SS Watch

OSS Watch National Software Survey 2010

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&
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JISC

Acknowledgements

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Introduction

This report presents the results of the OSS Watch National Software Survey 2010. The survey studies the status of open and closed software in Further Education (FE) and Higher Education (HE) institutions in the UK. It is the fourth in a row of biennial national surveys funded by the Joint Information Systems Committee (JISC).

The report opens with a summary of the findings followed by a section on study design and methodology. The main part of the report presents the data in detail and is split into five subsections, each representing one group of questions in the online questionnaire:

- General information about institutions
- ICT policy and procurement practice
- Software running on servers
- Software running on desktops
- Comments by survey respondents

Finally an Appendix is included containing a copy of the questionnaire and a summary of the survey data.

About OSS Watch

OSS Watch provides unbiased advice and guidance on the use, development, and licensing of free and open source software. OSS Watch is funded by the JISC and its services are available free-of-charge to UK Higher and Further Education. If you want to find out more about open source software, we're the people to ask. OSS Watch is based at the Oxford University Computing Services.

Here are some things we can help with:

- building new or engaging with existing development communities (for sustainability)
- software licence advice
- engaging with commercial companies (e.g. software procurement)
- finding routes to exploit your outputs commercially (e.g. institutional technology transfer units)
- exploring options for sustainability of software development activities
- evaluating the best software solution (either open source or proprietary – we are non-advocacy)

Executive summary

In late 2010 OSS Watch conducted their 4th bi-annual survey of Higher and Further Education IT directors' attitudes towards, and adoption of, open source software.

In terms of procurement policy we see an ever-increasing awareness of the possibility of using open source software. There has been another big increase in the number of institutions that include the consideration of open source in their procurement policies, both in Higher Education (HE) and Further Education (FE) (figure 6). This will help creating a more level playing field for suppliers of open source software.

On the other hand, there is still a relatively large number of institutions that indicate they prefer closed source over open source (35% of FE and 15% of HE respondents, figure 5). We suspect this is based on a continued lack of understanding about open source that needs to be addressed.

The essential differences between open and closed source are its development and licensing model. There is no reason why an open source solution could not have a very strong backing of a commercial entity and open source suppliers are capable of providing their software with terms very similar to those of suppliers of closed source software. Suppliers such as Red Hat have demonstrated this over many years. It may be true that some suppliers of open source do not match up to the requirements of a procurement exercise in a major institution, but this holds just as true for closed source software suppliers. The suitability of open source solutions and suppliers needs to be evaluated on a case by case basis. Having a policy that prefers one model over another, by default, is not helpful in this respect.

With respect to the use of open source software in institutions, there is another reported increase, both on servers and on desktops. This was predicted by responses in the 2008 survey. For FE, the increase is a little less than predicted, whereas for HE, the increase is a little more than predicted (figure 15).

For the first time we conducted a separate background survey. We asked a broader spectrum of staff at HE and FE institutions about open source software. Respondents were given the option of answering the questions for the whole institution or for their department only.

There were a few differences in the responses between the regular survey and the background survey. For example, when asked about policy relating to open and closed source software, there was a less pronounced preference for closed source software and a more pronounced preference for open source software. This was especially true at the departmental level.

But one of the most striking results of the background survey was the responses to the question of whether they contributed to open source software.

A much higher proportion of the respondents indicated that they contribute to open source software compared to the main survey (figure 8). This is also especially true on the departmental level. When IT directors are unaware of their staff's contributions, they have no knowledge of or control over these IP assets generated in their institution. This disconnect needs to be addressed in order to ensure copyright is being correctly managed in these contributions.

While there are more contributions than directors know about, there are fewer policies that encourage and manage these contributions. The survey respondents indicate that engagement with open source is now mentioned in fewer job descriptions of IT staff than was the case in the previous survey in 2008 (figure 13 and figure 27). Most report that this should be done in the employee's own time, which means it will not be done in most cases; there will just be local modifications.

This indicates a lack of policy towards managing open source engagement. How do we know the staff member is allowed to contribute to an open source project? Who owns the copyright in these cases? Is the staff member liable when there is a dispute? Lack of a managed contribution policy can expose institutions to legal risk.

On the other hand, respondents are expecting more deployments of open source software on their IT infrastructure (figures 16 and 30). This makes it even more urgent that engagement with open source projects is addressed by the IT management. This needs to be done both in the job description of the IT staff as well as in the day-to-day management of their work.

For efficient and effective management of open source IT systems it is important that the staff involved with the running and maintenance of the software can engage with and contribute to the software project easily and that this is in fact encouraged to gain the most benefit out of the project.

Respondents indicate that several IT systems are

due for replacement in close to 50% of institutions (figure 25 and 34). Given the ongoing increase in institutional interest in and use of open source software alongside the significant open source emphasis of government policy on software procurement in the public sector it is crucial that the question of how to assess open source software in a procurement process is addressed.

The survey examined the criteria that respondents find most important when procuring software. The number one issue is the Total Cost of Ownership (TCO) of solutions.

However, when asked for the common reasons for rejecting open source software in procurement, most of the top criteria are not related to TCO. Issues that heavily influence TCO, such as migration costs, do not appear in the top 5.

One of the top five reasons provided was 'interoperability and migration problems'. However, the effort of migration to open source is comparable to, if not less than the effort of migrating to another closed source solution. We therefore suggest that these respondents were likely to reject migrating to a new closed source solution for the same reason. Other reasons given are largely issues of education and supplier availability.

All in all, this survey supports the idea that open source software is still on the rise in the UK higher and Further education sector. A number of issues need to be addressed, such as providing a means to perform an accurate and consistent Total Cost of Ownership calculation for software, both open and closed source. The survey shows that there is now a real opportunity for open source suppliers to build offerings suitable for the sector. However, it also shows that institutions need to gain an understanding of how to evaluate open source products and suppliers and how to manage their engagement with those suppliers or with the projects themselves.

OSS Watch is continuing its work in these areas. We are developing a Software Sustainability Maturity Model[1] and a process for evaluating the Total Cost of Ownership of procurement solutions. Developments like these will continue to help institutions assessing open source software and create a more level playing field.

[1] http://www.oss-watch.ac.uk/resources/ssmm.xml

Study design

This year's study was designed around a main survey and a subsidiary 'background' survey which ran concurrently, but had different target populations. The main survey repeated previous OSS Watch surveys and was aimed at IT directors in FE and HE institutions. The subsidiary survey was aimed at providing a broader view of the issues surrounding open source software and was conducted with an expanded sample. Both surveys were conducted online using SurveyMonkey[2].

The main survey

The 2010 OSS Watch National Software Survey closely followed the design of the previous survey although the questionnaire was modified slightly following recommendations in the report on the 2008 survey[3]. The following modifications were made:

- The respondents were given the option to select their type of institution more flexibly by allowing them to indicate that their institution falls into both the FE and HE sectors.
- Questions asking the IT directors to estimate the number of students and academic staff in their institution were removed.

Apart from these changes, only minor alterations were made to the questionnaire and therefore the two surveys are overall comparable and provide a good insight into the changes in the status of open and closed software since 2008.

Response rates

A list of FE and HE institutions was compiled on the basis of a list provided by UCISA[4]. This was supplemented by a list created in the previous years in order to achieve a full list of institutions, which was as comprehensive as possible. A total of 619 IT directors (or equivalent positions) of HE and FE institutions in the UK were contacted by letter. A subsequent email containing an invitation to participate in the survey was sent out within a week. Two further reminder emails to those who had not yet responded were sent out with a week's interval in order to achieve a maximum response rate.

The overall response rate for the survey was 18%.

However, 120 of the email addresses were no longer correct suggesting that a number of the recipients had ceased to hold the IT director positions or that the email addresses had changed for other reasons. The actual response rate is therefore slightly higher.

Not all respondents completed the entire survey; the numbers used for the data analysis are therefore the following:

- 3 respondents were excluded on the basis of the type of institution they indicated, which did not fit either an FE or an HE profile
- a further 8 respondents quit the survey after answering only the first 3 questions - they are also excluded from the data set
- 17 respondents quit the survey after responding to question 8 - thus they have answered the questions about institutional policy - their responses are included in questions 1-8, thereafter excluded.
- 5 respondents quit the survey after answering Q22 - thus they have answered all the questions about server software - their responses are included in questions 1-22, thereafter excluded.

Therefore the response counts are as follows:

- Qs 1-8: n=101
- Qs 8-22: n=84
- Qs 22-31: n=79

Comparisons with the 2008 survey

The 2008 survey had different response/non-response patterns from the current one, which must be taken into consideration when comparing the results. In the present survey most questions were mandatory and attrition happened between pages of the survey. In the previous survey fewer questions were mandatory wherefore the non-response patterns are different. The 2008 report indicated in the reporting of every question whether the whole pool of respondents was taken into account or only the ones who had answered the particular question.

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2 http://www.surveymonkey.net/

3 http://www.oss-watch.ac.uk/studies/survey2008.pdf

4 http://www.ucisa.ac.uk/

To allow for comparison the following measures were taken:

- In the cases where the 2008 non-response rate is below 6% it will be ignored (this will be indicated in the text).

- In the cases where there is a significant level of non-responses in the previous survey, the 2008 results will be recalculated to exclude the non-respondents in order to provide a more true comparison to the 2010 data.

Background survey

The background survey was a new addition to the study and was aimed at providing a broader picture of the issues concerning open and closed source software in FE and HE institutions. The sample for this survey was drawn from professionals, mainly in the HE sector, who are involved in ICT in their institution and who have expressed an interest in open source software by subscribing to the OSS Watch mailing list. This survey was also announced on the OSS Watch blog inviting interested parties to take part.

The total number of respondents to this survey was 153. 15 respondents were excluded on the basis of the type of institution they indicated, which did not fit either an FE or an HE profile. The number of respondents used for the analysis was there 138.

The background survey was similar to the main survey and the majority of the questions were identical. However, to provide a better context for the broader sample of respondents, the respondents were asked to provide additional information about their roles in the institutions.

The respondents represent a mix of IT managers (33), other management staff (13), IT and software development staff (14), library staff (13), learning technologists and e-learning staff (11), teaching and other academic staff and students (23), IT directors (8), support and administration staff (7) and other types of staff who have an interest in the institutional IT systems (16). Most of the respondents to the background survey (71%) reported being part of the support staff rather than teaching staff at their institution.

It was anticipated that some of the respondents to the background survey may not have full knowledge about the central IT provision or policies in their institution. Therefore they were given the option to respond about their departmental policies and provision instead. 54% (74) chose to answer the survey in light of central ICT provision in their institutions and 46% (64) only had knowledge about departmental conditions. When comparing the results of the main survey to the background survey it will be indicated whether the comparison is made with the responses about central or departmental provision (or both in case there is little difference between the two categories).

In contrast to the main survey fewer questions in the background survey were mandatory in order to allow for a broader mix of staff roles of respondents who may wish to participate in the survey, but may only have partial knowledge of the issues covered. Therefore the response patterns in the background survey are also different with large non-response numbers in the optional questions. Where comparisons are made to the background survey, the number of respondents is indicated following the notation: (n = number of respondents).

Survey section 1: General information about institutions

Q1: Type of institution

Q1. What type is your institution?

The response numbers from FE and HE institutions were similar with 46 IT directors from FE completing the survey and 54 directors from HE institutions. A small number (9) of responses from other types of institutions were included in the analysis. This small group of institutions was not enough to obtain significant separate results and therefore these responses were recoded under the FE and HE groups:

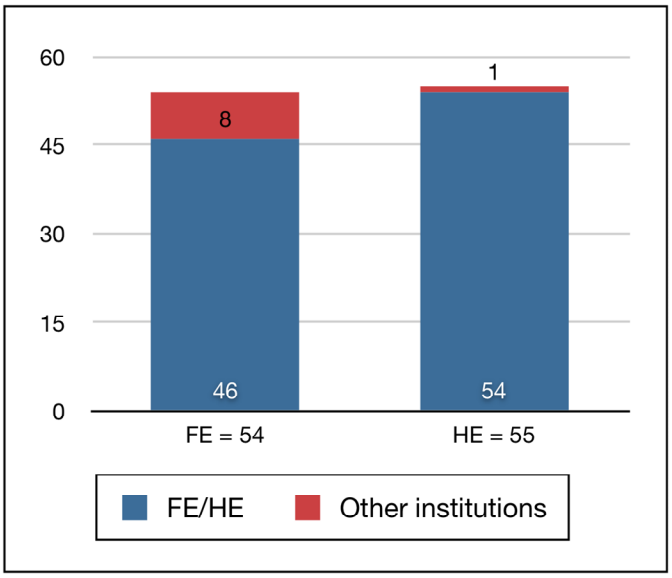


Figure 1: Types of institutions

- 6 of the 9 institutions offer a mix of FE and HE provision, these were aggregated under FE
- 2 are Sixth Form colleges and were included in the FE numbers
- 1 is a post graduate law college, subsumed under HE

The resulting totals were therefore 54 for FE and 55 for HE institutions as shown in Figure 1.

The 138 respondents to the background survey were mostly from the HE sector (116 respondents) with a much smaller proportion from FE institutions (22 respondents). Of these 22 responses, 5 were from mixed FE and HE institutions, which are all included under the FE category, as in the main survey.

Q2: Appropriateness of sample

Q2. Do you have any of the following responsibilities in your institution?

To test the appropriateness of the sample to answering the questions in this survey, participants were asked to indicate whether they had responsibility for the areas touched upon by this study. As shown in Figure 2 the vast majority of the respondents were involved in developing and implementing ICT policies, budgeting and software procurement. Other areas show lower involvement (especially in FE institutions). However personal involvement in the first four categories is most significant in terms of answering the questions in this survey and indicates that the participants are likely to be knowledgeable about the issues probed here. Also the respondents to the background survey indicated much lower levels of involvement in all the areas queried with no levels of involvement above 64%. This indicates that IT directors are a more appropriate sample for answering this survey.

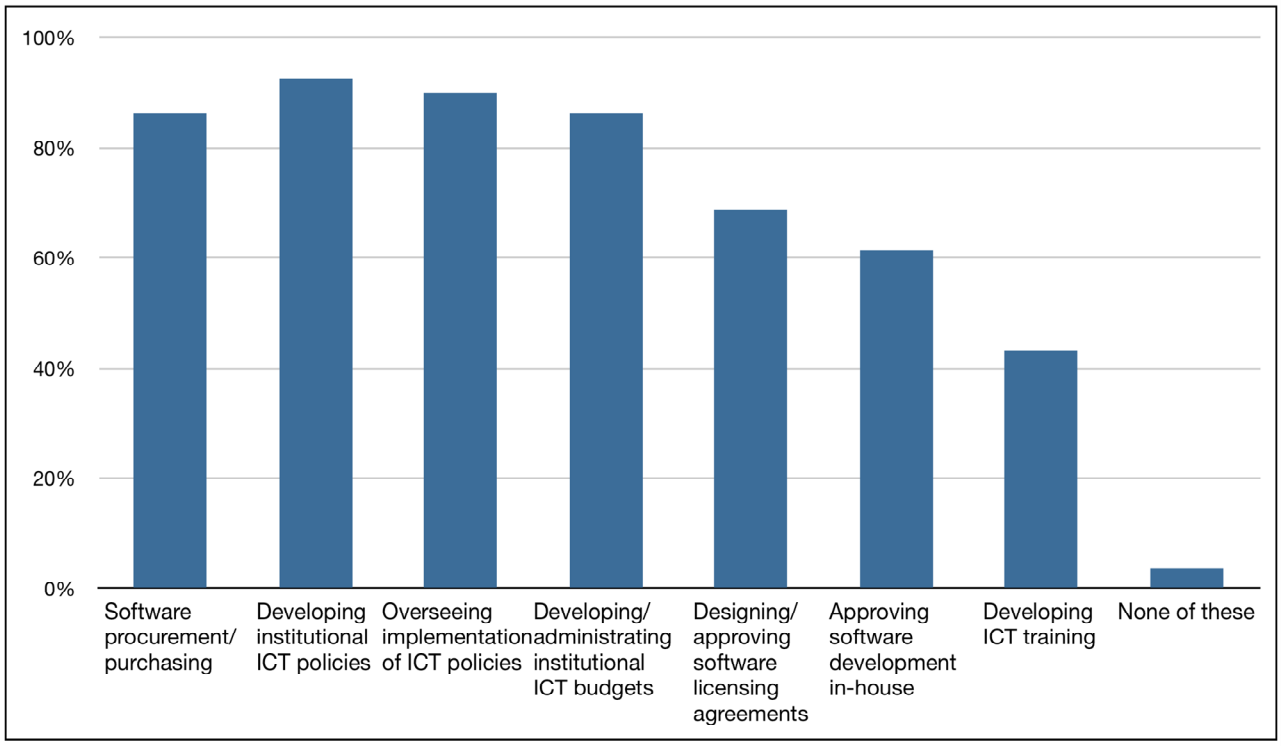
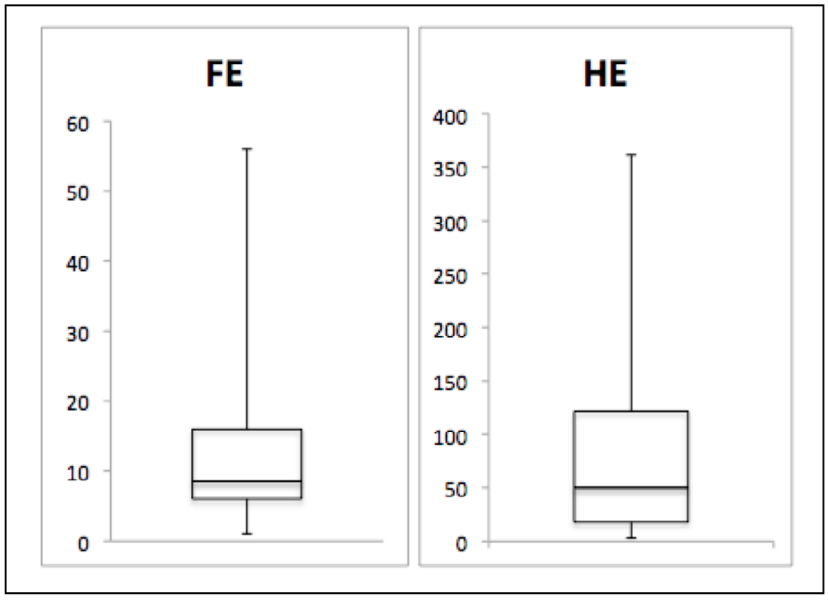


Figure 2: IT directors' responsibilities - average across FE and HE institutions (Q2)

Q3: Number of ICT staff

Q3. What is the approximate number of ICT staff at your institution?

