

# **CREE**

## **Contextual Resource Evaluation Environment**

### **CREE Survey**

Results and Comment

*CREE Deliverable SID9*

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April 2005



[www.hull.ac.uk/esig/cree](http://www.hull.ac.uk/esig/cree)

**JISC**

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\* - these two questions are reported together due to their related nature

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## **CREE Survey 2004**

### *Results and Comment*

#### **Introduction**

In September/October 2004, the CREE project launched a national online survey of the Higher and Further Education sector to assess both which Internet search tools were used and how they were used. Questions were also asked in relation to how users might wish to use these tools if they were presented in alternative contexts, for example through a virtual learning environment. The aim of the survey was to provide a baseline snapshot of current Internet search tool use and gather opinions on their use. This information would be used to inform the development of a series of search interface demonstrators to enable the further investigation of how Internet search tools might be best presented to users.

The term 'Internet search tools' has been used to indicate the full range of search tools that users interact with over the Internet. This includes both generic search engines, e.g., Google and Altavista, and more specialised subject-based databases often provided via the library. Whilst there are clear differences between the two, the project has focussed on the presentation of an interactive interface rather than the nature of the search tool itself. The benefits of presenting one or other or both alongside each other have been included as an area to examine with the demonstrators.

In gathering information about existing use of Internet search tools, the project has ensured that the demonstrators are based on tools that most users do use. In addition to this factual record, the survey also provided information on users' opinions about how they might like to use Internet search tools in alternative contexts. No assumptions were made about the contexts in which these tools were used already, although this was also examined briefly within the survey to assist with gathering opinion. It is recognised that the opinions expressed are in a theoretical context, insofar as the users were being asked about possible scenarios for presenting Internet search tools without being able to see what this might mean. It is the intention of the demonstrators to provide this 'view' and see if this alters or confirms the opinions expressed in the survey.

The survey gathered over 4500 responses in total from across the spectrum of Higher and Further Education staff and students. This figure includes 2500 responses alone from the University of Oxford, which are not included in this analysis to avoid bias within the figures gathered. However, this extremely positive response has provided a very valuable body of baseline information on the current use of Internet search tools that can be used within confidence in the planning of future search services and their presentation.

The survey has been supplemented by a series of focus groups that were able to extend the findings of the survey and examine some of the reasons behind these findings in more detail. These focus groups are reported in CREE Deliverable S1D8 and a summary paper drawing the two together is also available as CREE Deliverable S1D8/9a.

## The Survey

The survey was made available online at the website <http://www.learndev.hull.ac.uk/creesurvey> (at which it can still be viewed) and via a link from the project homepage at <http://www.hull.ac.uk/esig/cree> (removed after the survey closed). It was promoted at partner institutions and through the following lists and websites:

- JISCMail
  - COFHE
  - interoperability
  - jasig-uk
  - lis-infoliteracy
  - lis-jibs-users
  - lis-sconul
  - lis-ucr
  - portals
  - ucisa-announce
  - web-support
- HE Academy
- HERO
- RCUK

The survey was made available in two versions: Flash and text-only. The Flash version used a card-sort toolkit that had previously been developed at the University of Hull as part of the Iconex project. This is available via the Iconex repository at <http://www.iconex.hull.ac.uk> under Generic Objects. The Flash version was by far the most popular, with over 84% using this. It was notable that users of the text-only version indicated slightly more reluctance in considering the options presented within the survey as useful, although overall the responses were in line with those responding using Flash.

## General results

### A. Breakdown of results by country

Country	%	Population %
England	82.6%	84%
Scotland	12.5%	8%
Wales	3.8%	5%
N.Ireland	0.3%	3%
USA	0.5%	
Other	0.3%	

*Table 1. Breakdown by country and comparison with relative population*

By far the vast majority of responses came from England. The percentages of population are given for comparison for the home countries, and response figures are roughly in line with these. Notable are the high relative response from Scotland and the low relative response from N. Ireland. ‘Other’ responses were received from New Zealand, Saudi Arabia, Bahrain, Poland and Taiwan.

### B. Breakdown of results by educational affiliation

Educational establishment	%
Higher Education	83.8%
Further Education	16.2%

*Table 2. Breakdown by educational affiliation*

The vast majority of responses also originated from Higher Education establishments, although the response rate from Further Education is welcome. On evaluation, the routes used for promotion of the survey were considered to favour responses from a Higher Education audience and this will be addressed in future surveys.

