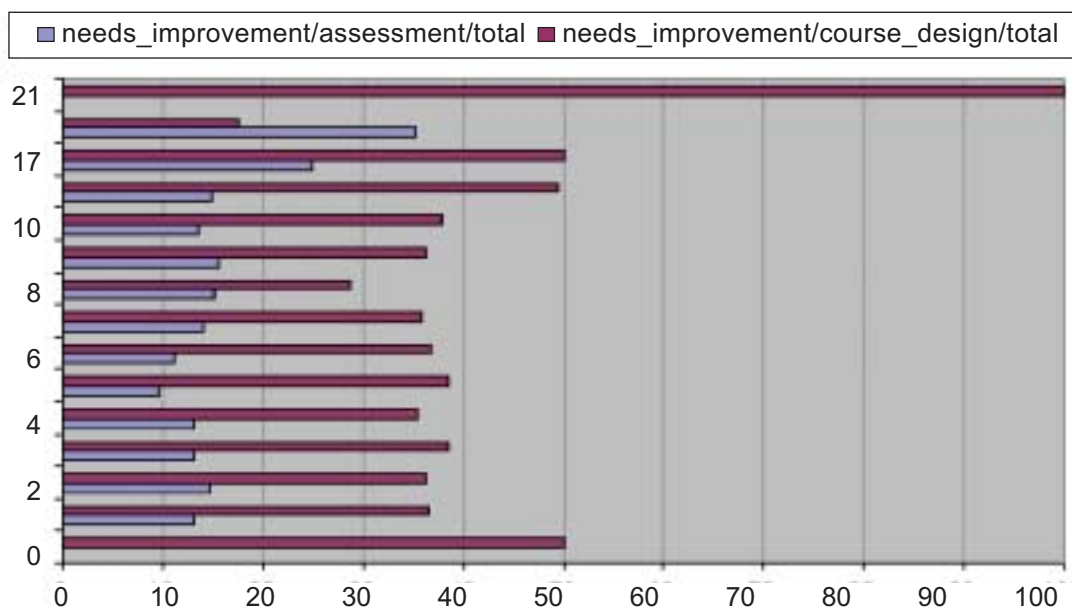
The screen below illustrates the selection of 'Needs Improvement' hits for the domains of Assessment and Course Design, by Award type.



"...Run subsorts to see if there are significant differences between various demographic variables like study area, mode of attendance level of study, fee status, employment status, gender, age, residency status, ATSI status, NESB status..."

The resultant Presentation Chart is illustrated below:

Hits by Award



Percentage hit rates for needs_improvement\assessment\total, needs_improvement\course_design\total, for separate levels of Award

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Example 2: Drill-Down Availability

The following screen shot illustrates just one of *CEQuery*'s capabilities. It shows how data can be presented graphically for the *CEQ* data set analysed. The overall 'Best Aspects' (BA) and 'Needs Improvement' (NI) counts in the demonstration database are indicated by the red bar charts. For each bar chart, it is possible to click and get the count for each of the domains and sub-domains making up the total count for the domain – see the blue bar chart for counts for each domain of the 'Needs Improvement' comments, and the green bar chart for each relevant sub-domain of the 'Course Design' domain. It is then possible to click on any particular subdomain to see the full set of unedited comments that make up the count, with the word that has been counted highlighted. This also provides an ongoing check of the validity and accuracy of the coding process.



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Availability and Further Information

CEQuery will be distributed throughout the tertiary sector within Australia via a series of user workshops. Ongoing support for the software will be provided by the Graduate Careers Council of Australia Ltd.

For further information regarding *CEQuery*, please contact:

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