If your institution's ICT provision is decentralised, please consider services provided centrally by your institution.



The estimates of the number of ICT staff provided by the respondents suggest that a typical FE ICT department employs between 6 and 16 staff and that a typical ICT department in HE is larger: anywhere between 20 to 120 employees, with a median of 50. However, the spread of estimates is very large, especially in HE, suggesting a potential need for a more precise measure of numbers of ICT staff than can be provided here.

Figure 3: Number of ICT staff (extreme outliers have been removed from this representation - 2 in FE and 3 in HE)(Q3)

Survey section 2: ICT policy and procurement practice

Q4: Institutional ICT policies

Q4: What best describes your institution in terms of ICT-related policies?

The responses to Q4 largely repeat the pattern of the corresponding question in the 2008 survey. There is a small increase in the number of official ICT policies (to 67% in HE and 76% in FE in 2010) and a similarly small decrease in the number of ICT policies which are spread across other policies (e.g. administration, accounts etc.) (to 28% in HE, the number for FE remains the same at 24%).

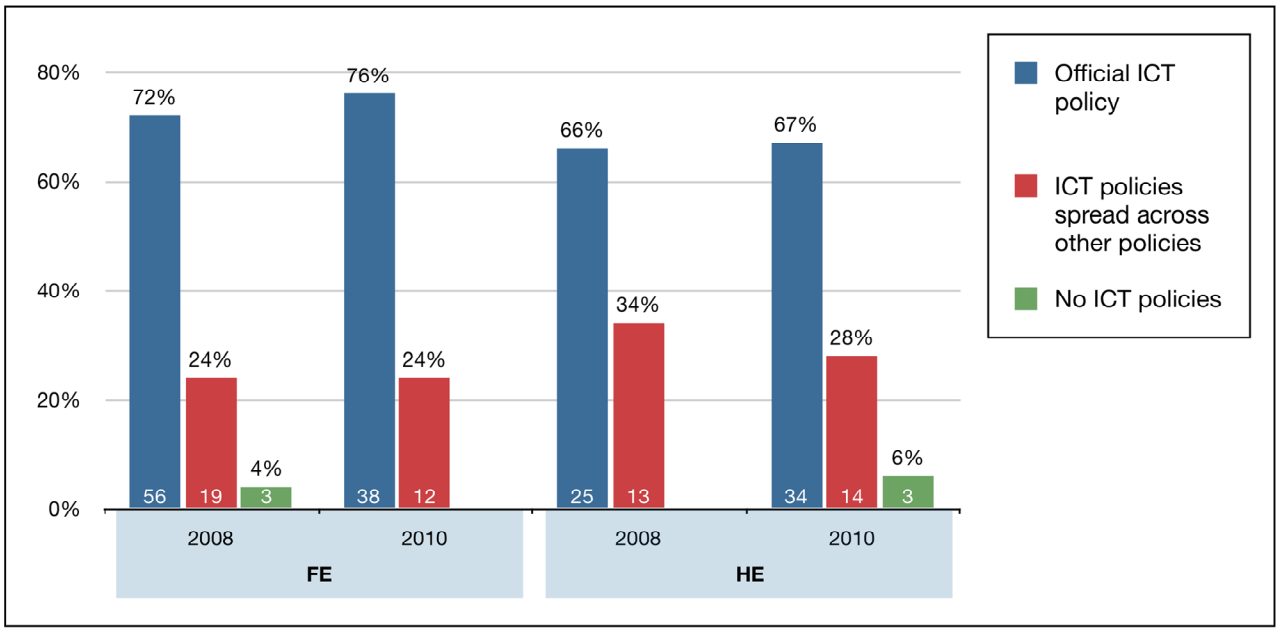


Figure 4: Types of ICT policies compared with 2008 survey (Q4)

The data from the background survey (n=115) suggest that individual departments are less likely to have official ICT policies (44%) than is the case for institutions centrally (59%). However this number might be somewhat skewed, because a total of 15% of the respondents indicated that they do not know the state of their institution's or department's ICT policies.

Q4a: Institutional policies for open and closed source software

Q4a. What best describes your institution's policies about open and closed source software?

As shown in Figure 5 the biggest difference between open and closed source software in terms of policy is that very few institutions mention open source software as being their preferred option. No respondents indicated that their institutional ICT policy prohibits the use of either type of software.

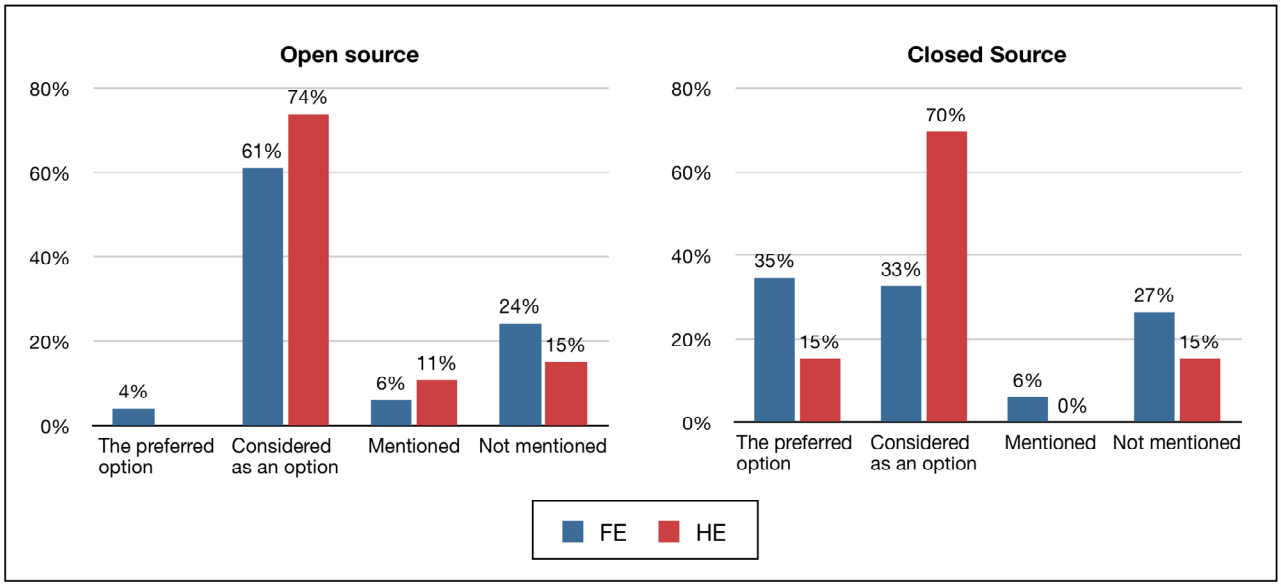


Figure 5: Policies about open and closed source software (Q4a)

Compared to the 2008 survey (Figure 6) the most notable difference is the increase in the number of institutions to consider open source software as an option, especially in HE (from 46% to 61% for FE and from 43% to 74% for HE institutions). The second notable difference is the decrease in the number of policies where open source software is not mentioned (from 43% to 24% for FE and from 49% to 15% for HE institutions). Very few institutions, if any, consider open source software to be their preferred option.

The background survey largely confirms this picture (n=95). However, a larger proportion of the respondents answering this question about their departmental policies (13%) indicated that open source software is the preferred option in their department (NB. This proportion corresponds to only 5 responses). Also a lower proportion of respondents indicated that closed source software was the preferred option across both institutional and departmental answers (19% for institutions 16% for departments).

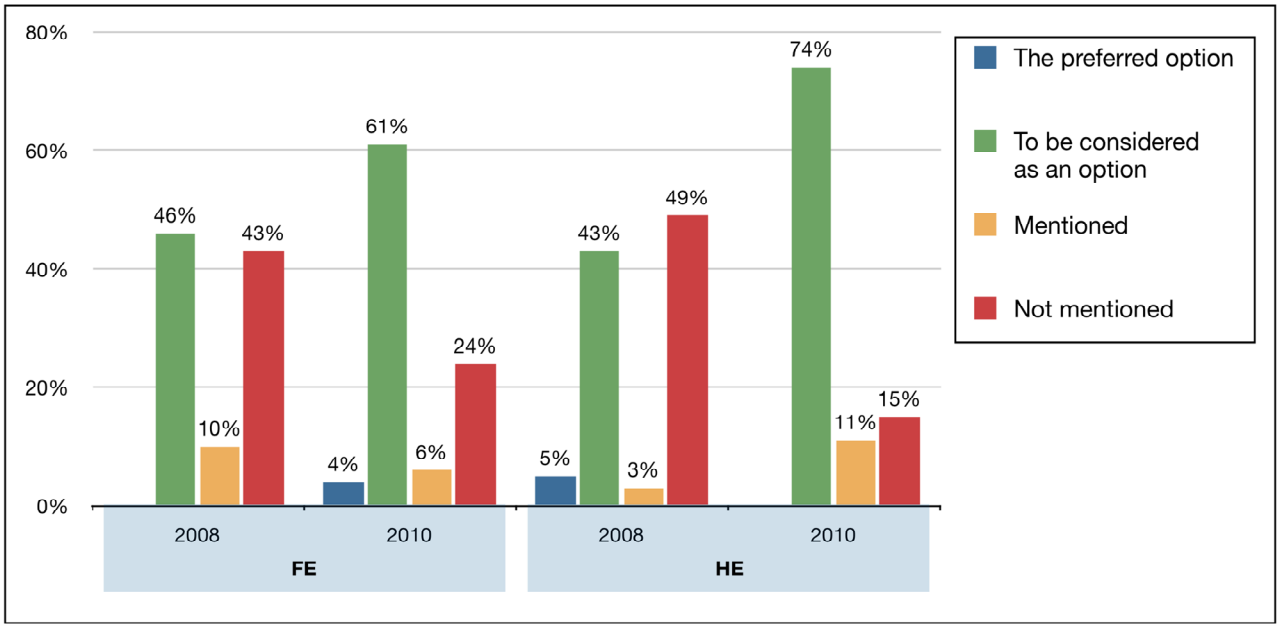


Figure 6: Policies for open source software compared with 2008 (Q4a)

Q5: Software considered for procurement/deployment in practice

Q5. In practice, what software is considered for procurement/deployment in your institution?

In practice almost all institutions include open source software in their considerations when procuring/deploying new software and this number has increased since 2008 by about 8% to 94% in FE and to 98% in HE (if the small number of institutions who provided no answer in the 2008 survey are ignored). It is evident, however, that closed source software continues to dominate in both FE and HE institutions, although there has been a small increase in institutions who consider open and closed source software equally since 2008.

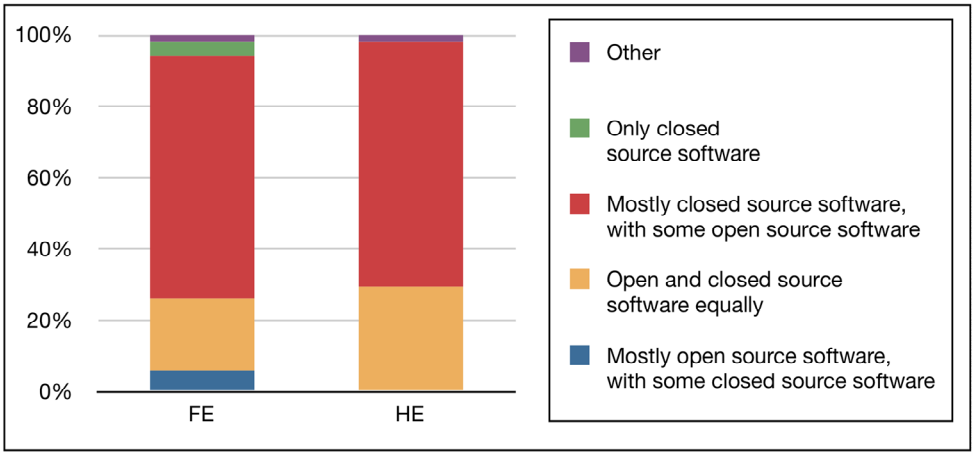


Figure 7: Software considered for procurement/deployment in practice (Q5)

While the data from the background survey (n=115) confirms this picture in terms of central ICT provision, it suggests that on a departmental level open source software is more popular. Thus 17% of respondents replying in terms of their departmental ICT provision indicated that their department considers only or mostly open source software.

Q6-8: Staff contribution to software projects

Q6/7. What is your institution's policy regarding staff contributing to open/closed source software projects?

The responses on policies regarding staff contribution to software projects largely follow the picture from the previous survey. Most of the staff who contribute to both open and closed source software projects do so either in a casual manner, in their own time, assuming personal responsibility, or because the working practice encourages it (without regulating it). This trend is stronger in the present survey, showing a small decrease in the number of institutions where contribution is part of the institutional policy. Furthermore in this survey no institutions indicated that contribution to software projects was part of staff contracts, which was the case for a few institutions in 2008 (however this number was negligible in the 2008 survey). Overall there is a significant move towards disaggregating staff contribution to open source projects from institutional or departmental policies (this result is significant at a confidence interval of 99%). Similarly to the 2008 survey, a large proportion of respondents were not aware of their institution's practices regarding staff contribution to software projects.

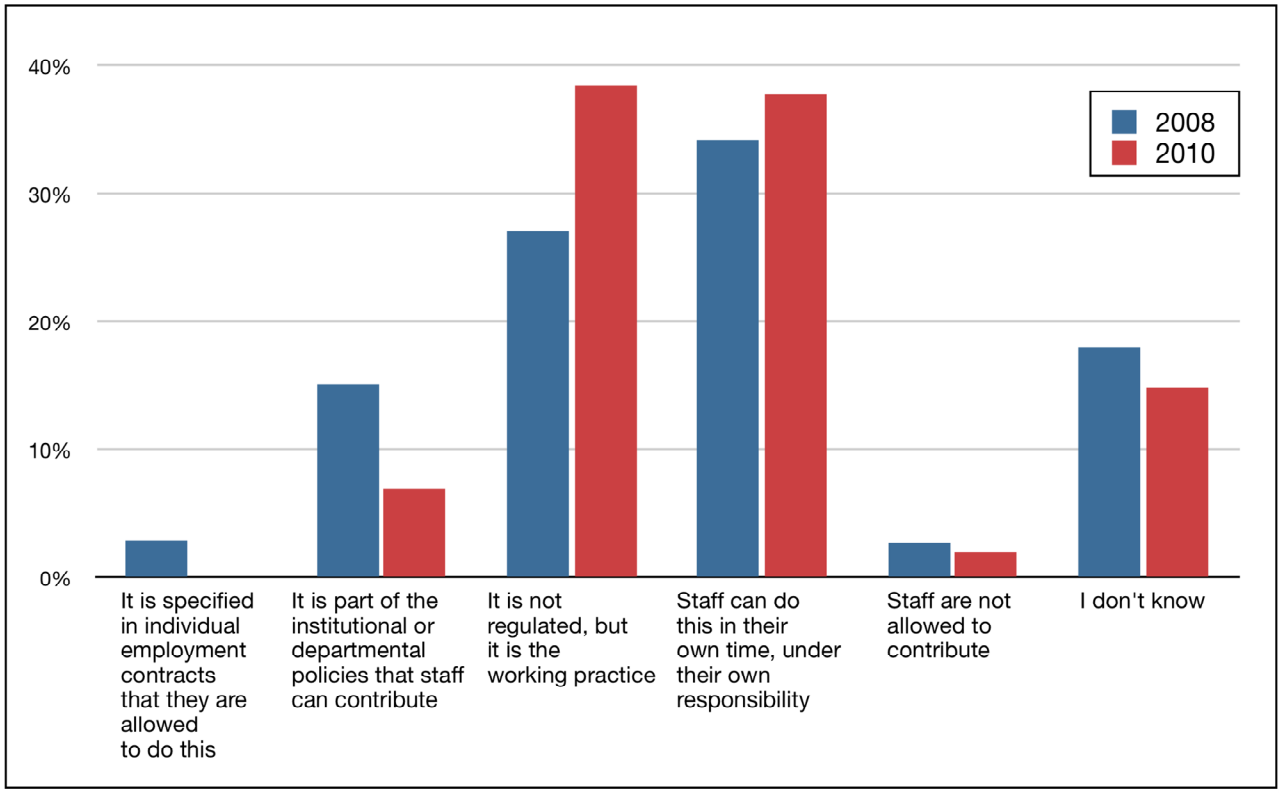


Figure 8: Policies regarding staff contribution to open source projects in 2008 and 2010 - average across FE and HE institutions (Q6)

There is a notable difference in the approach to contributing to open source projects between FE and HE. Whereas in FE a large proportion of staff mostly do it in their own time, in HE it is unregulated working practice for a similarly large proportion of staff.

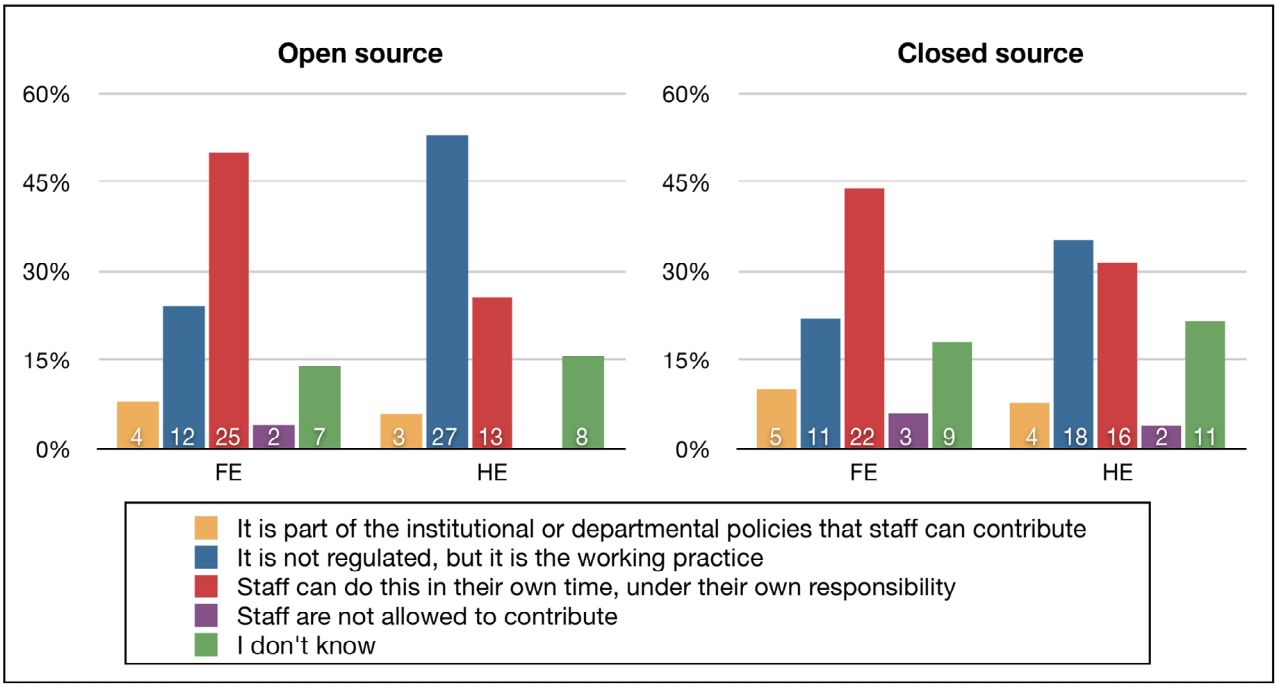


Figure 9: Policies regarding staff contributions to open and closed source software projects (Q6&7)

Q8. In practice, how often do ICT staff contribute to software projects?