## C. Breakdown of results by staff and student group

Staff/Student category	%
Teaching Staff	8.2%
Research Staff	8.5%
Library Staff	22.9%
Support Staff	16.7%
Clerical Staff	3.0%
Undergraduate Research	26.8%
Postgraduate Student Research	10.8%
Postgraduate Student Teaching	3.1%

*Table 3. Breakdown by staff and student group*

The spread of responses across all staff and student categories was very welcome and has allowed the results to be reflected across all parts of a university/college. The high proportion of library staff does introduce an element of bias to the results, but this is not considered to be high in the light of feedback from the focus groups carried out. The high proportion of support staff is also notable, and highlighted the need to possibly breakdown staff categories further in subsequent surveys. The high proportion of undergraduate responses is very welcome.

## Disclaimer

Not all those who took part in the survey indicated their country, educational affiliation or category of staff or student they fitted into. Total figures are based on all results received, whereas broken down results are based on those responses where the necessary information was provided. This means that the average of the broken down categories does not always match the overall figure exactly, with those indicating their affiliations being more likely to indicate high usage and agree with the most popular option. It was also notable that responses to later questions were lower in some cases, where respondents appeared to have not bothered with these and simply submitted the survey response after one or two questions. This was particularly notable amongst FE undergraduates. These aspects of data collection should be borne in mind when interpreting the survey results.

Category	Number of responses
All responses	2044
Responses indicating country of origin	1823
Responses indicating HE/FE affiliation	1808
Responses indicating staff/student type	1891

*Table 4. Numbers of responses*

The results presented in this document highlight the overall picture and how this is affected when split according to educational affiliation. Where results are specific to a particular user group or groups, or where the overall results has been affected by a large difference within one user group, then these are also highlighted and described. Full results from the survey can be found in the accompanying spreadsheet available from the CREE website.

## Detailed results

Q1. How often do you use Internet search tools?

Option	%
Daily	84.6%
Weekly	14.8%
Monthly	0.4%
Less than monthly	0.1%
Never	0.0%

*Table 5. Q1 overall results*

This clearly shows that the use of Internet search tools is a highly commonplace activity, with over 99% using them at least weekly. This also suggests that the use of the Internet equates with searching in many peoples' eyes.

Although the totals are the same across all educational establishments, the figures are split rather differently when comparing use within HE and FE.

Option	HE %	FE %
Daily	86.5%	54.8%
Weekly	13.0%	44.4%
Monthly	0.4%	0.8%
Less than monthly	0.1%	0.0%
Never	0.0%	0.0%

*Table 6. Q1 results by educational affiliation*

Usage of Internet search tools is thus still a commonplace activity, but not carried out as frequently within FE than within HE. This difference is almost entirely down to the behaviour of FE undergraduates, who use Internet search tools far less frequently than any other group. Undergraduates as a whole, perhaps surprisingly, were the least frequent users overall.

	Daily		Weekly	
	HE	FE	HE	FE
Teaching Staff	84.7%	92.3%	14.5%	7.7%
Research Staff	89.4%	90.9%	9.1%	9.1%
Library Staff	96.8%	100.0%	2.6%	0.0%
Support Staff	90.7%	87.5%	8.9%	12.5%
Clerical Staff	83.7%	71.4%	16.3%	28.6%
Postgraduate Student Teaching	89.2%	81.3%	10.8%	18.8%
Postgraduate Student Research	88.1%	81.8%	11.3%	15.2%
Undergraduate Student	70.7%	36.5%	28.4%	62.7%

*Table 7. Q1 results by staff and student group for daily and weekly use of Internet search tools*

Q2. How often do you use Internet search tools for purposes connected with teaching, learning and/or research?

Option	%
Daily	61.4%
Weekly	31.7%
Monthly	4.4%
Less than monthly	1.6%
Never	0.9%

*Table 8. Q2 overall results*

The proportion of use of Internet search tools for learning, teaching and/or research purposes (essentially for work purposes) is encouragingly high, with over 93% making use of such tools at least weekly. It is not surprising that the proportions and regularity are split differently, however, to general use of Internet search tools with the differences in usage assumed to be for administration and/or personal purposes.

The HE/FE split shows similarly lower proportions searching daily and weekly, with most in FE searching weekly for learning, teaching and/or research.

Option	HE %	FE %
Daily	64.2%	41.8%
Weekly	28.9%	54.3%
Monthly	4.2%	3.4%
Less than monthly	1.8%	0.5%
Never	0.9%	0.0%

*Table 9. Q2 results by educational affiliation*

It is interesting that 0.9% within HE claims to never use Internet search tools for learning, teaching and/or research but no one expressed this in FE. It would be valuable to pursue how the Internet is used to support learning, teaching and/or research activities in general where search tools are not used.

