

Learning and teaching in Action

Abstract

This feature discusses the use of a training needs analysis exercise carried out by library staff at the NHS Greater Glasgow & Clyde (NHSGGC) Library Network to support the development of a fit for purpose programme of information skills training. A survey was designed based on a well-known information skills competency framework and used to gain an understanding of the knowledge skills needed by staff and how library training could best support these. The survey received a good response rate and led to the successful writing of a training plan for the Library Network for the delivery of information skills training.

H.S.

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Assessing knowledge skills in the NHS: a training needs analysis approach

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Introduction

The NHS Greater Glasgow & Clyde (NHSGGC) Library Network provides library and information services to all staff working within NHSGGC, Scotland's biggest Health Board, and its partner organisations. A core role of this Library Network is offering training to all staff and partners on knowledge skills. This includes induction to library services, using online Library Network systems

such as the catalogue and QUEST request service, the NHS Scotland Knowledge Network to access electronic journals and other national subscription resources, together with both basic and advanced biomedical database searching. The Library Network aims to align its training to staff needs and preferences, offering both one-to-one and group sessions, and face-to-face and online training. As a considerable amount of library staff time goes into developing, preparing for and running training sessions, it is necessary to make sure that best use is being made of resources.

As part of a major review of the Library Network training programme, we looked at attendance figures and trainer feedback from our timetabled, mixed ability, mixed discipline basic search skills courses. These courses form the backbone of the current training on offer, and feedback from users is largely very positive. Attendance figures were however beginning to drop quite significantly, and it was felt by the trainers that these sessions were not best meeting the needs of users.

To form a clearer picture of the knowledge skills needed by NHSGGC staff and how library training could best help meet these needs, the Library Network team decided to run a training needs analysis during the summer of 2011. This survey had three main aims:

- To identify the knowledge skills that NHSGGC staff and partners judged to be most important to their role and measure self-assessed competence levels in these skills which could then form the core of future library training
- To identify models of good and bad training to inform future delivery
- To identify user preferences for location, timing, style and method of delivery of future library training

The survey was distributed via a link to SurveyMonkey (www.surveymonkey.com) to as many staff and partners as possible during June 2011. The survey was started by 884 respondents and

had a 48% completion rate which greatly exceeded the success of past surveys sent out by the Library Network.

Previous user surveys

The Library Network has always recognised the importance of consulting with users to ensure that resources and services best meet their needs; however, previous training surveys have tended to ask questions about users familiarity with very broad topics such as 'database searching'. This use of broad terms to describe tasks that may involve the use of many skills makes assumptions that the questioner and respondent are interpreting the question in the same way and also makes it difficult to pinpoint any specific areas where the user may have strengths and weaknesses. For example, 'database searching' can potentially involve:

- Formulating an answerable question
- Breaking that question into its constituent parts, perhaps using a tool such as PICO.
- Selecting an appropriate database
- Understanding the use of subject headings and how to search with them
- Database-specific language such as 'explode' and 'focus', or 'major heading'
- Identifying appropriate key words and phrases to search with and using tools such as truncation and wildcards
- Applying limits and filters.

It is to be expected that within the process of database searching, a user may find some of these steps more troublesome than others, but impossible to identify which steps these might be using a five-point scale to answer a question such as 'how would you rate your confidence in carrying out a basic database search for information?'

It is identified by experts in survey methodology that accurate responses depend on the participant understanding the question, being able to recall the relevant information needed to answer the question and being able to answer the question.^{1,2} In addition, where a respondent can see that the survey is relevant to their situation, their motivation to answer the survey is more likely, thereby achieving not only better validity in the survey, but also a good response rate.³⁻⁵ Careful consideration of the questions was therefore important, and after a great

deal of discussion about what we needed to find out from our users to better meet their training needs, it was decided that, as well as looking at whether the format of sessions was still appropriate, we needed to break down the knowledge tasks carried out by NHSGGC staff and partners, such as looking for information, carrying out a database search, using information, into the discrete skills and behaviours needed for these tasks; in other words, to take a training needs analysis approach. This helped in being able to fashion appropriate questions for the survey.