Contributions to software projects include being an active member of a mailing list, submitting patches, writing documentation or code, etc.

In practice staff tend to contribute more often to open source than closed source projects, a picture common to both FE and HE institutions.

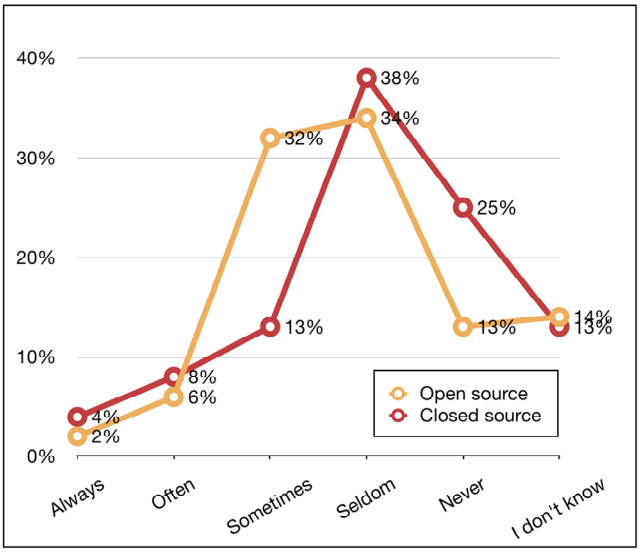


Figure 10: Staff contribution to open and closed source software projects - average across FE and HE institutions (Q8)

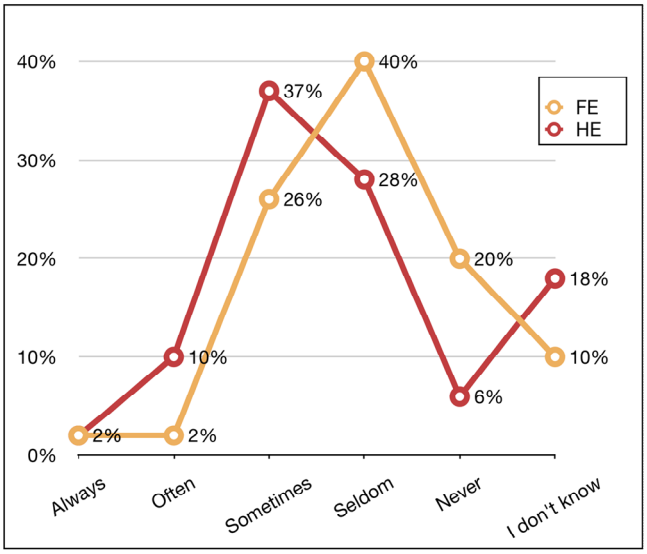


Figure 11: Staff contribution to open source projects in FE and HE (Q8)

Staff in HE institutions are generally more likely to contribute to open source projects with staff contributing 'often' in 10% of HE and 2% of FE institutions and 'never' in 6% of HE and 20% of FE institutions (see Figure 11).

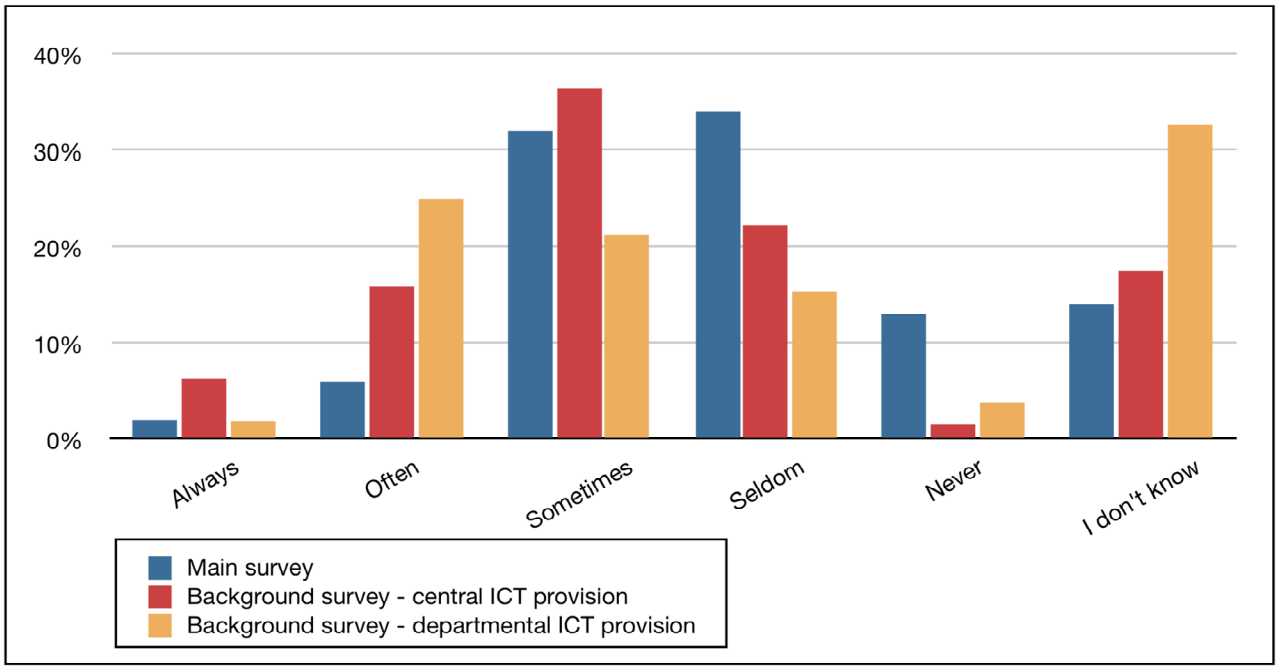


Figure 12: Staff contribution to open source projects – comparison of responses from the main and background surveys

The respondents to the background survey (n=115) indicated a higher rate of contribution to open source projects than did the respondents to the main survey. The difference was especially pronounced if comparing the data from the main survey to the responses for the departmental level in the background survey. However a large proportion of the respondents answering for their department in the background survey indicated that they do not know about the rates of contribution. Nonetheless this data raises questions about the reasons for the difference in perception between the two samples, which merit further investigation.

Survey section 3: Software running on servers

Q9&10: Software support for servers

Q9/10. What best describes the support for open/closed source software running on your institution's servers?

The pattern of responses to question 10 with regards to support of closed source software running on servers largely follows the pattern of the corresponding question in the 2008 survey. The support duties are included in the job description of some or all staff in most institutions.

With regards to support of open source server software (Q9), there is a notable decrease since 2008 in the proportion of institutions where this is mentioned in staff contracts. There is an increase of 25% in the number of institutions where staff do provide support, but where it is not part of their job description and also a small increase in outsourcing.

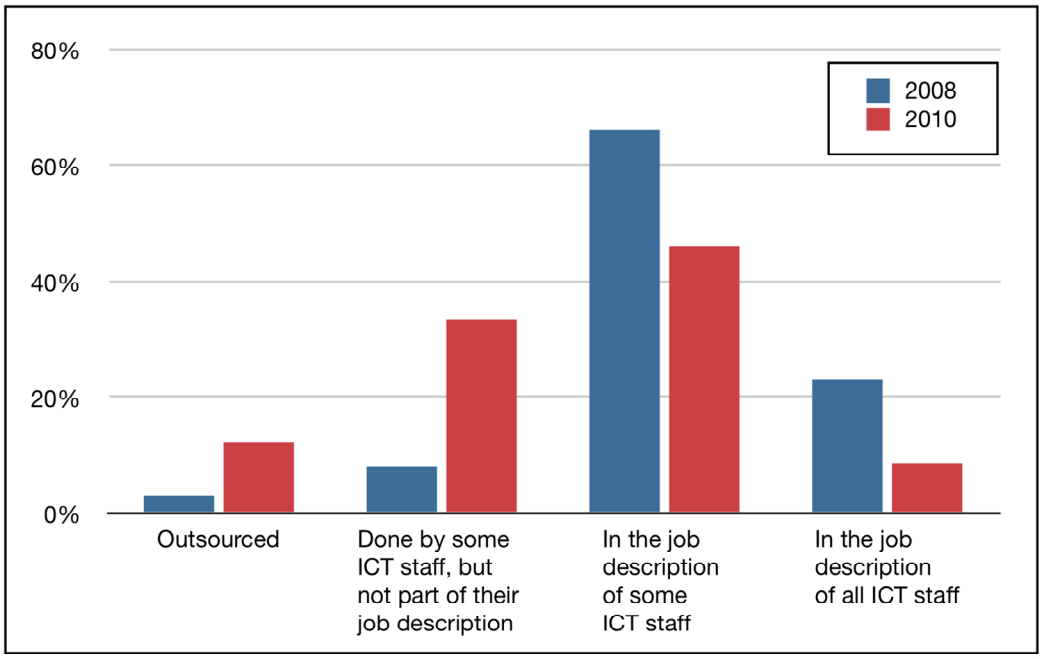


Figure 13: Support for open source software running on servers in 2008 and 2010 - average across FE and HE institutions (Q9)

Q11: Ratio of open and closed source software deployed on servers

Q11. What is the approximate ratio of open and closed source software deployed on your servers? (in the past; currently; planned for the future)

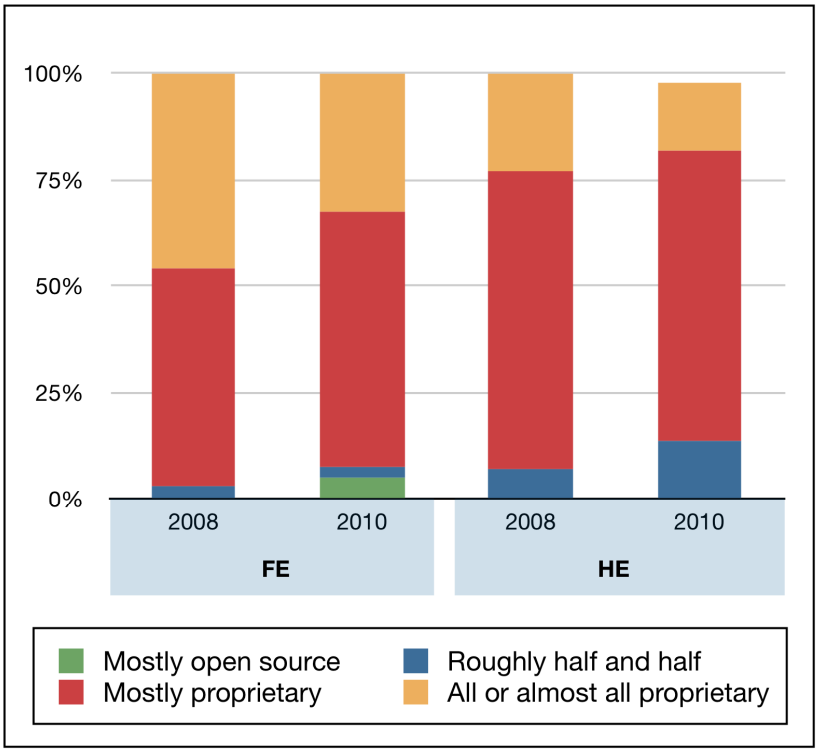


Figure 14: Ratios of use of open and closed source server software in FE and HE institutions - reported 'current' states of 2008 and 2010 (Q11).

Compared to the data from the 2008 survey there has been an increase in the number of institutions who deploy open source software on their servers (the increase is significant at a confidence interval of 90%). Thus the total proportion of institutions using open source software to any extent has increased from 54% to 68% in the FE sector and from 77% to 82% in the HE sector. The proportion of institutions reporting to use all or almost all closed source software has correspondingly decreased from 46% to 33% for FE 23% to 16% for HE institutions (see Figure 14 - 1 respondent who did not know the current state of affairs in HE has been omitted in this representation).

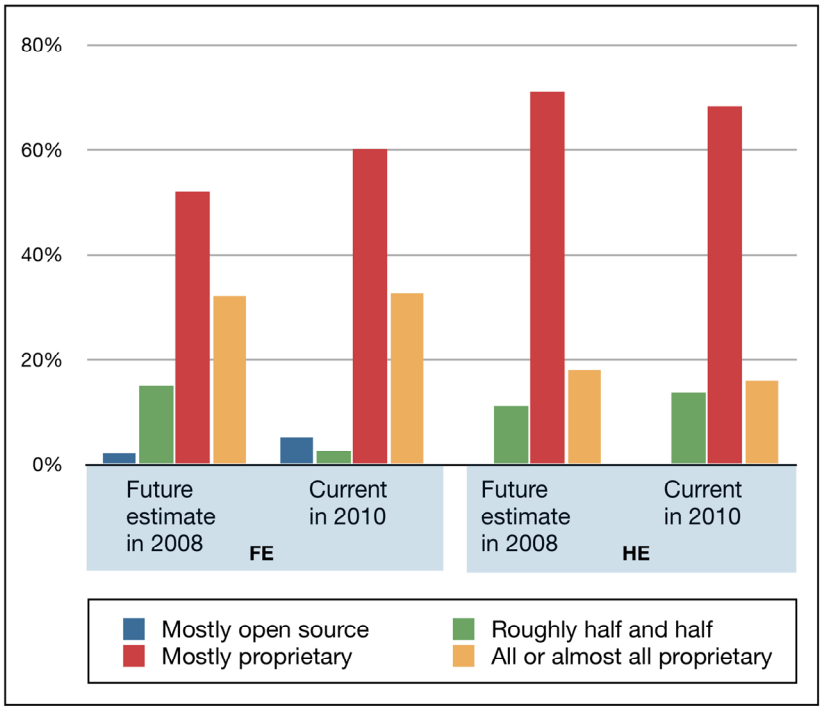


Figure 15: Comparison of ratios of open and closed source server software in FE and HE institutions planned for the future in 2008 with current reported ratios (Q11).

The development planned for the future in 2008 holds fairly true compared to the current conditions reported in 2010, as illustrated in Figure 15. Fewer FE institutions than predicted reported a 50/50 ratio of open to closed source software, however a larger number reported using mostly open source software. The time span of 'future' was not indicated in either survey, and therefore these estimates may apply more precisely to a later date.

The trend predicted for the coming years in the current survey is towards further increases in deployment of open source software. This trend is slightly stronger for HE rather than FE institutions, but the difference is small. However, closed source server software is currently and is predicted to remain dominant in both FE and HE institutions.

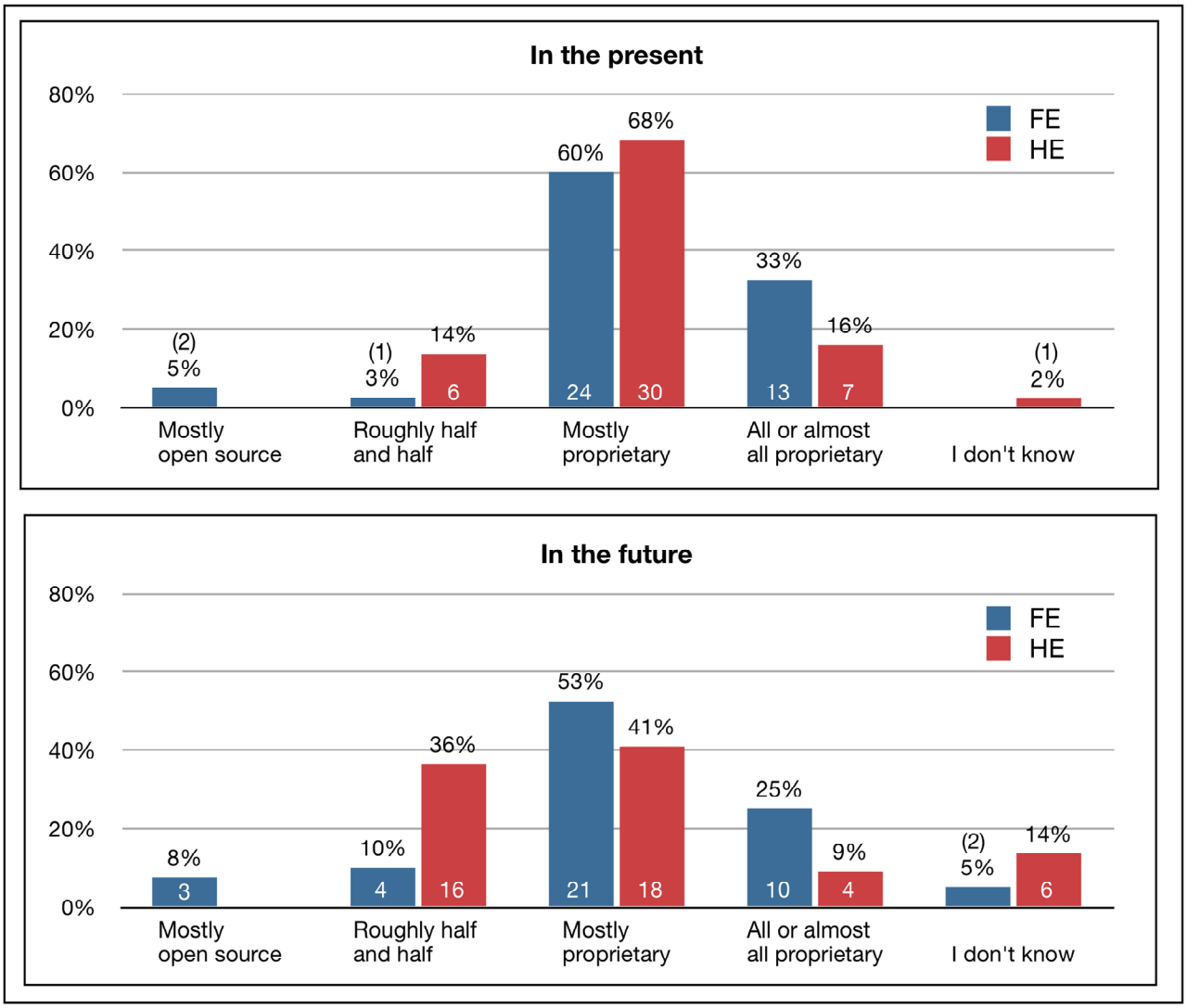


Figure 16: The current ratios of use of open and closed source server software in FE and HE institutions and the ratios currently planned for the future (Q11)

Q12: Server operating systems

Q12. Which of the following operating systems are used on your institution's servers?