The less frequent usage in FE is again due to the lower frequency of use by FE undergraduates. The proportion using Internet search tools for learning, teaching and/or research is the same overall for daily and weekly combined, but the balance is very different. The figures are about equal for HE undergraduates. There is also less frequent usage recorded for those not so involved in learning, teaching and/or research, with lower figures for support and clerical staff. The slightly lower frequency usage for HE PG teaching students is also notable.

	Daily		Weekly	
	HE	FE	HE	FE
Teaching Staff	74.6%	100.0%	24.6%	0.0%
Research Staff	81.1%	90.9%	15.9%	9.1%
Library Staff	77.6%	76.9%	17.2%	23.1%
Support Staff	56.1%	65.6%	29.3%	31.3%
Clerical Staff	52.4%	28.6%	31.0%	57.1%
Postgraduate Student Teaching	48.6%	68.8%	45.9%	25.0%
Postgraduate Student Research	76.0%	72.7%	20.7%	24.2%
Undergraduate Student	44.3%	23.6%	48.8%	71.9%

*Table 10. Q2 results by staff and student group for daily and weekly use of Internet search tools for learning, teaching and/or research*

Q3. Which Internet search tools and directories do you use most often for teaching, learning and/or research?

	Frequently	Occasionally	Never used	Never heard of
Google	92.0%	6.4%	0.5%	1.2%
Ask Jeeves	4.9%	55.7%	33.8%	5.6%
Altavista	5.5%	52.4%	31.5%	10.6%
Hotbot	0.9%	17.7%	40.2%	41.2%
Euroseek	0.6%	4.7%	26.8%	68.0%
iTools	12.0%	32.9%	40.1%	15.0%
Dogpile	6.2%	17.7%	24.0%	52.1%
Teoma	0.7%	5.0%	15.4%	78.8%
AllTheWeb	1.9%	16.5%	27.2%	54.5%
MSN	2.0%	9.7%	26.0%	62.2%
Vivisimo	0.6%	4.6%	14.4%	80.5%
Yahoo!	21.9%	60.3%	14.5%	3.3%
Infomine	0.8%	5.0%	18.9%	75.4%
Academic Info	11.3%	14.2%	15.8%	58.7%
Nationally maintained subject specific resources	34.2%	32.8%	14.3%	18.7%

*Table 11. Q3 overall results, with the most popular responses highlighted*

Not surprisingly, of the generic Internet search engines listed, Google came well ahead of the rest in awareness and use. Indeed, the results show that aside from a few such search engines (Google, Yahoo!, Altavista and Ask Jeeves), most had not heard of other available search engines. A notable exception is iTools, which was clearly well known if not very heavily used. Academic Info was also more highly used amongst academic staff than other groups. This may not be so surprising, though it is not impossible to assume that there might have been some confusion with ‘generic’ academic information here. The authority and value of the search engines being used is clearly high, and there doesn’t appear to be much shopping around for alternatives.

It is also notable that the only other Internet search tool category that is used frequently by the largest proportion is the nationally maintained subject specific resources. This is, admittedly, a catch-all category that includes many such resources, partly to avoid the necessity of users knowing about their origin (many users do not know that ‘their’ subject resources are JISC-funded, for example), but there is clearly extensive awareness and use of these. Looking further into the type of subject resource being used would be highly valuable, and also how they are being used alongside the more generic search engines.

Breaking these down into HE and FE reveals the following differences:

- The most frequently used resources are the same.
- FE makes more frequent use of subject specific resources than HE.

- A much larger proportion of FE users have occasionally used many of the other search engines.

	Frequently		Occasionally		Never used		Never heard of	
	HE	FE	HE	FE	HE	FE	HE	FE
Google	93.7%	94.4%	6.0%	4.2%	0.2%	1.1%	0.2%	0.3%
Ask Jeeves	3.9%	5.7%	55.1%	71.5%	36.8%	20.9%	4.3%	1.9%
Altavista	5.1%	32.9%	55.5%	34.8%	31.7%	23.0%	7.7%	9.3%
Hotbot	0.9%	0.6%	19.5%	38.8%	43.7%	23.9%	35.8%	36.8%
Euroseek	0.5%	0.8%	5.1%	2.0%	28.5%	45.2%	66.0%	52.0%
iTools	9.4%	13.5%	31.2%	52.8%	45.9%	23.6%	13.5%	10.1%
Dogpile	6.3%	5.1%	18.9%	39.6%	26.9%	14.3%	48.0%	41.0%
Teoma	0.8%	0.6%	6.0%	30.9%	17.5%	7.3%	75.7%	61.2%
AllTheWeb	1.7%	1.4%	18.3%	37.9%	29.5%	16.3%	50.6%	44.4%
MSN	1.8%	1.1%	9.3%	7.6%	26.8%	17.7%	62.1%	73.6%
Vivisimo	0.7%	0.3%	5.2%	1.7%	15.2%	7.9%	78.9%	90.2%
Yahoo!	19.8%	18.5%	62.8%	71.3%	15.2%	9.0%	2.2%	1.1%
Infomine	0.8%	0.6%	6.0%	2.0%	20.9%	9.0%	72.3%	88.5%
Academic Info	12.4%	7.6%	13.2%	39.3%	16.2%	9.0%	58.3%	44.1%
Nationally maintained subject specific resources	37.3%	48.3%	33.4%	24.7%	13.8%	10.1%	15.5%	16.9%