Training needs analysis

The purpose of a training needs analysis is to identify the gaps between what someone needs to know in order to fulfil their role in an organisation and what they currently know.^{6,7} Once this has been established, then training can be organised to fill these gaps. While this technique works on an individual level, it can also be used to identify common training needs and themes to be used at an organisational level.⁸

Methods

We carried out a literature search in the Medline, CINAHL and LISTA databases to identify any previous training needs analyses carried out with library users. We also contacted the LIS-Medical and LIS-SHINE Jiscmail lists asking whether any other library services had experience with similar projects. There was very little retrieved from the search that specifically looked at carrying out a training needs analysis with library users; however, some articles were found that dealt with the process of carrying out a training needs analysis with a focus on knowledge skills.

A report from 2010 on the SPECTRAL project by Booth and Beecroft,⁹ although looking at the needs of information professionals rather than users, had useful information on the structure of a training needs analysis in the area of knowledge skills, with four parts identified:

- Identify training needs of both current and future users
- Achieve agreement on the competencies required

- Review current training provision
- Develop strategy and proposals for specific training needed.

More information which helped us with the structure of the survey was found on the Lasa Knowledgebase web page⁷ on carrying out a training needs analysis for ICT skills, including samples of questionnaires. This informed the development of the training needs analysis project and confirmed that our main focus in developing a survey should be identifying the knowledge skills competencies required for our users to carry out their roles within NHSGGC. These would cover the first two parts of the SPECTRAL approach, with the wider training review taking part within the Library Network dealing with the latter two areas.

Identifying key competencies

We were keen to be very specific about the competencies we were identifying and to avoid broad terms such as 'literature searching' which necessarily encompass a whole set of skills, only some of which the user may feel they have confidence with. However, it became clear that teasing out individual competencies specific to NHSGGC was a difficult task and that previous work by other organisations might mean that an effort to create a 'bespoke' list might duplicate existing resources.

A further search was consequently carried out for existing schemes of information/knowledge skills competencies in healthcare and the academic sector to see whether they could be adapted to meet the needs of NHSGGC staff. A computer skills self-assessment checklist from the Royal Devon and Exeter NHS Foundation Trust¹⁰ gave us an excellent example of how tasks could be broken down into discrete skills required, allowing gaps in knowledge and proficiency to be identified and a personalised training programme developed. In addition, the SCONUL Seven Pillars of Information Literacy model¹¹ provided a useful framework for grouping competencies together under headings (manage, evaluate, present, gather, identify, plan, scope) and although developed for the academic and research community has a great deal which translates across to the more specific areas of health information.

However, the existing model that best suited our needs was felt to be the 2011 Royal College of Nursing (RCN) *Finding, using and managing information: nursing, midwifery, health and social care information literacy competencies*.¹² The competencies are grouped under seven headings and break down tasks into required knowledge and skills for each heading, allowing identification of gaps in knowledge for specific topics rather than broad areas. While the original RCN competencies were somewhat modified to suit the needs of NHSGGC staff, the majority of the content was used in our survey.

Dissemination of the survey and analysing the results

To make analysis of the final results as straightforward as possible, we circulated the Survey-Monkey links via email to contacts and on the NHSGGC internet and intranet sites. We did not supply paper copies. This will have excluded respondents who might have preferred to complete the survey offline, but meant that library staff did not have to manually input paper submissions.

We had 884 responses to the survey with an overall completion rate of 48%. While this compared favourably with previous library surveys, it was clear from the steady drop in numbers completing each section that the survey was either too long, or not holding the interest of many respondents. This is a learning point that will be taken into consideration during the design of future surveys.

The results of the survey were downloaded into Excel, and the responses to the competency statements were assigned an average score by multiplying the number of responses for each point on the scale by its value (e.g. if 20 respondents chose point 3 on the scale, this would be assigned a total of 60) and then dividing by the total number of responses, less those who indicated 'Do not understand'.

We then used these averages to calculate the gap between the relevance of a statement to the respondents' roles and their confidence in carrying out a task. This allowed us to identify the areas where there was the biggest gap between relevance and

How relevant is this to your role?									
Answer options	Do not understand	1 (not relevant)	2	3	4	5 (very relevant)	Total count	Total of 1-5	Avg
When searching more than one source of information, I can remove duplicate results to save time	32	53	56	152	150	227	670	638	3.7

Figure 1 Relevance of statements to role of respondent

competence and therefore where there were potential training needs to be met (see Fig. 1).