The survey data show that Windows Server 2003 is reported to be by far the most used server operating system, which is unchanged since the 2008 survey. The use of Mac OS X has increased compared to the 2008 data and so has the use of Linux (Red Hat) in HE institutions. Since the time of the previous survey Windows Server 2008 has been introduced and has been taken up by 25% of HE institutions and 32% of FE institutions. As noted in the last survey, Windows Server 2008 was only taken up by a small minority of institutions at the time and it does not appear at all in the data in this survey.

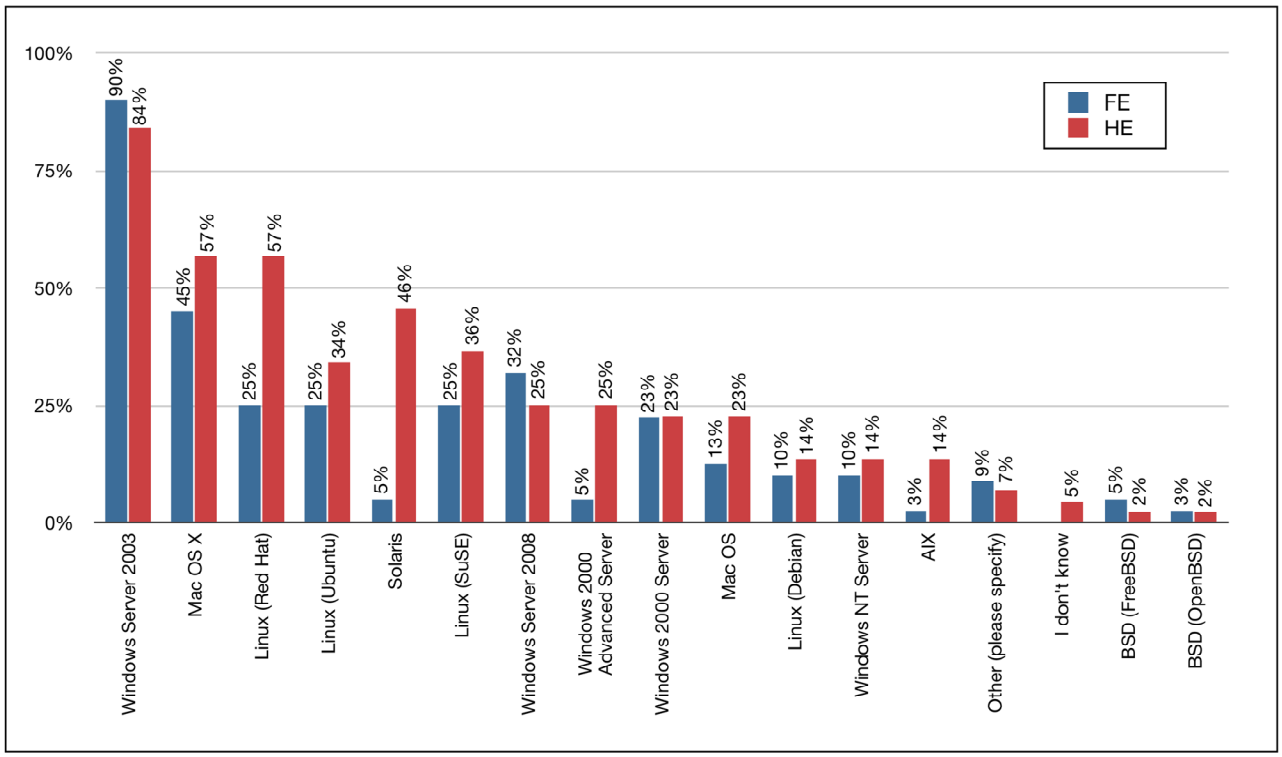


Figure 17: Operating systems on servers (Q12)

Q13: Mail servers

Q13. Which of the following mail servers are used at your institution?

As was the case in the previous survey, Microsoft Exchange is by far the most popular mail server, and has had a slight increase in popularity in HE since 2008. It is now used in 76% of FE institutions and 86% of HE institutions. According to the data Exim has fallen out of use in FE, but slightly grown in popularity in HE (from 18% to 25%). A higher number of HE institutions also report outsourcing their mail server solution (3% in 2008 and 14% in 2010). Additions to the list of mail servers being used were Googlemail and Microsoft's Live@edu. However these are used in only a few institutions.

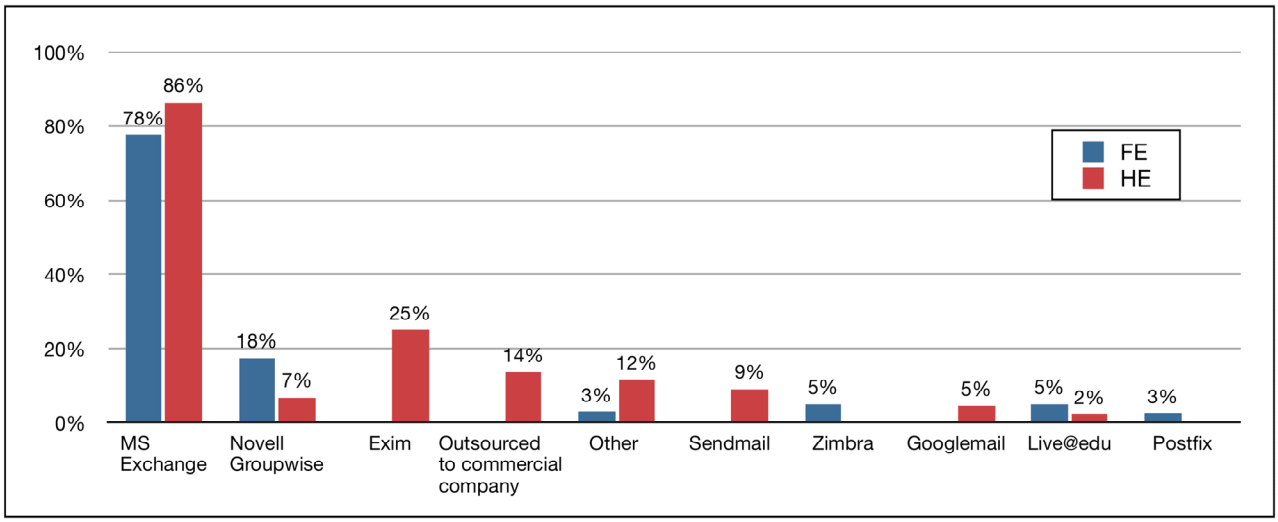


Figure 18: Mail servers (Q13)

Q14: Webmail systems

Q14. Which of the following webmail systems are used in your institution?

Microsoft Outlook Web Access remains by far the most popular webmail solution across FE and HE and has gained in popularity since 2008 (from 63% to 86% in HE and from 61% to 78% in FE institutions). Novell NetMail, previously the second most popular solution, has lost popularity, while Novell Groupwise has become slightly more prevalent. As in the previous question, Google Mail (especially popular in HE) and Microsoft Live@Edu have been the new additions to the list of webmail solutions.

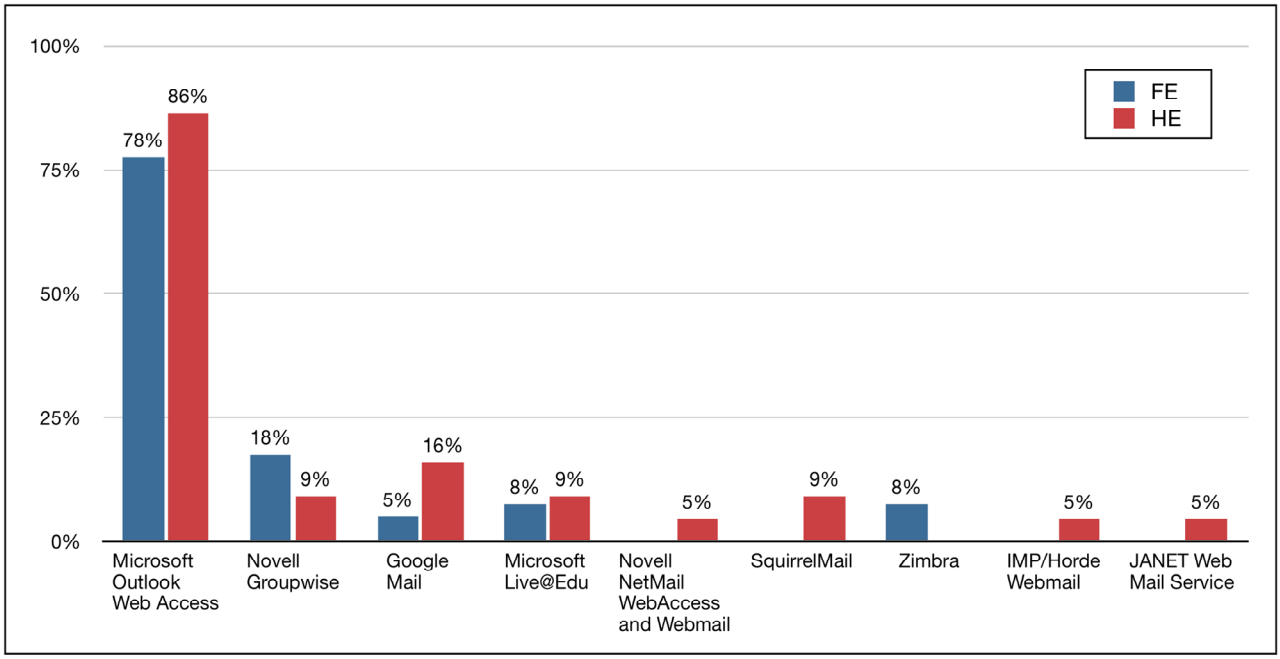
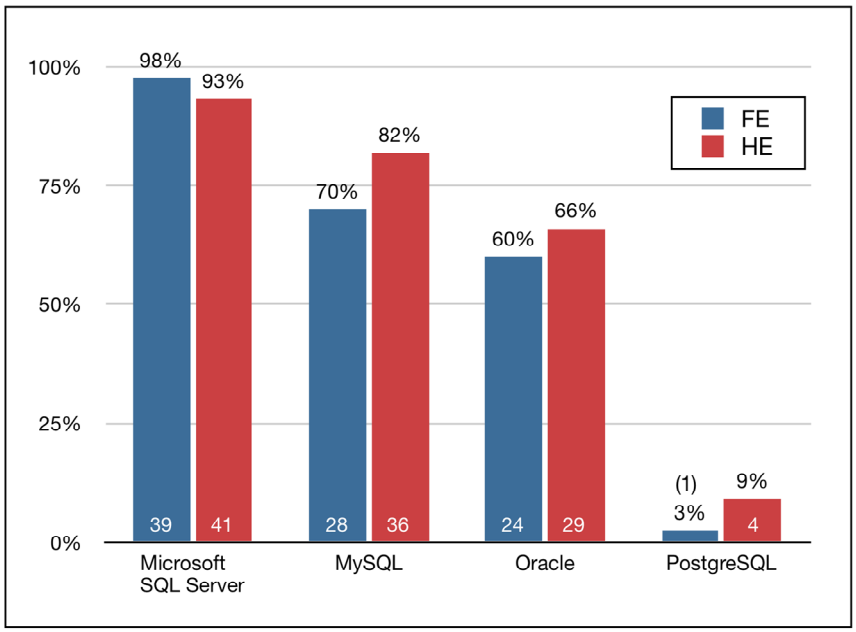


Figure 19: Webmail systems (Q14)

Q15: Database servers

Q15. Which of the following database servers are used in your institution?

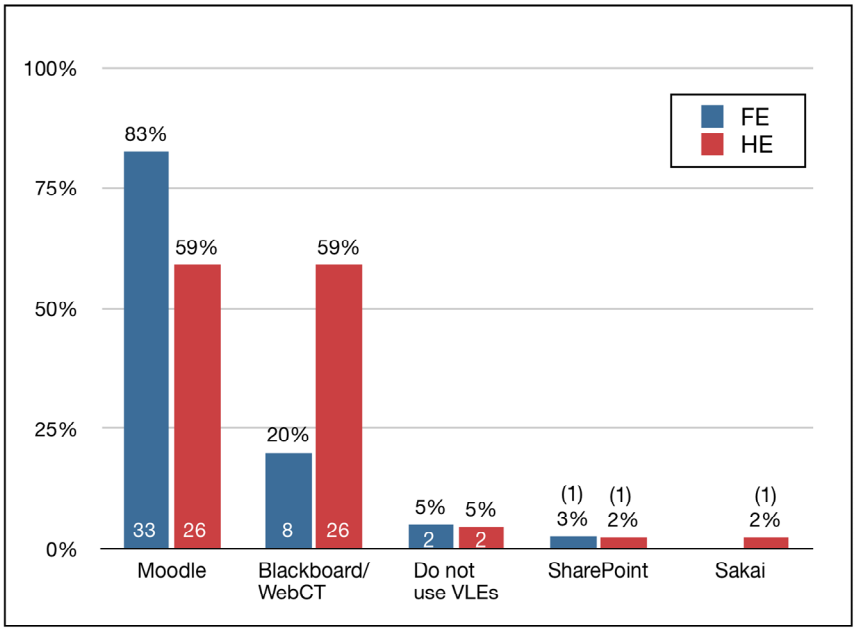


The use of database servers has been largely unchanged since the previous survey with Microsoft SQL server being the most popular option. All institutions in this survey use a database server and one respondent from an FE institution reported using Sybase.

Figure 20: Database servers (Q15)

Q16: Virtual Learning Environments (VLEs)

Q16. Which of the following Virtual Learning Environments (VLEs) are used in your institution?



Virtual Learning Environments is an area where open source solutions have been more widely adopted. Moodle is now by far the most popular VLE in FE institutions while it is being used with equal frequency as Blackboard/WebCT in HE. Across both sectors Moodle has gained popularity (from 62% to 83% in FE and from 36% to 59% in HE) while Blackboard/WebCT has become less widely used (from 29% to 20% in FE and from 79% to 59% in HE). The range of VLE systems has decreased since 2008 and systems such as Learnwise, Bodington, Fronter and others were not mentioned.

Figure 21: Virtual Learning Environments (VLEs) (Q16)

Q17: Content Management Systems (CMSs)

Q17. Which of the following Content Management Systems (CMSs) are used in your institution?

The most significant developments in the use of Content Management Systems are the increased uptake of Microsoft SharePoint in both FE and HE institutions and the decrease in the number of institutions who do not use a CMS. Whereas a CMS is still more likely to be used in the HE sector, the proportion of institutions who do not use a CMS has decreased from 61% to 43% in FE and from 28% to 11% in HE. Microsoft SharePoint has gained popularity to a similar extent in both sectors and is now being used by 43% of FE institutions (8% in 2008) and 36% of HE institutions (6% in 2008).

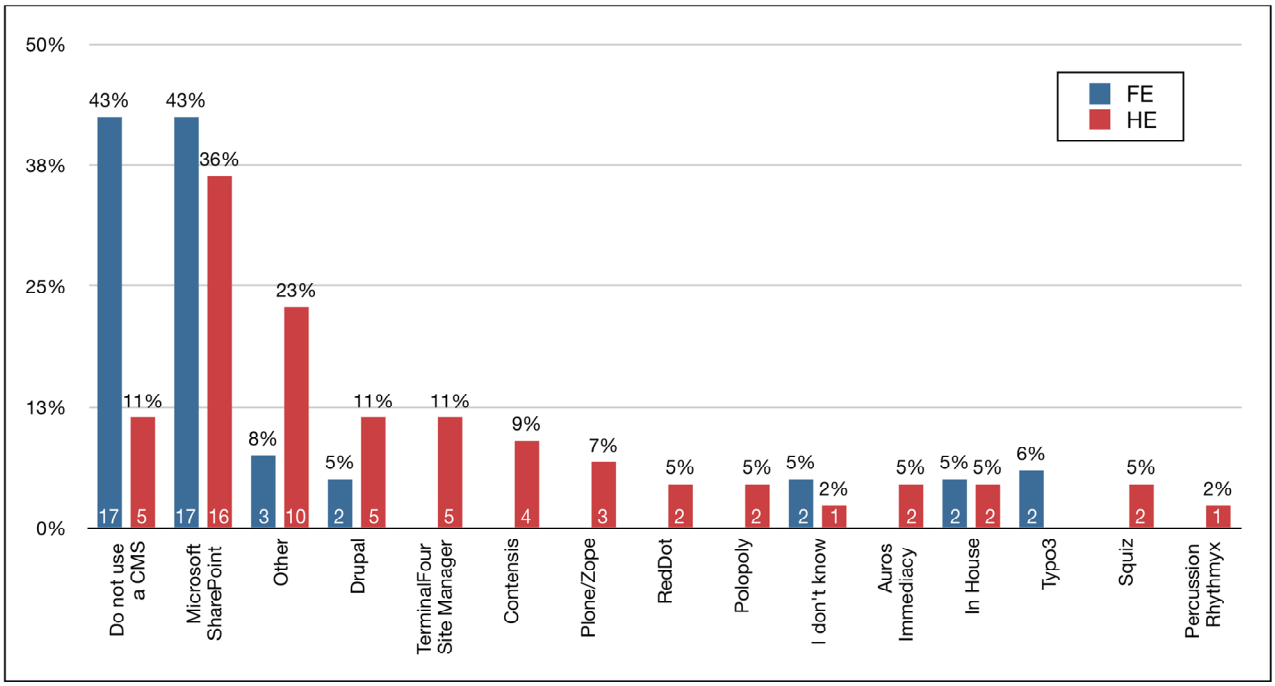


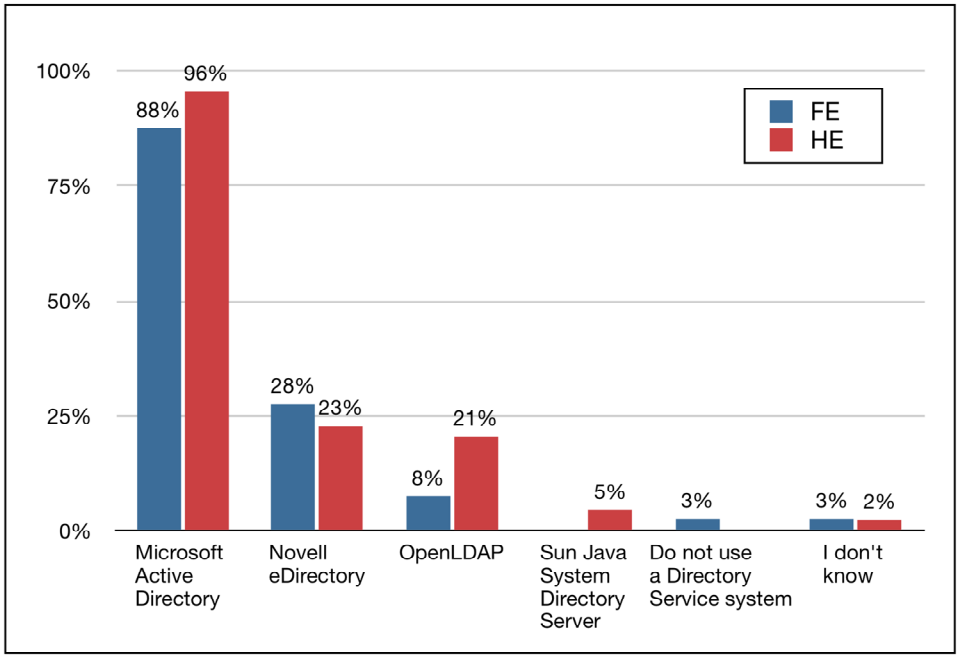
Figure 22: Content Management Systems (CMSs) (Q17)

The range of Content Management Systems in use remains large, especially in HE, as is evidenced by the large number of 'Other' responses depicted in Figure 22. Content Management Systems mentioned were: Oracle CMS, Shado, C2 ActiveEdition, LiveSite (formerly Teamsite), CMS Made Simple, Easysite, JADU, OpenCMS, Silktide, Serengeti, Moodle, Mojoportal, Joomla as well as some in house developed systems.