*Table 12. Q3 results by educational affiliation, with the most popular responses highlighted for both HE (yellow) and FE (blue)*

The use of nationally maintained subject specific resources varied across user groups, with usage more frequently amongst academic staff than students overall (though note the high frequency of use amongst FE undergraduates and taught postgraduates).

	Frequently		Occasionally		Never used		Never heard of	
	HE	FE	HE	FE	HE	FE	HE	FE
Teaching Staff	45.5%	33.3%	28.5%	25.0%	14.6%	16.7%	11.4%	25.0%
Research Staff	49.2%	40.0%	33.9%	50.0%	8.1%	0.0%	8.9%	10.0%
Library Staff	59.0%	41.7%	30.2%	25.0%	4.6%	8.3%	6.2%	25.0%
Support Staff	16.9%	9.4%	39.0%	25.0%	27.1%	25.0%	16.9%	40.6%
Clerical Staff	4.9%	0.0%	36.6%	50.0%	24.4%	16.7%	34.1%	33.3%
Postgraduate Student Teaching	28.6%	33.3%	40.0%	20.0%	5.7%	20.0%	25.7%	26.7%
Postgraduate Student Research	42.3%	38.7%	27.7%	41.9%	10.9%	9.7%	19.0%	9.7%
Undergraduate Student	25.2%	59.6%	35.8%	20.6%	15.6%	7.6%	23.5%	12.1%

*Table 13. Q3 results for nationally maintained subject-specific resources by staff and student group, with the most popular responses highlighted for both HE (yellow) and FE (blue)*

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Q4. Do you use your own University/College online library catalogues for purposes connected with teaching, learning and/or research?

Option	%
At least once per day	26.6%
Every week	41.5%
Every month	13.9%
Less than monthly	12.1%
Never	6.0%

*Table 14. Q4 overall results*

Notwithstanding the high proportion of users making use of Internet search tools for learning, teaching and/or research (see Q2), the library catalogue is not the highest on the list of priorities. Usage is high (over 68% using their local catalogue at least weekly), but is less frequent overall. This would seem to indicate a clear value in the local catalogue, but as a source to be referred to as required rather than as first resort.

The lower frequency is accentuated within FE, where the proportion using the library catalogue weekly is even higher.

Option	HE %	FE %
At least once per day	30.5%	11.5%
Every week	38.1%	61.7%
Every month	14.3%	11.5%
Less than monthly	11.8%	10.7%
Never	5.3%	4.6%

*Table 15. Q4 results by educational affiliation*

The spread of usage is, though, very much the same and reflects the common if steady use of the local library catalogue as a search tool. Library staff are the most frequent users not surprisingly (over 76% use it daily), and support staff are the least frequent users (over 33% use it less than monthly).

	Used at least weekly	
	HE	FE
Teaching Staff	79.8%	53.9%
Research Staff	67.4%	81.8%
Library Staff	92.7%	92.3%
Support Staff	23.3%	12.5%
Clerical Staff	39.5%	57.1%
Postgraduate Student Teaching	81.1%	71.3%
Postgraduate Student Research	73.3%	71.9%
Undergraduate Student	69.8%	80.1%

*Table 16. Q4 results by staff and student group for at least weekly use of local library catalogues for learning, teaching and/or research*

Q5. Do you use other University/College online library catalogues for purposes connected with teaching, learning and/or research?

Option	%
At least once per day	8.1%
Every week	28.6%
Every month	17.3%
Less than monthly	25.6%
Never	20.3%

*Table 17. Q5 overall results*

As might be expected, the use of other library catalogues is lower than the local catalogue. Other library catalogues, though, still appear to be regarded as a valid

resource, with over half using them at least monthly and only a fifth never making use of them.

The breakdown into HE and FE suggests that whereas daily use of other library catalogues is higher in HE (as might be expected from research activities), usage within FE of these resources is actually far higher overall, with over half using them at least weekly.