Lessons learned

Limitations of the survey software

While using SurveyMonkey survey software certainly saved us time and made it easier to gather and analyse the results of the training needs analysis, there were some limitations which meant that we had to compromise on the layout of questions in a way that made completion less straightforward for respondents.

For each competency statement (for example: ‘I know how to obtain the full text of articles that are not available online’), respondents were asked to rate on a 5-point scale:

- The relevance of this statement to their role (i.e. how important it was that they know how to achieve this)
- Their confidence in carrying out the task.

There was also the option of indicating that they did not understand the meaning of the statement.

Ideally, we would have displayed the competency statement with the five-point scale for relevance and the five-point scale for confidence all on the same line. For ease and speed, the respondent would have selected radio buttons for their response. Unfortunately, SurveyMonkey templates do not allow this display format and so a compromise was reached of using drop down selectors for each value rather than radio buttons (see Fig. 2). While still useable, this probably added several minutes to the time needed to complete an already lengthy survey. For future surveys, the implications of any limitations of survey software should be more carefully considered.

Importance of piloting with users

The importance of piloting surveys is stressed by Fowler (1995)¹ to ensure the questions are understandable and relevant to the anticipated audience. The training needs analysis project was carried out to a fairly limited timescale and the design of the survey, in particular in selecting the appropriate competency statements and working out the

Figure 2 Finding information

layout, took longer than was first anticipated. Because of this, there was limited time in which to pilot the survey. The survey was however piloted by library staff and by Library & Information Studies students, who were on placement within the NHSGGC Library Network; however, with hindsight, the main issue with the training needs analysis, excessive length, would likely have been spotted had we piloted with users rather than library staff.

Librarians, in common with many other professions, can be guilty of using jargon and unfamiliar terms without adequate explanation. The nature of the competency statements meant that they would have taken careful and possibly repeated reading for some users to digest their meaning, and therefore, users were likely to take longer than the 20 minutes completion time estimated by the librarian pilot. The high response rate of 'do not understand' for some statements might also have been reduced through rewording if the survey had been piloted by users.

Keeping it to the point

There is a temptation when carrying out surveys with library users to extract as much information as possible in one go, and our survey was no exception, despite our endeavours to be as succinct as possible. In retrospect, the training needs analysis component of the survey should have been a stand-alone piece of work with follow-up questions asked at a later date. This would almost certainly have led to a better completion rate overall because it would have significantly cut the completion time required. Instead, we added two further sections that looked at respondents' past experiences of training and their preferences for the style, location and timing of future training. While these were important questions to ask, and the responses we obtained were valuable, they made the survey too long. Feedback from many users stated that they simply did not have the time to complete the whole thing.

Use of training needs analysis responses with individuals

The training needs analysis was carried out to ascertain common training needs across the whole

of NHS Greater Glasgow and Clyde to inform the development of the Library Network training programme; however, an interesting outcome was that several people contacted us after completing the survey to request a copy of their personal responses to use as a learning plan.

Now that we have gathered together a set of competencies that we feel represent the knowledge skills required by NHSGGC staff, there is the potential to reuse them both with individual users and groups for pre- and post-assessment of needs in conjunction with training supplied by the Library Network.

Conclusion

This was the first time that the Library Network had carried out a training needs analysis of our users and while the process was lengthy and had its challenges, we were able to obtain a great deal of information about the knowledge skills required by NHS Greater Glasgow & Clyde staff which had not been obtained by previous user surveys. Our key learning points from having gone through this process are as follows: A training needs analysis approach allowed us to identify the gaps between the knowledge skills our users felt they needed, and their perceived level of competence in these skills; Existing information literacy competencies schemes can be tailored to the specific user group to avoid having to "reinvent the wheel"; Piloting a survey with users is essential to identify any issues such as excessive length, ambiguous language and issues with layout; and training needs analysis works well both as a tool to identify broad training needs themes across an organisation and as an assessment tool for individual users.

We have now written a training plan for the Network based around these results and hopefully this knowledge will allow us to make best use of the resources at our disposal to meet the needs of our users.

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