Q18: Directory Service Systems

Q18. Which of the following Directory Service systems are used in your institution?

Directory Services deliver information, e.g. an online telephone directory. Typically, they implement the Lightweight Directory Access Protocol (LDAP), and are often used by other systems for authentication and/or authorisation.



Microsoft Active Directory remains the most popular Directory Service system followed by Novell eDirectory. There has been a decrease in popularity of the latter in FE institutions since 2008 (from 43% to 27%).

Figure 23: Directory Service systems (Q18)

Q19: Other server software

Q19. Which software, if any, does your institution use in the following areas?

Please only consider centrally-supported services rather than applications deployed for purely local use (e.g. department, research group or individuals).

In this question respondents were asked to indicate any software (or multiple software solutions) they may use in a number of areas. No prompts were provided and the answers were free-text. The resulting quantitative data was obtained by sorting the free-text responses into categories according to content. Where multiple software solutions were indicated, each was counted as a response in its own right.

Calendar/diary services: Microsoft products (Exchange, Outlook, SharePoint) remain by far the most popular solutions across FE and HE institutions, although 18% of FE institutions report using Groupwise.

Wikis: Of the institutions who report using a wiki, Microsoft SharePoint is the most popular solution in FE institutions (30%) and MediaWiki in HE (24%)

Blogs: WordPress is the most popular blog in HE institutions and Microsoft SharePoint and WordPress are used equally in FE.

Project Management software: Microsoft Project continues to dominate in both the FE and HE sectors.

Social Networking software: Only about 10% of institutions across both sectors report not using any social networking software. Facebook is most popular across both FE (29%) and HE (21%) institutions. Twitter is being used in 13% of FE institutions.

Groupware: Microsoft products (SharePoint and Exchange) are most popular across the sectors. A small number of FE institutions report using Moodle and Zimbra.

Digital repositories: A wide range of digital repositories is in use across both sectors. The most popular are Microsoft SharePoint in FE, and ePrints and Dspace in HE institutions.

Q20: Criteria when procuring software for servers

Q20. Rank the top 5 criteria that your institution considers important when procuring software for your servers, from most to least important.

Please number 5 of the boxes, 1 being the highest priority

In Figure 24 below FE institutions are represented by a dotted line and HE institutions by the solid contour. Colour indicates the number of people including a given criterion in their top 5 concerns: red indicates the 5 most mentioned criteria, orange - 5 next-most mentioned criteria, blue - 5 least mentioned criteria. The number of people who mentioned a particular issue is indicated above each column. The graph is ordered according the popularity of criteria for choice of software in HE. The vertical scale represents the level of importance respondents have assigned to the criteria – 1 being the most and 5 the least important. Therefore the lower the bar, the greater importance has been assigned to the issue by the people who mentioned it as one of their 'top 5' issues.

As shown in Figure 24, the most important considerations when procuring software for servers are, both for FE and HE institutions, total cost of ownership and the performance of the software. This pattern is largely unchanged since the previous survey. A significant number of respondents in FE also attach importance to the software already being used in the institution. The one notable difference between HE and FE institutions is that more respondents in FE included staff preferences in their top 5 - and ranked it as a more important factor, whereas it was mentioned by only one respondent from an HE institution.

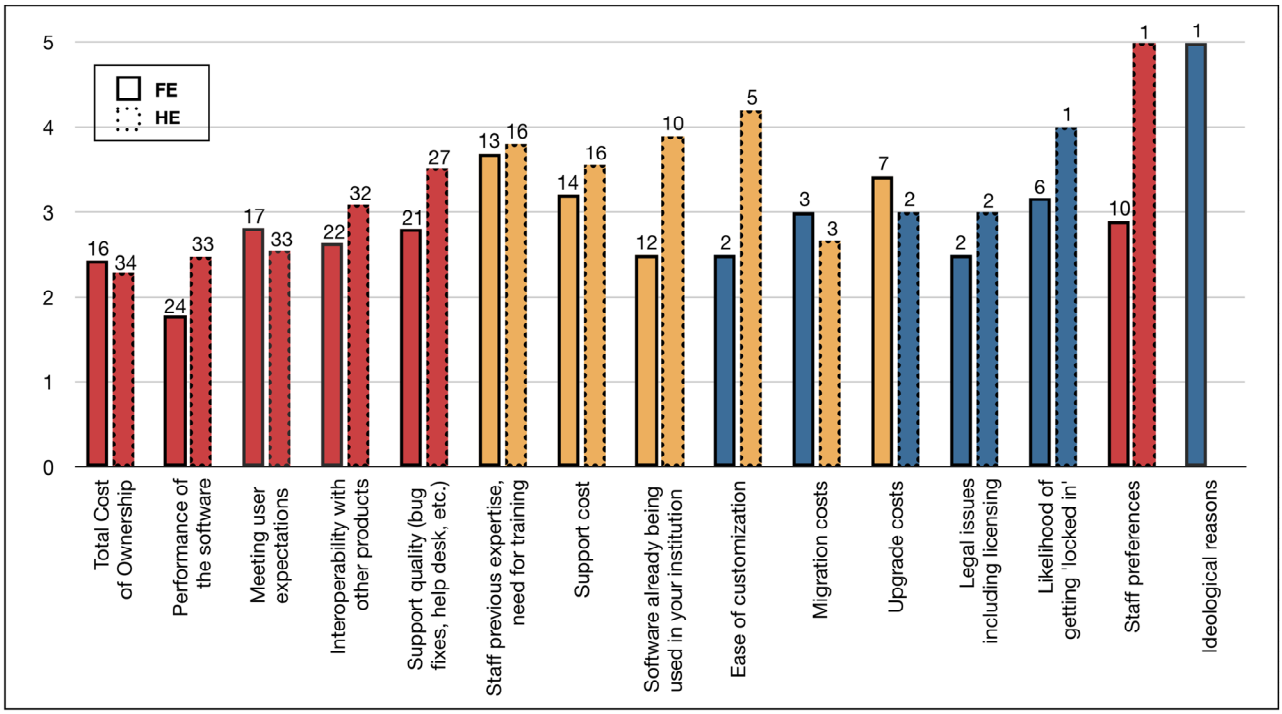


Figure 24: Criteria institutions consider important when procuring software for servers (Q20) – a detailed explanation of the notation used in this representation is provided in the text directly above the figure.

Q21: Software considered for procurement/replacement on servers

Q21. Which new server software systems are currently being considered for procurement at your institution? Please also include old systems being considered for replacement.

This could be, for example, because your institution does not have some systems, but would like to procure them, or because your current systems do not meet your needs.

A high number of institutions across the FE and HE sectors are considering replacing various types of software on their servers. Just like in 2008 a large proportion of institutions are considering replacing their server operating systems. Overall a larger proportion of HE institutions are considering replacing/procuring server software than is the case in FE. Especially notable is the increase in interest in procuring/replacing webmail systems (from 17% to 41%) and VLEs (from 20% to 44%) in HE institutions in comparison to the 2008 survey.

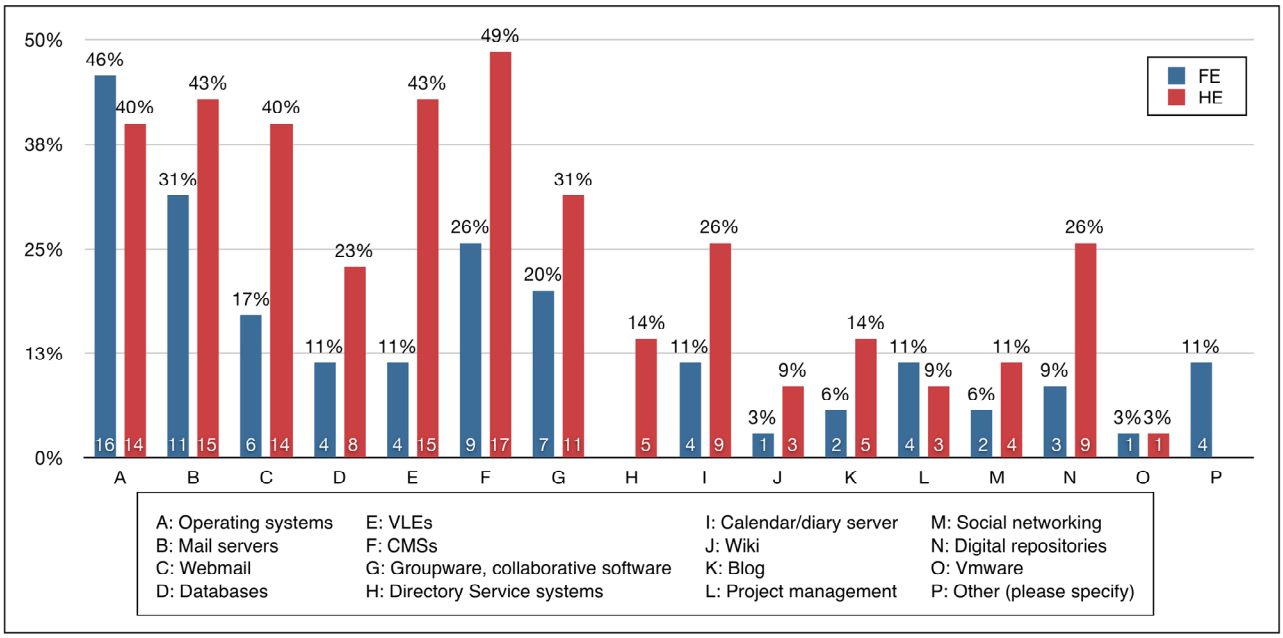


Figure 25: Software being considered for procurement/replacement on servers (Q21)

Q22: Reasons to decide against using open source software on servers

Q22. If your institution decides against using an open source software system on its servers, what are the top 5 most likely reasons? Please rank the following reasons from most to least likely.

Lack of support, interoperability and migration costs, lack of staff expertise and the perception of open source software as being of poor quality remain the most important reasons to reject open source solutions for institutional servers across both the FE and the HE sectors. Furthermore, although fewer respondents included in their top 5 reasons the option 'There is no open source solution for our needs', for those institutions, especially in HE, it is a very weighty reason for rejecting an open source solution. A possible connection between the status of open source software in terms of policy and the reasons for deciding against using open source software on servers was probed, but no notable differences were discovered. Thus institutions who explicitly mention open source software in their policies are likely to decide against it for the same set of reasons as other institutions.

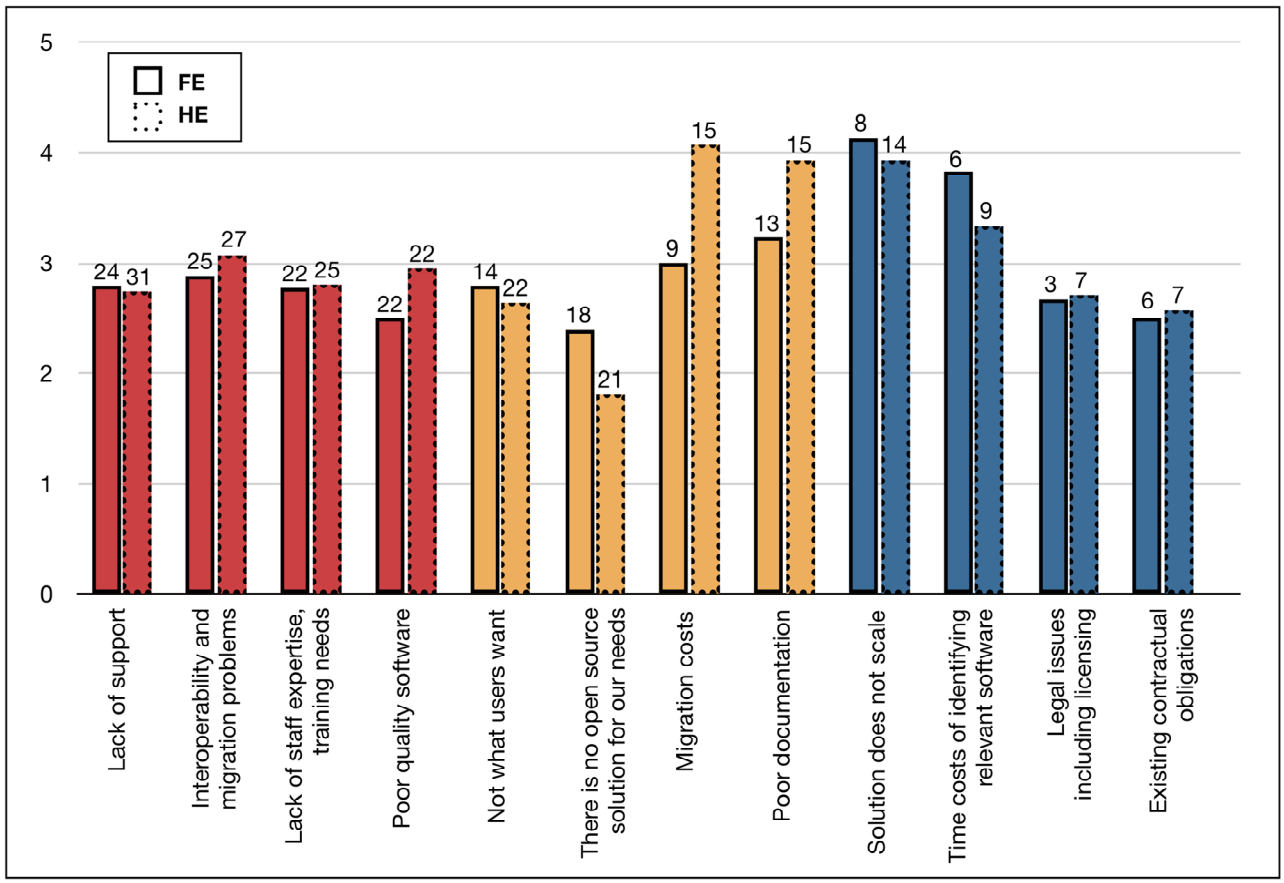


Figure 26: Reasons to decide against using open source software on servers (Q22) (see Q20 for detailed description of graph notation)

Survey section 4: Software running on desktops

Q23/24: Support for software running on desktops

Q23/24. What best describes the support for open/closed source software running on your institution's desktops?

The data for these questions follow the trend outlined in Q9/10 about support for server software. The pattern of responses to question 24 with regards to support of closed source software running on desktop computers largely follows the pattern of the corresponding question in the 2008 survey. The support duties are included in the job description of some or all staff in most institutions.

With regards to support for open source software, there are notable differences compared to the 2008 data. Support duties for open source software are now mentioned in fewer job descriptions and more ICT staff perform support without it being part of their job description. The proportion of institutions who outsource the support has also increased.

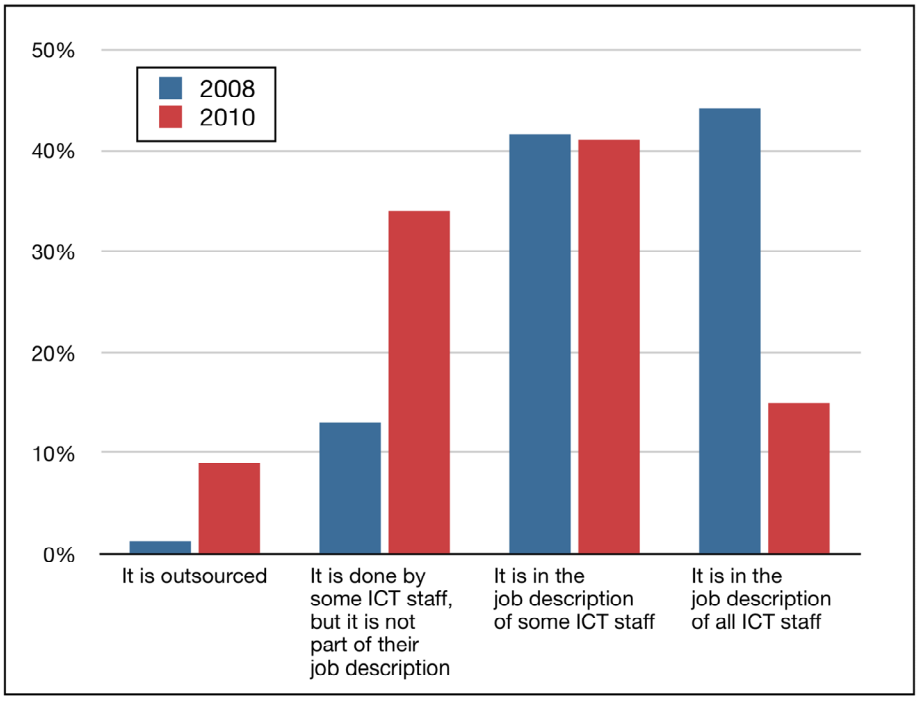


Figure 27: Support for open source software running on desktops in 2008 and 2010 - average across FE and HE institutions (Q23)

Q25: Ratio of open and closed source software deployed on desktops

Q25. What is the approximate ratio of open and closed source software deployed on your institution's desktop computers?