Option	HE %	FE %
At least once per day	8.5%	3.3%
Every week	27.1%	49.3%
Every month	18.9%	12.5%
Less than monthly	26.0%	19.6%
Never	19.4%	15.3%

*Table 18. Q5 results by educational affiliation*

Within FE, this may reflect either usage of other FE catalogues, local HE catalogues, or even, and quite possibly, public library catalogues, albeit that these were not specifically mentioned in the question. There is clearly a perceived need and use of other resources here, as evidenced by the use of such catalogues at least monthly, where only support and clerical staff are low users.

	Used at least monthly	
	HE	FE
Teaching Staff	62.1%	61.6%
Research Staff	52.7%	54.6%
Library Staff	81.1%	80.7%
Support Staff	21.1%	12.6%
Clerical Staff	23.8%	16.7%
Postgraduate Student Teaching	51.3%	50.1%
Postgraduate Student Research	62.8%	54.6%
Undergraduate Student	50.9%	75.7%

*Table 19. Q5 results by staff and student group for at least monthly use of other library catalogues for learning, teaching and/or research*

Q6. Whilst using online learning environments such as BlackBoard, WebCT or WebLearn, how often do you use Internet search tools?

Option	%
Every time	8.5%
Frequently	30.5%
Not very frequently	30.3%
Never	30.7%

*Table 20. Q6 overall results*

Q7. Whilst using online learning environments such as BlackBoard, WebCT or WebLearn, how often do you use library catalogues?

Option	%
Every time	5.6%
Frequently	28.4%
Not very frequently	32.3%
Never	33.6%

*Table 21. Q7 overall results*

These two questions are taken together as their results are very similar. The method by which users made use of Internet search tools or library catalogues whilst using an online learning environment was not tested here. Yet it is clear that although usage is reasonable, this is not an activity that occurs very much however it is done, and that it is not an activity that is carried out at all for many.

These figures are slightly different in FE, where there does appear to be more use whilst using an online learning environment than in HE.

Q6.

Option	HE %	FE %
Every time	7.9%	7.1%
Frequently	28.0%	49.7%
Not very frequently	30.1%	24.3%
Never	33.9%	18.9%

*Table 22. Q6 results by educational affiliation*

Q7.

Option	HE %	FE %
Every time	5.3%	5.5%
Frequently	27.1%	45.2%
Not very frequently	31.7%	27.7%
Never	36.0%	21.6%

*Table 23. Q7 results by educational affiliation*

This higher usage may reflect the wider use of online learning environments within FE or a more interactive use of the online learning environment leading to the user to interrogate Internet search tools etc. to find the information required.

The use of search tools whilst using an online learning environment is heavily affected by the role a user has: those who do not regularly use such an environment recorded low frequency of search tool usage in these circumstances. It is to be presumed that some respondents answered hypothetically on the basis of what they thought they might do if they used an online learning environment.

It is also worth noting the difference in preference for using Internet search tools or library catalogues according to role and HE/FE affiliation. There does appear to be much consistency here, though it would be interesting to explore further why these preferences were expressed and link them to actual activities being undertaken when using the search tool.

	Q6 – Internet search tools		Q7 – library catalogues	
	HE	FE	HE	FE
Teaching Staff	36.4%	38.5%	24.4%	46.2%
Research Staff	13.0%	0.0%	16.2%	9.1%
Library Staff	25.1%	16.0%	31.8%	30.8%
Support Staff	18.4%	18.8%	9.0%	9.4%
Clerical Staff	19.5%	14.3%	2.5%	14.3%
Postgraduate Student Teaching	40.5%	31.3%	57.1%	43.8%
Postgraduate Student Research	24.2%	39.4%	25.8%	36.4%
Undergraduate Student	42.7%	65.4%	41.5%	57.4%

*Table 24. Q6 and Q7 results by staff and student group contrasting the preferences for using library catalogues or Internet search tools when using an online learning environment. The most popular responses are highlighted for HE (yellow) and FE (blue)*

Q8. Do you make use of advanced search facilities when searching the Internet, local intranet or library catalogues?

Option	%
Always	16.2%
Depends on the search tool/resource	27.0%
Depends what I'm looking for – I like to choose when I search	53.2%
Never	3.6%

*Table 25. Q8 overall results*

Although fairly low, it is still interesting to see that the proportion of users making use of advanced search facilities is reasonable, indicating a good awareness that they exist at least. Not so surprisingly, the use of these advanced facilities most often depends on the circumstance of the search and/or tool being used. This could imply a good level of selection in the search strategy being used, though could equally indicate that users are aware of the options but just don't use them that much.