"Software" refers to both operating systems and applications.

Compared to the ratios of open and closed source software deployed on servers, discussed in Q11, the proportion of open source software on desktop computers in both FE and HE institutions is lower. The data from this survey is, however, showing a similar trend towards deployment of more open source software across both sectors.

Thus the total proportion of institutions using open source software to any extent has increased from 17% to 50% in the FE sector and from 38% to 59% in the HE sector. The proportion of institutions reporting to use all or almost all closed source software has correspondingly decreased from 83% to 50% for FE 62% to 41% for HE institutions.

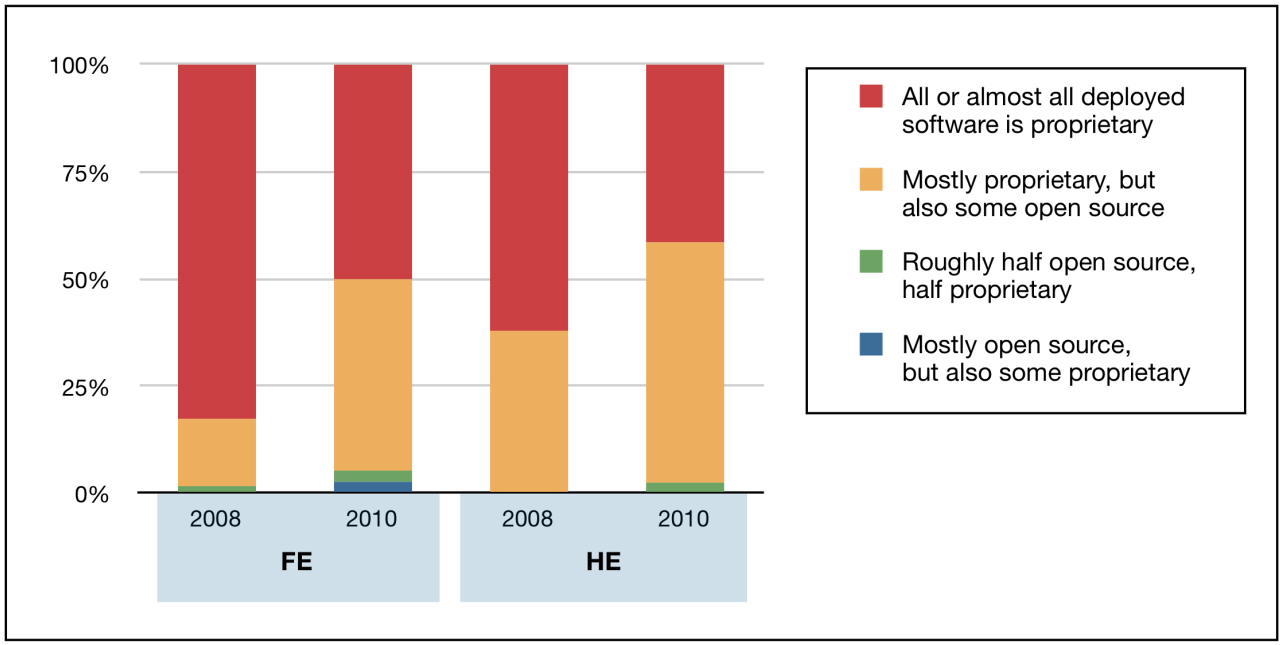


Figure 28: Ratios of use of open and closed source software on desktops in FE and HE institutions - reported 'current' states of 2008 and 2010 (Q25).

The development planned for the future in 2008 slightly overestimated the rate of deployment of open source software compared to the current situation. However, as mentioned earlier, the time span of 'future' was not indicated in either survey. Therefore these estimates may apply more precisely at a later date.

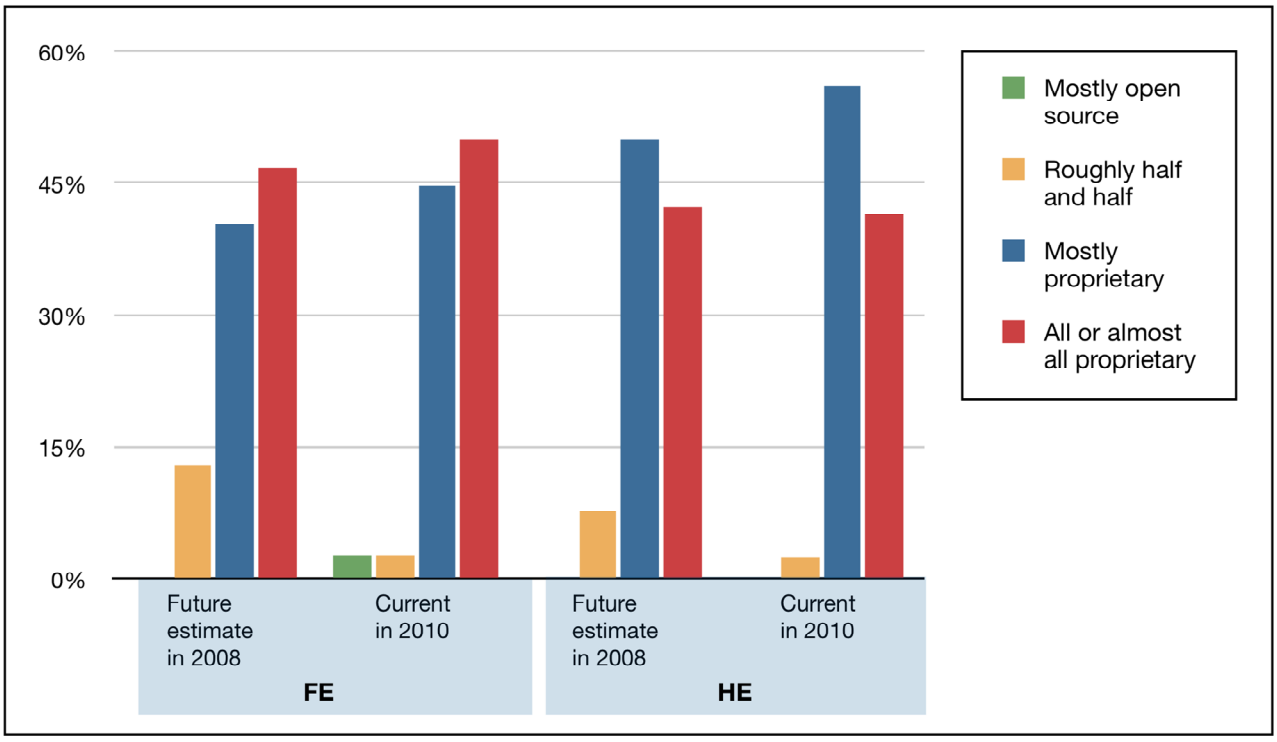


Figure 29: Comparison of ratios of open and closed source desktop software in FE and HE institutions planned for the future in 2008 with current reported ratios (Q25).

As was the case with server software, the trend predicted for desktop software for the coming years in the current survey is towards further increases in deployment of open source software. However, closed source desktop software is currently and is predicted to remain dominant in both FE and HE institutions.

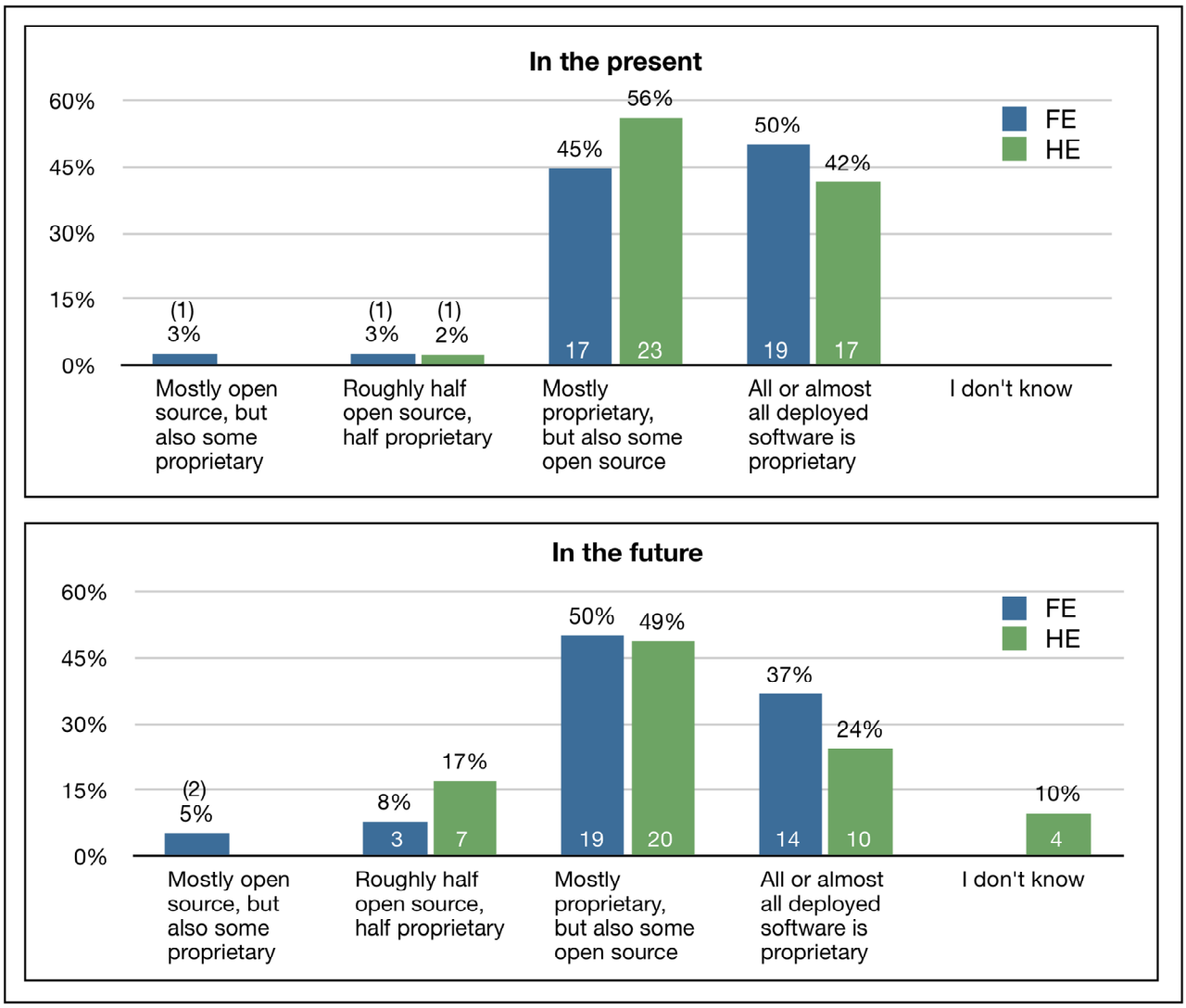


Figure 30: The current ratios of use of open and closed source desktop software in FE and HE institutions and the ratios currently planned for the future (Q25)

Q26: Operating systems used on desktop computers

Q26. Which of the following operating systems are used on your institution's desktop computers?

Windows XP and Windows 7 are currently the most popular operating systems on desktop computers across the FE and HE sectors. The use of Mac operating systems has increased since 2008 and so has the use of Linux systems. Linux (Red Hat) is now used in 34% of HE institutions (13% in 2008), Linux (Ubuntu) is used in 16% of FE institutions (8% in 2008) and 31% of HE institutions (10% in 2008). Overall HE institutions are more likely to use open source operating systems on their desktop computers that are FE institutions.

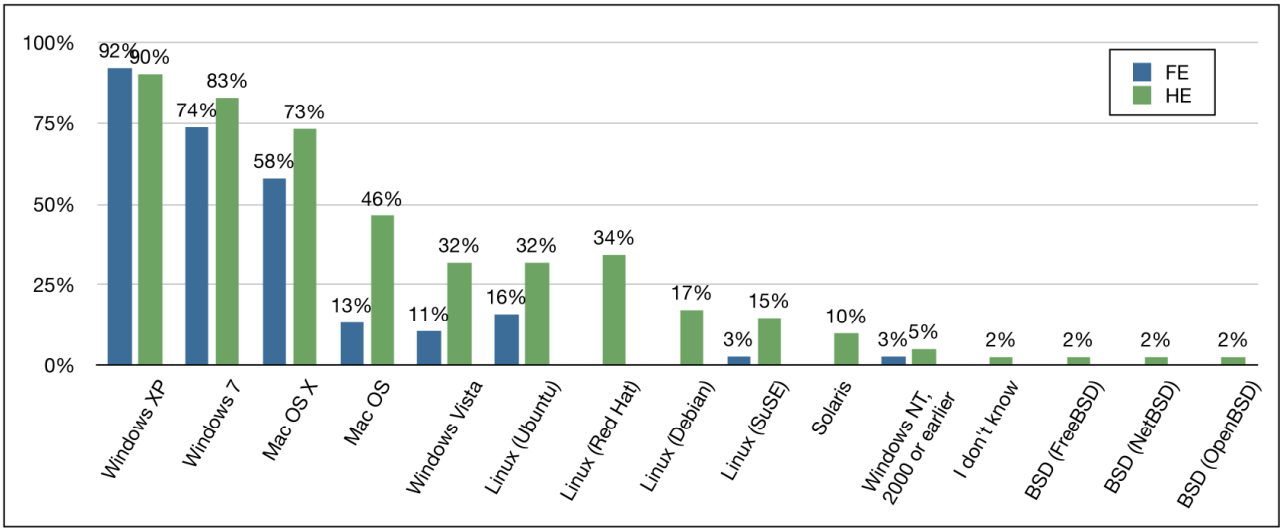


Figure 31: Operating systems on desktop computers (Q26)

Q27: Software applications on desktops

Q27: Which of the following software applications are used on your institution's desktop computers?

In the most common categories of desktop applications - office suites, internet browsing and email, Microsoft products are most popular. The Mozilla Firefox browser is also very popular, especially in HE where it is being used by 85% of institutions. The use of Safari has increased since the 2008 survey in both the FE and the HE sectors (from 30% to 47% in FE and from 37% to 66% in HE institutions). Google Chrome was introduced since the last survey and has been taken up by a sizable proportion of institutions across FE and HE. The use of Matlab in HE has grown (from 17% to 42%). The popularity of OpenOffice has increased to a lesser extent from 30% to 37% in FE and from 23% to 34 % in HE institutions.

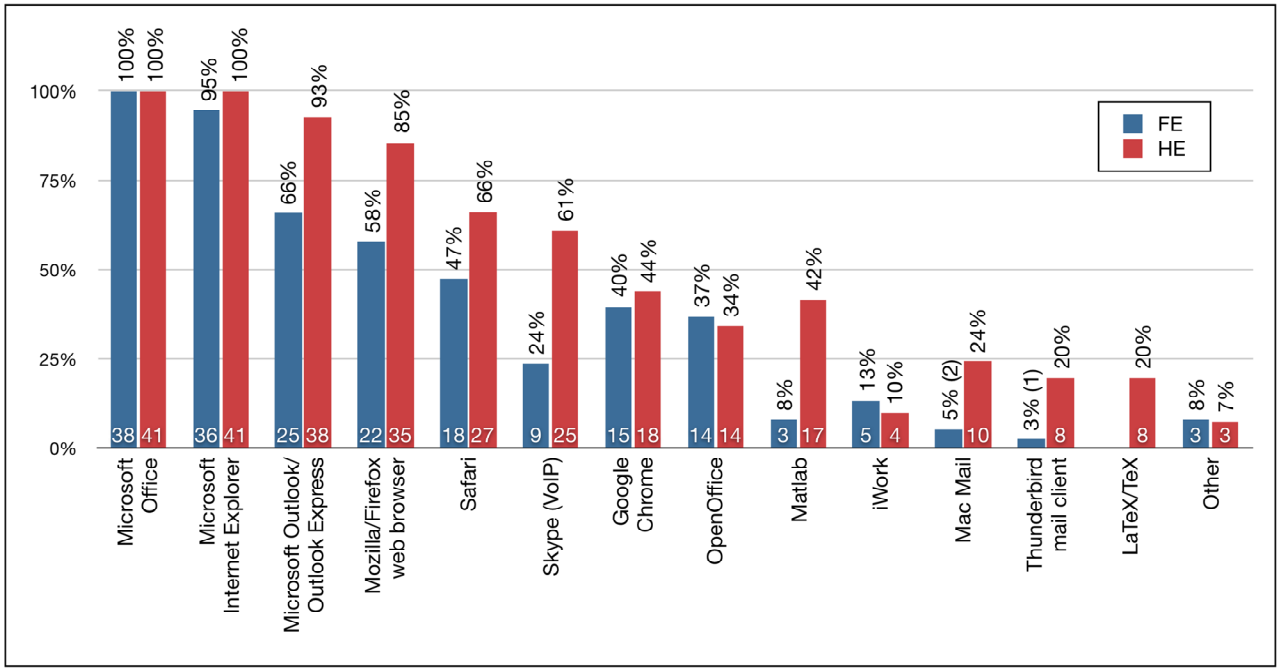


Figure 32: Software applications on desktop computers (Q27)

Q28: Criteria when procuring software for desktop computers

Q28. Rank the top 5 criteria that your institution considers important when procuring software for your desktop computers, from most to least important.

Please number 5 of the boxes, 1 being the highest priority

The most important criteria considered when procuring software for desktop computers are reported by HE institutions to be the meeting of user expectations, the total cost of ownership and interoperability with other products. While these criteria are also important in the FE context, a large number of respondents in FE indicated the performance of the software to be the most important criterion for their choice. This is also an important criterion for HE institutions, although it was chosen by a lower number of respondents.

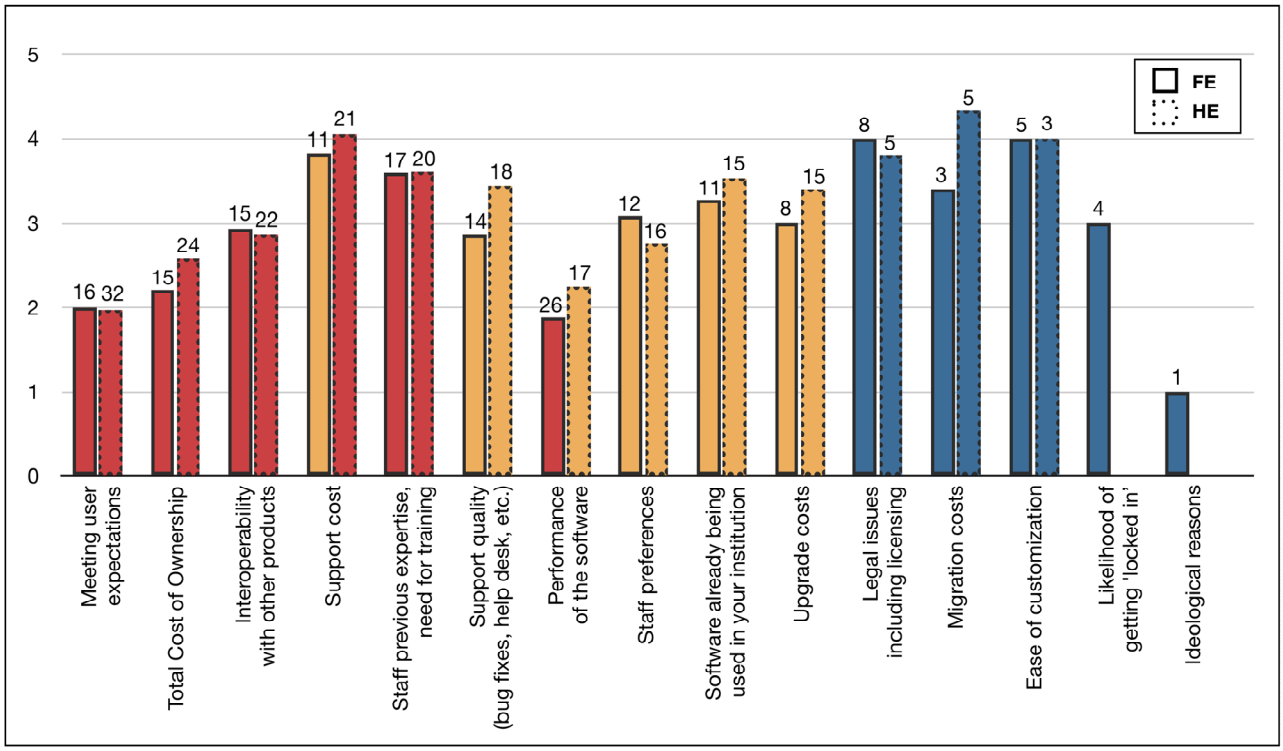


Figure 33: Criteria institutions consider important when procuring software for desktop computers (Q28) (see Q20 for detailed description of graph notation)

Q29: Desktop software systems currently being considered for procurement/replacement

Q29. Which new desktop software systems are currently being considered for procurement at your institution? Please also include old systems being considered for replacement.

This could be, for example, because your institution does not have some systems, but would like to procure them, or because your current systems do not meet your needs.

As was the case with server software, operating systems on desktop computers are most frequently considered for replacement. Many more institutions in FE are considering replacing their operating systems than did in 2008 (a rise from 34% to 69%). Across the various other systems HE institutions are more likely to be considering procuring new software or replacing existing systems than FE institutions.

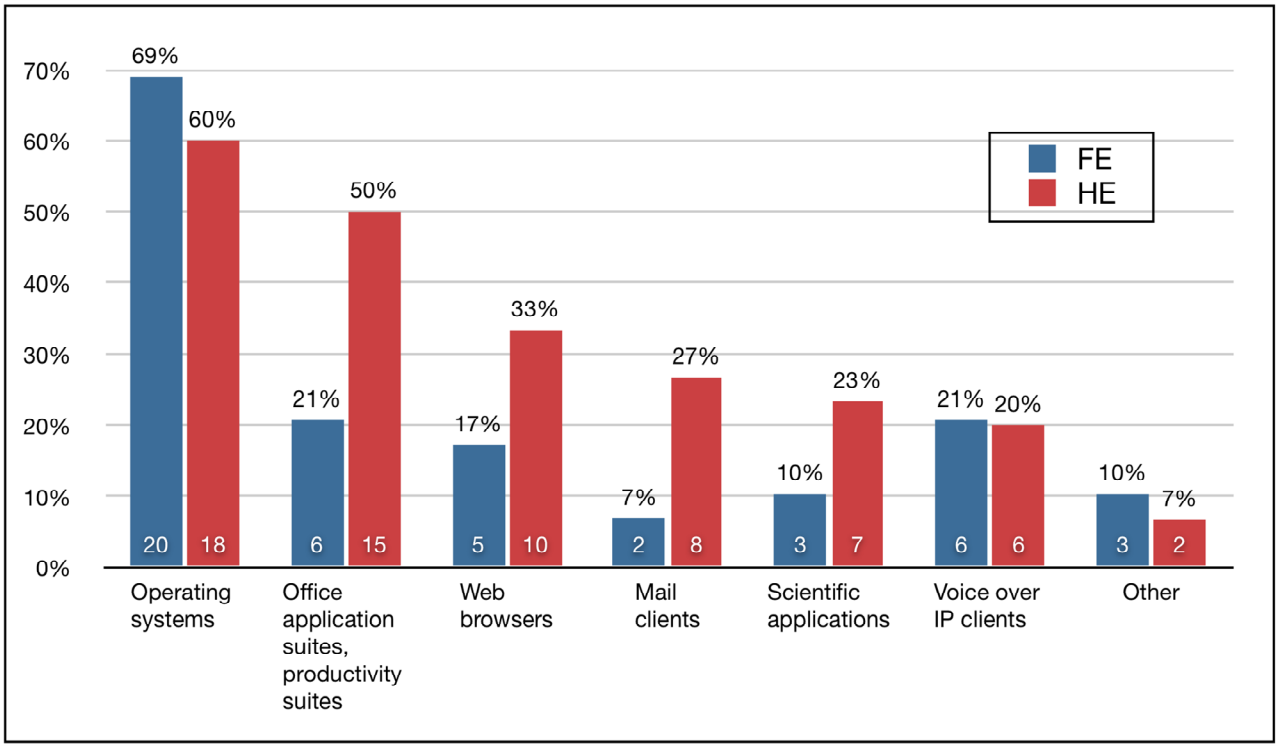


Figure 34: Software systems currently being considered for procurement/replacement (Q29)

Q30: Reasons to decide against using open source software on desktops

Q30. If your institution decides against using an open source software system in its desktop computers, what are the top 5 most likely reasons? Please rank the following reasons from most to least likely.

Please number 5 of the boxes, 1 being the most likely reason

The most important reasons for deciding against using open source software on desktop computers are that it is not what users want, and that there is not open source specialized software to satisfy the needs of the institution. Lack of support was mentioned by a high number of respondents both in FE and HE, but was less important. Additionally for some FE institutions, migration costs are a weighty reason, although this was mentioned by fewer people.

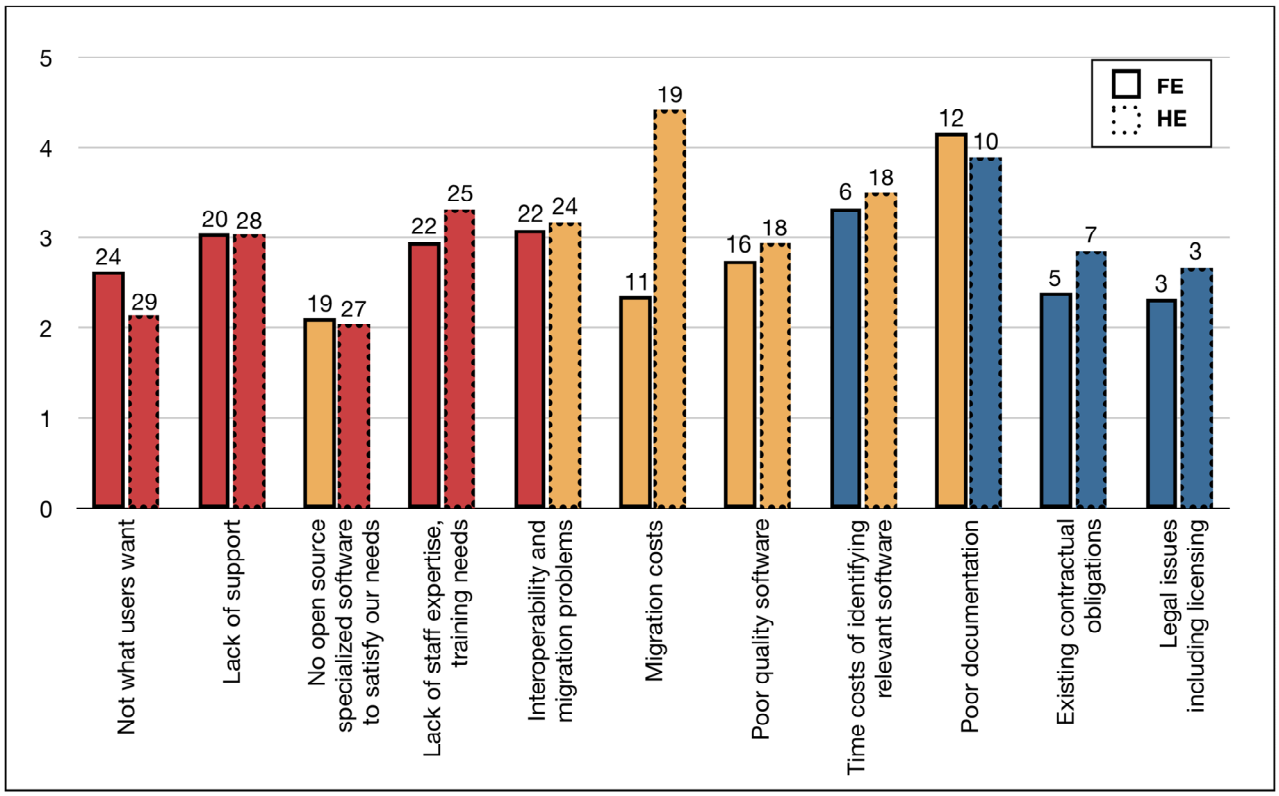


Figure 35: Reasons to decide against using open source software on desktops (Q30) (see Q20 for detailed description of graph notation)

Survey section 5: Comments by survey respondents

Q31: Other comments

Q31. Is there anything you would like to add to the information that you gave in this survey, and that you have not been able to express?

The last question of the survey allowed survey respondents to contribute their own thoughts in addition to the answers elicited by our questions. The free-text responses were analysed qualitatively to draw out the main themes brought up by the respondents. The results of the analysis are presented below. Not all the comments have been reproduced here, but the quotes below are illustrative of the issues discussed in Question 31.

The comments can be divided into 4 main categories:

- comments about plans for looking into open source solutions and examples of existing use of open source software
- comments about reasons for choosing closed source over open source software
- comments opposing the rhetoric which juxtaposes open and closed source software
- comments about issues not considered in the survey

1. Plans for looking into open source solutions and examples of existing use of open source software

A few of the respondents report being involved with or having plans to look further into using (more) open source software:

> *"Increasingly, we expect that our needs will be met via 'as a service' models in the cloud."*

Others report success stories with open source projects:

> *"We use asterix (sic) voip for 200 staff members including many critical users. All developed in house, very very successful."*

"We use a fair number of open source systems in core infrastructure and at the value added end. As well as the obvious Apache, tomcat, Mysql etc our VL environmet is a combination of Moodle, Mahara, Kaltura, LAMS, Big Blue button, Wookie. We use ZerotoOne helpdesk system."

2. Reasons for choosing closed source over open source software

A large number of comments concern reasons for choosing closed source over open source solutions. A number of respondents state that closed source solutions suit their institutions because they perform adequately and furthermore carry education discounts, wherefore they are cost-efficient solutions. Conversely one respondent wrote about open source products not functioning adequately:

> *"Firefox (our default browser up until the last couple of weeks) has become more unstable and bloated in recent times. OpenOffice is threatening to implement a ribbon interface in the next version, which I haven't heard a good word about with our users who use MSOffice2007. I am now under pressure to remove these products, just leaving IE & MSOffice on our desktops."*

One respondent commented that even though they would like to look more into open source solutions, the senior management at their institution is against the idea. Another wrote about open source software not fitting with the institution's overall procurement practices:

"Software procurement is (like anything else) subject to tendering processes - the University decides it needs something, asks suppliers for information (including licensing and support costs), invites tenders and chooses the best fitting products. There is no route through which Open Source software which is not provided and supported by a supplier can (nor arguably should) break into this competitive and evaluative process."

A final very important consideration in this category, which was brought up multiple times in the comments, is the lack of staff resources to dedicate to open source projects in institutions with small teams of ICT staff and the risk of using non-standard and un-supported products in such institutions:

"In FE colleges, IT teams are relatively small and we cannot rely too heavily on their own knowledge to support open source because of the danger of critical staff leaving for higher pay or other reasons. It is better to use proprietary software for which support can be purchased in an emergency."

3. Opposition between open and closed source software?

Several respondents voiced their concern about the tendency to juxtapose open and closed source software and called for a more nuanced understanding of the issue. They argued that the decision between open and closed source software is only a small part of the overall decision making process when choosing software tools.

"We don't really engage in a proprietary vs. open source debate for its own sake. Instead we pick the right solution for our needs taking into account user and support expertise, total cost of ownership and contribution to overall enterprise architecture."

"I strongly believe that we should allow our students to use the latest and most commonly available industry standard software irrelevant to whether it is open or closed source software. This is completely without regard to ideological consideration to what I personally feel about what is right and what should be put right in the world of software. That is not my place. Our students and staff should have access to the best software that works. And when they leave us they have some small head start when using software in the workplace."

4. Issues not considered in the survey

A number of respondents suggested other issues they consider when making decisions about open and closed source software, which were not mentioned in the survey. These issues were:

- interoperability between desktop software (such as OpenOffice) and large applications: *"we think the MS Campus agreement gives is good value for us"*
- the need for open source software to meet the requirements of examination bodies and students' needs in the workplace
- use of open source software being hindered due to the general preference across the education sector for using closed source formats (PDF, DOC) for information exchange and other communication
- questions on virtualization of servers and the desktop
- questions of energy and environmental sustainability
- other regularly perceived common arguments against choosing open source software, such as the perceived need for customization and issues relating to the pricing model of open source software

Similar types of issues are brought up by many of the respondents to the background survey. However, there is a greater enthusiasm for using and driving the implementation of open source software visible in the background survey responses. This is possibly due to the nature of the sample, which was drawn from people who had expressed interest in open source issues.

Appendix 1: Online questionnaire

1. OSS Watch National Software Survey 2010

OSS Watch National Software Survey 2010

This survey aims to evaluate the state of software policies and usage in Further Education (FE) and Higher Education (HE) across the UK.

OSS Watch is the open source national advisory service funded by the Joint Information Systems Committee (JISC) for all FE and HE institutions and projects in the UK. We are a non-advocacy service.

OSS Watch is hosted by the University of Oxford as part of its Research Technologies Service. For further information about OSS Watch please visit http://www.oss-watch.ac.uk/ or contact OSS Watch at info@oss-watch.ac.uk.

2. Your institution

1. What type is your institution?

- ☐ Further Education (FE)
- ☐ Higher Education (HE)
- ☐ Other (please specify)

2. Do you have any of the following responsibilities in your institution?

Please select as many options as apply.

- ☐ Software procurement/purchasing
- ☐ Developing institutional ICT policies
- ☐ Overseeing implementation of ICT policies
- ☐ Developing/administrating institutional ICT budgets
- ☐ Designing/approving software licensing agreements
- ☐ Approving software development in-house
- ☐ Developing ICT training
- ☐ None of these

3. What is the approximate number of ICT staff at your institution?

If your institution's ICT provision is decentralised, please consider services provided centrally by your institution.

3. ICT-related policies at your institution

This group of questions evaluates the processes followed by FE and HE institutions when procuring software, and possibly contributing software to external projects.

We have classified software as either open source or closed source.

Open source software (OSS) is software released under one of the licences approved by the Open Source Initiative (OSI). Some examples of these licences are the General Public License (GPL), Apache License, Modified BSD License, Mozilla Public License, etc. You may also know of OSS as free software or libre software (loosely speaking). More information about open source software can be found on our website

4. What best describes your institution in terms of ICT-related policies?

- My institution has an official ICT policy
- Policies about ICT are spread across other policies, e.g. administration, management, procurement...
- My institution has no policies regarding ICT
- I don't know whether my institution has any policies regarding ICT

4a. What best describes your institution's policies about open and closed source software?

Only answer this question if you answered 'My institution has an official ICT policy' or 'Policies about ICT are spread across other policies, e.g. administration, management, procurement...' to the previous question, otherwise please proceed to question 5

	The preferred option	To be considered as an option	Mentioned	Not mentioned	Prohibited
Open source					
Closed source					

5. In practice, what software is considered for procurement/deployment in your institution?

- Only open source software
- Mostly open source software, with some closed source software
- Open and closed source software equally
- Mostly closed source software, with some open source software
- Only closed source software

- I don't know
- Other (please specify)

6. What is your institution's policy regarding staff contributing to open source software projects?

- It is specified in individual employment contracts that they are allowed to do this
- It is part of the institutional or departmental policies that staff can contribute
- It is not regulated, but it is the working practice
- Staff can do this in their own time, under their own responsibility
- Staff are not allowed to contribute
- I don't know

7. What is your institution's policy regarding staff contributing to closed source software projects?

- It is specified in individual employment contracts that they are allowed to do this
- It is part of the institutional or departmental policies that staff can contribute
- It is not regulated, but it is the working practice
- Staff can do this in their own time, under their own responsibility
- Staff are not allowed to contribute
- I don't know

8. In practice, how often do ICT staff contribute to software projects?
Contributions to software projects include being an active member of a mailing list, submitting patches, writing documentation or code, etc.