Intriguingly, the breakdown into HE and FE reveals that there is a difference in opinion on when advanced search facilities may be used.

Option	HE %	FE %
Always	16.9%	10.2%
Depends on the search tool/resource	25.5%	49.7%
Depends what I'm looking for – I like to choose when I search	54.4%	37.0%
Never	2.8%	2.7%

*Table 26. Q8 results by educational affiliation*

In HE there use of advanced search facilities will depend on what is being sought; the use will depend on what has been found so far. In FE there is more of a preference to use advanced search facilities according to the tool being used, unaffected by what has been retrieved so far. This seems to suggest that many FE searchers like to make the most of the search tools they use, although they are selective about which tools they would use advanced search facilities within.

However, it is notable that this balance is entirely down to PG research students and undergraduates within FE. All others within FE agree with HE that advanced search facilities are most used depending on the search being carried out. The notable exceptions within HE are PG taught students.

	Depends on tool/resource		Depends on search	
	HE	FE	HE	FE
Teaching Staff	23.4%	46.2%	64.5%	53.8%
Research Staff	25.0%	36.4%	58.3%	54.5%
Library Staff	24.1%	34.6%	53.5%	42.3%
Support Staff	24.0%	37.5%	61.8%	53.1%
Clerical Staff	30.2%	28.6%	48.8%	42.9%
Postgraduate Student Teaching	35.1%	18.8%	28.6%	37.5%
Postgraduate Student Research	23.2%	51.5%	49.7%	36.4%
Undergraduate Student	29.3%	58.4%	49.1%	31.1%

*Table 27. Q8 results by staff and student group contrasting whether use of advanced search facilities depends more on the tool/resource or on the search being carried out. The most popular responses are highlighted for HE (yellow) and FE (blue)*

Q9. Would you find it useful to search more than one library catalogue at once?

Option	%
Always	44.7%
Never	4.7%
Depends what I'm looking for – I like to choose when I search	50.6%

*Table 28. Q9 overall results*

There is a very clear desire expressed here for being able to search across more than one library catalogue at the same time. This reflects the high usage of these search tools found in the survey (see Q4 and Q5). There is also a clear demand for this functionality regardless of what is being searched for as well even higher demand for the ability to choose whether to use it or not. Very few people do not think this multiple searching would be valuable.

This balance of demand appears to be reflected across both HE and FE, with FE showing slightly more preference for the choice rather than always using multiple searching.

Option	HE %	FE %
Always	43.7%	39.9%
Never	4.4%	3.3%
Depends what I'm looking for – I like to choose when I search	51.9%	56.8%

*Table 29. Q9 results by educational affiliation*

One of the CREE portlets is making use of the JAFER search engine to enable this type of multiple searching across library catalogues.

However, the role of a user does affect the level of desire to carry out of such multiple searching. A number of the user groups within FE actually show a higher intention to always use multiple searching and the overall figure reflects more the higher number of FE UG students responding than a general FE response. The high positive response from postgraduate students and FE staff perhaps reflects the amount of time available for searching and the desire to make the most of this.

	Yes, always		Depends on search	
	HE	FE	HE	FE
Teaching Staff	44.4%	61.5%	48.4%	38.5%
Research Staff	46.2%	54.5%	52.3%	45.5%
Library Staff	37.9%	46.2%	60.9%	46.2%
Support Staff	37.7%	28.1%	54.9%	59.4%
Clerical Staff	33.3%	42.9%	54.8%	42.9%
Postgraduate Student Teaching	56.8%	68.8%	40.5%	25.0%
Postgraduate Student Research	58.3%	69.7%	38.4%	30.3%
Undergraduate Student	46.5%	31.1%	48.6%	67.4%

*Table 30. Q9 results by staff and student group contrasting whether searching multiple library catalogues would always be used or used depending on the search. The most popular responses are highlighted for HE (yellow) and FE (blue)*

Q10. Would you find it useful to search library catalogue(s) and the Internet simultaneously?

Option	%
Always	20.6%
Never	7.1%
Depends what I'm looking for – I like to choose when I search	72.3%

*Table 31. Q10 overall results*

The desire to search across both library catalogues and the Internet at the same time is clearly of interest to users, with over 90% indicating that they would use it, but there is some hesitancy here when compared to a search across just multiple library catalogues. The proportion of users who would never use this functionality is still very low. Whilst there is demand to provide this functionality, there is clearly also the need to approach it with caution and address user requirements for it in greater detail.

The results of this query across HE and FE were almost identical.

Option	HE %	FE %
Always	19.4%	19.7%
Never	6.6%	6.9%
Depends what I'm looking for – I like to choose when I search	74.0%	73.4%

*Table 32. Q10 results by educational affiliation*

Within CREE, none of the portlets being developed make use of search engines that can currently carry out searching across library catalogues and the Internet, mainly due to the lack of an appropriate tool to adapt. Both JAFER and GetRef are capable of searching across library catalogues and bibliographic databases, though not the Internet in general. It is noticeable that there is little functionality available that is able to carry out library catalogue/Internet multiple searching, as most tools have focused in on searching across similar resources. Further testing of metasearch engines will be required to investigate how valuable this multiple source searching will be.

The desire by many roles to always search library catalogues together is not reflected here, with all user groups following the overall figures and trend towards exercising more caution on this type of multiple searching.

Q11. Would you find it useful to conduct a search of any resource from within an online learning environment such as BlackBoard, WebCT or WebLearn?

Option	%
Always	24.8%
Never	10.5%
Depends what I'm looking for – I like to choose when I search	64.7%

*Table 33. Q11 overall results*

As with multiple searching across different resources, there is clear interest in the idea of being able to search from within an online learning environment. Proportionately there is greater potential interest here than the number of people who do make use of Internet search tools whilst using an online learning environment currently (cf, Q6 and Q7). This suggests that if access to the search tools is made available in the user's context, they will be more likely to be used.

There is a greater sense of certainty about this interest from FE, where over a third of users would always make use of tools presented within the online learning environment. This is mainly down to enthusiasm expressed by FE undergraduates, over 53% of whom would always use such tools if available.

Option	HE %	FE %
Always	22.5%	37.6%
Never	11.1%	7.2%
Depends what I'm looking for – I like to choose when I search	66.4%	55.2%

*Table 34. Q11 results by educational affiliation*

CREE will be investigating the potential use of search tools within online learning environments in a subsequent part of the project to examine further how valuable a service this is likely to be.

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Q12. Would you like to be notified of resources, which you could determine in advance, as they become available?

Option	%
By email	45.6%
When I log onto my local virtual learning environment (VLE)	15.4%
When I log onto my local web portal	16.1%
No, this is not of interest to me	12.1%
I don't know	10.8%

*Table 35. Q12 overall results*

Answers to this question were, of course, affected by whether the respondents had a VLE (quite likely) or portal (less likely) they could get notification through. However, regardless of this there is a clear statement that notification via email is the preferred route. This probably reflects aspects of personal information management, which many people centre round their email. Notwithstanding this, there is some interest in being alerted to new resources when logging into local systems. There is also a certain level of not wanting to be alerted in this way, although it was noted that this resulted in part from high responses here for support and clerical staff; it would be interesting to discover how these users find out about new resources, if they do.

FE shows greater interest in using a VLE than a portal, not surprisingly considering the relatively high presence of such systems within FE.

Option	HE %	FE %
By email	47.0%	36.6%
When I log onto my local virtual learning environment (VLE)	15.5%	27.5%
When I log onto my local web portal	15.0%	8.5%
No, this is not of interest to me	11.9%	14.9%
I don't know	10.7%	12.5%

*Table 36. Q12 results by educational affiliation*

The use of RSS to alert users to information and news etc. is an area that has much untapped potential. This question seems to suggest that it will get a limited welcome, although users possibly found this difficult to visualise.

The enthusiasm within FE is also focussed on those involved in teaching and learning more.

	By Email		Via VLE		Via portal	
	HE	FE	HE	FE	HE	FE
Teaching Staff	59.0%	23.1%	13.9%	38.5%	13.9%	15.4%
Research Staff	59.5%	36.4%	6.1%	9.1%	15.3%	18.2%
Library Staff	52.6%	53.8%	10.0%	11.5%	20.6%	7.7%
Support Staff	30.7%	21.9%	16.8%	18.8%	22.1%	12.5%
Clerical Staff	30.2%	14.3%	4.7%	28.6%	14.0%	14.3%
Postgraduate Student Teaching	48.6%	68.8%	29.7%	18.8%	0.0%	0.0%
Postgraduate Student Research	53.6%	42.4%	13.2%	12.1%	9.9%	12.1%
Undergraduate Student	42.8%	33.8%	25.7%	37.0%	8.3%	5.8%

*Table 37. Q12 results by staff and student group, contrasting the preferred method for receiving notification of new resources. The most popular response (by email) is highlighted alongside the second preference for HE (yellow) and FE (blue)*

Q13. Would you like to be able to give others the right to see your resource notifications?