	Always	Often	Sometimes	Seldom	Never	I don't know
Open source						
Closed source						

4. Software on servers

The questions in this group refer to the **server machines** in your institution and the software running on them.

9. What best describes the support for open source software running on your institution's servers?

- It is outsourced
- It is done by some ICT staff, but it is not part of their job description
- It is in the job description of some ICT staff
- It is in the job description of all ICT staff

10. What best describes the support for closed source software running on your institution's servers?

- It is outsourced
- It is done by some ICT staff, but it is not part of their job description
- It is in the job description of some ICT staff
- It is in the job description of all ICT staff

11. What is the approximate ratio of open and closed source software deployed on your servers?

	All or almost all deployed software is open source	Mostly open source, but also some proprietary	Roughly half open source, half proprietary	Mostly proprietary, but also some open source	All or almost all deployed software is proprietary	I don't know
In the past						
Currently						
Planned for the future						

12. Which of the following operating systems are used on your institution's servers?

Please choose *all* that apply:

- AIX
- BSD (FreeBSD)
- BSD (NetBSD)
- BSD (OpenBSD)
- Linux (Ubuntu)
- Linux (Debian)
- Linux (Red Hat)
- Linux (SuSE)
- Mac OS
- Mac OS X
- Solaris
- Windows 2000 Advanced Server
- Windows 2000 Server
- Windows NT Server
- Windows Server 2003
- I don't know

- [ ] Other (please specify)

13. Which of the following mail servers are used at your institution?

Please choose *all* that apply:

- [ ] We outsource our email to a commercial company
- [ ] Exim
- [ ] MS Exchange
- [ ] Postfix
- [ ] Sendmail
- [ ] Qmail
- [ ] Novell Groupwise
- [ ] I don't know
- [ ] Other (please specify)

14. Which of the following webmail systems are used in your institution?

Please choose *all* that apply:

- [ ] We don't use webmail
- [ ] Microsoft Outlook Web Access
- [ ] Novell NetMail WebAccess and Webmail
- [ ] IMP/Horde Webmail
- [ ] SquirrelMail
- [ ] Oracle Webmail
- [ ] JANET Web Mail Service
- [ ] Google Mail
- [ ] Novell Groupwise
- [ ] I don't know
- [ ] Other (please specify)

15. Which of the following database servers are used in your institution?

Please choose *all* that apply:

- [ ] We don't use database servers
- [ ] Microsoft SQL Server
- [ ] MySQL

- [ ] Oracle
- [ ] PostgreSQL
- [ ] Informix
- [ ] I don't know
- [ ] Other (please specify)

16. Which of the following Virtual Learning Environments (VLEs) are used in your institution?
Please choose *all* that apply:

- [ ] We don't use any VLEs
- [ ] ATutor
- [ ] Blackboard/WebCT
- [ ] Bodington
- [ ] Moodle
- [ ] Sakai
- [ ] I don't know
- [ ] Other (please specify)

17. Which of the following Content Management Systems (CMSs) are used in your institution?

Please choose *all* that apply:

- [ ] We don't use any CMSs
- [ ] Microsoft SharePoint
- [ ] Drupal
- [ ] TerminalFour Site Manager
- [ ] Plone/Zope
- [ ] RedDot
- [ ] Percussion Rhythmyx
- [ ] Polopoly
- [ ] I don't know
- [ ] Other (please specify)

18. Which of the following Directory Service systems are used in your institution?

Directory Services deliver information, e.g. an online telephone directory. Typically, they

implement the Lightweight Directory Access Protocol (LDAP), and are often used by other systems for authentication and/or authorisation.

Please choose *all* that apply

- ☐ We don't use any Directory Service systems
- ☐ Novell eDirectory
- ☐ Microsoft Active Directory
- ☐ Sun Java System Directory Server
- ☐ OpenLDAP
- ☐ I don't know
- ☐ Other (please specify)

19. Which software, if any, does your institution use in the following areas?

Please only consider centrally-supported services rather than applications deployed for purely local use (e.g. department, research group or individuals).

If you are using multiple solutions for the same function, please separate them with commas.

Calendar/diary server:	
Wiki:	
Blog:	
Project management:	
Social networking:	
Groupware, collaborative software:	
Digital repositories:	

20. Rank the top 5 criteria that your institution considers important when procuring software for your servers, from most to least important.

	Please number 5 of the boxes, 1 being the highest priority
Performance of the software	
Support quality (bug fixes, help desk, etc.)	
Total Cost of Ownership (TCO)	
Likelihood of getting 'locked in'	
Staff preferences	
Interoperability with other products	

Software already being used in your institution	
Upgrade costs	
Ease of customization	
Ideological reasons	
Meeting user expectations	
Migration costs	
Legal issues including licensing	
Staff previous expertise, need for training	
Support cost	

21. Which new server software systems are currently being considered for procurement at your institution? Please also include old systems being considered for replacement.

This could be, for example, because your institution does not have some systems, but would like to procure them, or because your current systems do not meet your needs. Please choose *all* that apply:

- ☐ Operating systems
- ☐ Mail servers
- ☐ Webmail
- ☐ Databases
- ☐ Virtual Learning Environments (VLEs)
- ☐ Content Management Systems (CMSs)
- ☐ Directory Service systems (e.g. LDAP)
- ☐ Calendar/diary server
- ☐ Wiki
- ☐ Blog
- ☐ Project management
- ☐ Social networking
- ☐ Groupware, collaborative software
- ☐ Digital repositories
- ☐ Other (please specify)

22. If your institution decides against using an open source software system on its servers, what are the top 5 most likely reasons? Please rank the following reasons from most to least likely.

Please note that you will have the chance to add comments at the end of the survey.

	Please number 5 of the boxes, 1 being the most likely reason
There is no open source solution for our needs	
Legal issues including licensing	
Poor quality software	
Existing contractual obligations	
Interoperability and migration problems	
Migration costs	
Time costs of identifying relevant software	
Lack of support	
Lack of staff expertise, training needs	
Not what users want	
Poor documentation	
Solution does not scale	

6. Other information

This final question is a chance for you to add your own thoughts.

31. Is there anything you would like to add to the information that you gave in this survey, and that you have not been able to express?

Appendix 2: Summaries of the data

Below are presented summaries of the raw data from the main survey. A few of the questions are omitted where the data could not be conveniently represented in a tabular format (e.g. questions requiring free-text responses).

1. 1. What type is your institution?			
		Response Percent	**Response Count**
Further Education (FE)		49.50%	54
Higher Education (HE)		**50.50%**	**55**
		answered question	**109**
		skipped question	**0**

2. Do you have any of the following responsibilities in your institution?			
	1. What type is your institution?		
	Further Education (FE)	**Higher Education (HE)**	**Response Totals**
Software procurement/purchasing	**90.7% (49)**	81.8% (45)	86.2% (94)
Developing institutional ICT policies	87.0% (47)	**98.2% (54)**	**92.7% (101)**
Overseeing implementation of ICT policies	87.0% (47)	92.7% (51)	89.9% (98)
Developing/administrating institutional ICT budgets	85.2% (46)	87.3% (48)	86.2% (94)
Designing/approving software licensing agreements	61.1% (33)	76.4% (42)	68.8% (75)
Approving software development in-house	51.9% (28)	70.9% (39)	61.5% (67)
Developing ICT training	40.7% (22)	45.5% (25)	43.1% (47)
None of these	5.6% (3)	1.8% (1)	3.7% (4)
answered question	54	55	**109**
		skipped question	**0**

4. What best describes your institution in terms of ICT-related policies?			
	1. What type is your institution?		
	Further Education (FE)	Higher Education (HE)	Response Totals
My institution has an official ICT policy	**76.0% (38)**	**66.7% (34)**	**71.3% (72)**
Policies about ICT are spread across other policies, e.g. administration, management, procurement...	24.0% (12)	27.5% (14)	25.7% (26)
My institution has no policies regarding ICT	0.0% (0)	5.9% (3)	3.0% (3)
I don't know whether my institution has any policies regarding ICT	0.0% (0)	0.0% (0)	0.0% (0)
answered question	50	51	**101**
		skipped question	**8**

4a. What best describes your institution's policies about open and closed source software?

Only answer this question if you answered 'My institution has an official ICT policy' or 'Policies about ICT are spread across other policies, e.g. administration, management, procurement...' to the previous question, otherwise please proceed to question 5

		1. What type is your institution?		
		Further Education (FE)	Higher Education (HE)	Response Totals
Open source	The preferred option	4.1% (2)	0.0% (0)	
	To be considered as an option	**61.2% (30)**	**73.9% (34)**	
	Mentioned	6.1% (3)	10.9% (5)	
	Not mentioned	28.6% (14)	15.2% (7)	
	Prohibited	0.0% (0)	0.0% (0)	
		49	46	95
Closed source	The preferred option	**34.7% (17)**	15.2% (7)	
	To be considered as an option	32.7% (16)	**69.6% (32)**	
	Mentioned	6.1% (3)	0.0% (0)	
	Not mentioned	26.5% (13)	15.2% (7)	
	Prohibited	0.0% (0)	0.0% (0)	
		49	46	95

4a. What best describes your institution's policies about open and closed source software? *Only answer this question if you answered 'My institution has an official ICT policy' or 'Policies about ICT are spread across other policies, e.g. administration, management, procurement...' to the previous question, otherwise please proceed to question 5*			
answered question	49	47	**96**
		skipped question	**13**

5. In practice, what software is considered for procurement/deployment in your institution?			
	1. What type is your institution?		
	Further Education (FE)	**Higher Education (HE)**	**Response Totals**
Only open source software	0.0% (0)	0.0% (0)	0.0% (0)
Mostly open source software, with some closed source software	6.0% (3)	0.0% (0)	3.0% (3)
Open and closed source software equally	20.0% (10)	29.4% (15)	24.8% (25)
Mostly closed source software, with some open source software	**68.0% (34)**	**68.6% (35)**	**68.3% (69)**
Only closed source software	4.0% (2)	0.0% (0)	2.0% (2)
I don't know	0.0% (0)	0.0% (0)	0.0% (0)
Other (please specify)	1 reply (2.0%)	1 reply (2.0%)	2.0% (2)
answered question	50	51	**101**
		skipped question	**8**

6. What is your institution's policy regarding staff contributing to open source software projects?			
	1. What type is your institution?		
	Further Education (FE)	**Higher Education (HE)**	**Response Totals**
It is specified in individual employment contracts that they are allowed to do this	0.0% (0)	0.0% (0)	0.0% (0)
It is part of the institutional or departmental policies that staff can contribute	8.0% (4)	5.9% (3)	6.9% (7)

6. What is your institution's policy regarding staff contributing to open source software projects?			
It is not regulated, but it is the working practice	24.0% (12)	**52.9% (27)**	**38.6% (39)**
Staff can do this in their own time, under their own responsibility	**50.0% (25)**	25.5% (13)	37.6% (38)
Staff are not allowed to contribute	4.0% (2)	0.0% (0)	2.0% (2)
I don't know	14.0% (7)	15.7% (8)	14.9% (15)
answered question	50	51	**101**
		skipped question	**8**

7. What is your institution's policy regarding staff contributing to closed source software projects?			
	1. What type is your institution?		
	Further Education (FE)	**Higher Education (HE)**	**Response Totals**
It is specified in individual employment contracts that they are allowed to do this	0.0% (0)	0.0% (0)	0.0% (0)
It is part of the institutional or departmental policies that staff can contribute	10.0% (5)	7.8% (4)	8.9% (9)
It is not regulated, but it is the working practice	22.0% (11)	**35.3% (18)**	28.7% (29)
Staff can do this in their own time, under their own responsibility	**44.0% (22)**	31.4% (16)	**37.6% (38)**
Staff are not allowed to contribute	6.0% (3)	3.9% (2)	5.0% (5)
I don't know	18.0% (9)	21.6% (11)	19.8% (20)
answered question	50	51	**101**
		skipped question	**8**

8. In practice, how often do ICT staff contribute to software projects?

Contributions to software projects include being an active member of a mailing list, submitting patches, writing documentation or code, etc.

		1. What type is your institution?		
		Further Education (FE)	**Higher Education (HE)**	**Response Totals**
Open source	**Always**	2.0% (1)	2.0% (1)	
	Often	2.0% (1)	9.8% (5)	
	Sometimes	26.0% (13)	**37.3% (19)**	
	Seldom	**40.0% (20)**	27.5% (14)	
	Never	20.0% (10)	5.9% (3)	
	I don't know	10.0% (5)	17.6% (9)	
		50	51	101
Closed source	**Always**	2.0% (1)	5.9% (3)	
	Often	4.0% (2)	11.8% (6)	
	Sometimes	16.0% (8)	9.8% (5)	
	Seldom	**34.0% (17)**	**41.2% (21)**	
	Never	**34.0% (17)**	15.7% (8)	
	I don't know	10.0% (5)	15.7% (8)	
		50	51	101
	answered question	50	51	**101**
			skipped question	**8**

9. What best describes the support for open source software running on your institution's servers?

	1. What type is your institution?		
	Further Education (FE)	**Higher Education (HE)**	**Response Totals**
It is outsourced	17.5% (7)	6.8% (3)	11.9% (10)
It is done by some ICT staff, but it is not part of their job description	**35.0% (14)**	31.8% (14)	33.3% (28)

9. What best describes the support for open source software running on your institution's servers?			
It is in the job description of some ICT staff	**35.0% (14)**	**56.8% (25)**	**46.4% (39)**
It is in the job description of all ICT staff	12.5% (5)	4.5% (2)	8.3% (7)
answered question	40	44	**84**
		skipped question	**25**

10. What best describes the support for closed source software running on your institution's servers?			
	1. What type is your institution?		
	Further Education (FE)	**Higher Education (HE)**	**Response Totals**
It is outsourced	20.0% (8)	0.0% (0)	9.5% (8)
It is done by some ICT staff, but it is not part of their job description	10.0% (4)	6.8% (3)	8.3% (7)
It is in the job description of some ICT staff	**40.0% (16)**	**81.8% (36)**	**61.9% (52)**
It is in the job description of all ICT staff	30.0% (12)	11.4% (5)	20.2% (17)
answered question	40	44	**84**
		skipped question	**25**

11. What is the approximate ratio of open and closed source software deployed on your servers?				
		1. What type is your institution?		
		Further Education (FE)	**Higher Education (HE)**	**Response Totals**
In the past	**All or almost all deployed software is open source**	0.0% (0)	0.0% (0)	
	Mostly open source, but also some proprietary	0.0% (0)	0.0% (0)	
	Roughly half open source, half proprietary	5.0% (2)	9.1% (4)	
	Mostly proprietary, but also some open source	25.0% (10)	31.8% (14)	

11. What is the approximate ratio of open and closed source software deployed on your servers?				
	All or almost all deployed software is proprietary	**70.0% (28)**	**54.5% (24)**	
	I don't know	0.0% (0)	4.5% (2)	
		40	44	84
Currently	**All or almost all deployed software is open source**	0.0% (0)	0.0% (0)	
	Mostly open source, but also some proprietary	5.0% (2)	0.0% (0)	
	Roughly half open source, half proprietary	2.5% (1)	13.6% (6)	
	Mostly proprietary, but also some open source	**60.0% (24)**	**68.2% (30)**	
	All or almost all deployed software is proprietary	32.5% (13)	15.9% (7)	
	I don't know	0.0% (0)	2.3% (1)	
		40	44	84
Planned for the future	**All or almost all deployed software is open source**	0.0% (0)	0.0% (0)	
	Mostly open source, but also some proprietary	7.5% (3)	0.0% (0)	
	Roughly half open source, half proprietary	10.0% (4)	36.4% (16)	
	Mostly proprietary, but also some open source	**52.5% (21)**	**40.9% (18)**	
	All or almost all deployed software is proprietary	25.0% (10)	9.1% (4)	
	I don't know	5.0% (2)	13.6% (6)	
		40	44	84
	answered question	40	44	**84**
			skipped question	**25**

12. Which of the following operating systems are used on your institution's servers?

Please choose *all* that apply:

	1. What type is your institution?		
	Further Education (FE)	**Higher Education (HE)**	**Response Totals**
AIX	2.5% (1)	13.6% (6)	8.3% (7)
BSD (FreeBSD)	5.0% (2)	2.3% (1)	3.6% (3)
BSD (NetBSD)	0.0% (0)	0.0% (0)	0.0% (0)
BSD (OpenBSD)	2.5% (1)	2.3% (1)	2.4% (2)
Linux (Ubuntu)	25.0% (10)	34.1% (15)	29.8% (25)
Linux (Debian)	10.0% (4)	13.6% (6)	11.9% (10)
Linux (Red Hat)	25.0% (10)	56.8% (25)	41.7% (35)
Linux (SuSE)	25.0% (10)	36.4% (16)	31.0% (26)
Mac OS	12.5% (5)	22.7% (10)	17.9% (15)
Mac OS X	45.0% (18)	56.8% (25)	51.2% (43)
Solaris	5.0% (2)	45.5% (20)	26.2% (22)
Windows 2000 Advanced Server	5.0% (2)	25.0% (11)	15.5% (13)
Windows 2000 Server	22.5% (9)	22.7% (10)	22.6% (19)
Windows NT Server	10.0% (4)	13.6% (6)	11.9% (10)
Windows Server 2003	**90.0% (36)**	**84.1% (37)**	**86.9% (73)**
I don't know	0.0% (0)	4.5% (2)	2.4% (2)
Other (please specify)	15 replies (37.5%)	13 replies (29.5%)	33.3% (28)
answered question	40	44	**84**
		skipped question	**25**

13. Which of the following mail servers are used at your institution?

Please choose *all* that apply:

	1. What type is your institution?		
	Further Education (FE)	**Higher Education (HE)**	**Response Totals**
We outsource our email to a commercial company	0.0% (0)	13.6% (6)	7.1% (6)
Exim	0.0% (0)	25.0% (11)	13.1% (11)
MS Exchange	**77.5% (31)**	**86.4% (38)**	**82.1% (69)**
Postfix	2.5% (1)	0.0% (0)	1.2% (1)
Sendmail	0.0% (0)	9.1% (4)	4.8% (4)
Qmail	0.0% (0)	2.3% (1)	1.2% (1)
Novell Groupwise	17.5% (7)	6.8% (3)	11.9% (10)
I don't know	0.0% (0)	0.0% (0)	0.0% (0)
Other (please specify)	4 replies (10.0%)	5 replies (11.4%)	10.7% (9)
answered question	40	44	**84**
		skipped question	**25**