Option	%
Yes	19.7%
No	49.5%
I don't know	30.7%

*Table 38. Q13 overall results*

Even taking into account the level of interest in receiving notification of new resources, there is not much desire to share these with other people! There is probably some uncertainty about what this question was referring to judging by the high 'I don't know' response, however.

FE expressed almost exactly the same opinion as HE on this matter, whilst being very slightly more open to the idea.

Option	HE %	FE %
Yes	19.4%	21.2%
No	49.2%	46.3%
I don't know	31.4%	32.5%

*Table 39. Q13 results by educational affiliation*

A more detailed inspection of user roles suggests that this isn't the whole story, with some being far keener than others to share (though notably not in HE).

	Yes		No		I don't know	
	HE	FE	HE	FE	HE	FE
Teaching Staff	23.6%	46.2%	42.3%	38.5%	34.1%	15.4%
Research Staff	14.5%	27.3%	55.0%	63.6%	30.5%	9.1%
Library Staff	26.1%	38.5%	40.2%	26.9%	33.7%	34.6%
Support Staff	20.8%	12.5%	45.7%	59.4%	33.5%	28.1%
Clerical Staff	7.1%	28.6%	54.8%	14.3%	38.1%	57.1%
Postgraduate Student Teaching	13.5%	25.0%	59.5%	43.8%	27.0%	31.3%
Postgraduate Student Research	15.2%	24.2%	63.6%	42.4%	21.2%	33.3%
Undergraduate Student	16.3%	16.2%	52.8%	48.6%	31.0%	35.2%

*Table 40. Q13 results by staff and student group, with the most popular responses highlighted for HE (yellow) and FE (blue)*

These results reveal a lack of awareness of what RSS and related technologies are and are capable of doing, allowing the sharing of resources through broadcasting one's own information. CREE will be investigating the use of RSS and presenting this to users to gain further information in a subsequent part of the project.

Q14. If you were able to search more than one online resource at a time, what priority would you give to the order in which your search results were displayed?

	Not necessary	Unimportant	Important	Very important
By relevance ranking – best first	1.2%	1.9%	27.1%	69.9%
By type of resource – Internet first	7.2%	27.2%	36.1%	29.5%
By type of resource – local first	7.9%	36.8%	42.4%	12.9%
By type of resource – other first	21.1%	42.8%	17.3%	18.8%
By type of resource – subject specific	6.0%	24.0%	43.1%	26.9%
By date of publication – most recent first	18.5%	48.4%	22.9%	10.3%

*Table 41. Q14 overall results, with the most popular responses highlighted*

It is quite clear that the preferred order of displaying search results is by relevance ranking. This elusive goal does not seem to dampen user demand for it and the value

they place in it. Behind relevance, listing by subject, by what is available locally and listing Internet resources first are the next three in order of preference. None of these is any great surprise, unlike the low demand for ordering results by date of publication, which occurred across all user groups. This is a staple way of ordering search results within many bibliographic databases and other Internet search tools. The results of this question would seem, however, to call its usefulness into doubt.

Breaking down the results into HE and FE produces no real differences other than for the option of ordering by Internet resource first. FE was more evenly split over the value of ordering results this way, but also did not regard this option as being as useful.

	Not necessary	Unimportant	Important	Very important
By type of resource – Internet first	HE 5.6% FE 15.6%	HE 28.7% FE 31.1%	HE 43.5% FE 28.9%	HE 22.2% FE 24.4%

*Table 42. Q14 results by educational affiliation for displaying results by Internet resources first, with the most popular responses highlighted*

These results indicate that ordering of search results is important to users. The preferred method of ordering these results is relatively mixed, though, albeit that relevance is the clear winner. Although the results are mixed, they were consistently mixed across all user groups.

Q15. Would you like the results of your search to appear within your VLE session?

Option	%
Yes	46.1%
No	16.6%
I don't know	37.3%

*Table 43. Q15 overall results*

The value of displaying search results from within an online learning environment is high according to this question, although clearly a large number of respondents were uncertain what the question referred to. Interestingly, when compared to Q11, there appears to be a greater number of users who would not wish to have search results displayed than those who would not want to search from within the online learning environment anyway. Hence, even where searching is available, some would prefer to have the results displayed elsewhere, or at least separately from the learning environment itself.

The figures for HE and FE matched each other for this question.

Option	HE %	FE %
Yes	46.6%	44.6%
No	15.6%	17.7%
I don't know	37.8%	37.6%

*Table 44. Q15 results by educational affiliation*

The most enthusiastic user group were FE teaching staff, over 60% of whom were in favour. Most other user groups followed the overall figures.

CREE will be testing the relative merits of where search results are best displayed in a subsequent part of the project.

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