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**An evaluation on the effectiveness of Web 2.0 Startpages (Netvibes & Pageflakes) within NHS libraries.**

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**Abstract**

Carol McCormick was Learning Resources Advisor in the library at James Cook University Hospital, South Teesside when she completed her BSc (Hons) Librarianship (Work Based Learning) degree at Northumbria University. She gained a 1<sup>st</sup> Class Honours and is now Learning Resources Librarian. Carol's dissertation formed part of a wider action research project into the provision of current awareness services at James Cook University Hospital. This article reports on the evaluation which was conducted after a Web 2.0 *Startpage*, or portal, had been introduced to improve access to current awareness information for all staff within the Trust. It is the second article in the *Dissertations into practice* series to examine the use of web-based tools to improve access to information for NHS staff.

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**Keywords**

Current awareness services; eHealth; Health resources; Web 2.0; evaluation, qualitative

## Dissertation context

The role of an NHS library is to ensure the delivery of a service that meets the needs of the organisation and staff and to ensure the resources are up to date, relevant and accessible to all employees. At James Cook University Hospital (JCUH) and Friarage Hospital Northallerton (FHN), this is done by providing access to all Trust employees and those in training, to the highest quality knowledge and information currently available in order to inform health and core decision-making. South Tees Hospitals NHS Foundation Trust Library Services conducted a survey in January 2009, the aim of which was to identify library users' views on the quality of the Library Service. The survey highlighted that accessing resources electronically is an increasing priority for users. As a result of the survey and in accordance with the National Service Framework of quality improvement for NHS funded library services, the criteria of which states that the "library knowledge service provides and /or supports a range of alerting services appropriate to the user base,"<sup>1</sup> the library services team created a current awareness resource. This took the form of a *startpage*, a type of portal to Web 2.0 resources, and the team used the Netvibes platform to achieve this. The primary goal was to provide NHS staff with evidence and support in clinical decision-making and their Continuing Professional Development (CPD). This article reports on a study which took place at the post-implementation stage of the action research project and aimed to provide an evaluation on the effectiveness of Web 2.0 technologies - in particular *startpages* (Netvibes & Pageflakes) - within NHS libraries and to determine whether the Netvibes page for South Tees NHS Hospital provides NHS staff with evidence and support in clinical decision-making and CPD. According to Bradley "*every single Web 2.0 resource can be used to make the life of the information professional less complicated in their day-to-day work and in their own professional updating, but also allows librarians to quickly and easily create new resources for their users*".<sup>2</sup> However, this does not imply that they know what Web 2.0 is about or what to do about it, more that they realise that its very purpose is valuable and attracts information seekers.<sup>3,4</sup>

## Literature Review

There is a paucity of published literature covering the barriers faced by health librarians when using Web 2.0 technologies within the NHS. However, Web 2.0 has changed the way that we access and communicate with each other. As a consequence libraries, information professionals and the relationship they have with their users has changed and continues to evolve.<sup>2,5,6</sup> Access to current health information is a 'core function' in health care services,<sup>1</sup> providing users with evidence and support in clinical decision making and continuing professional development. Creating a current awareness service for staff of large acute hospitals also poses a challenge for libraries in meeting the needs of a diverse range of specialities and professions.<sup>7</sup> Conventional methods of current awareness include emailing journal content pages and scanning journals to create bulletins for each speciality, which is time consuming. The Hill Review states that "*seeking the most up to date evidence for the clinical care of individuals and the systematically applied protocols or guidelines*" are to be supported whenever possible.<sup>8</sup>

There is a growing body of literature around the nature of the next generation of library users and the implications their internet use has for libraries.<sup>9, 10, 11</sup> There is evidence that the more aware students are of Web 2.0, then the more likely they will have an increased interest in using it for medical education.<sup>12</sup> However there is also evidence of resistance to these technologies from clinical staff in relation to their learning preferences and their general dislike or mistrust of new technology.<sup>12,13</sup> Bradley<sup>2</sup> claims users of a *startpage*, such as Netvibes or Pageflakes can spend long periods of time using it, so it is important that it looks and feels comfortable to them. Once the Netvibes portal has been configured, it does not require much in the way of upkeep, is highly adaptable to the needs of its specific user group and can be used on any computer either at work or home, updating RSS feeds automatically.<sup>14</sup> However, there are a number of potential barriers to the use of '*startpages*' such as: the terminology used;<sup>15</sup> network speeds; copyright; data protection and cost.<sup>16</sup> Lack of awareness about Web 2.0, fear of change and technophobia all add to the challenges users face.<sup>17-20</sup>

## **Methodology**

In order to evaluate the effectiveness of the service it was necessary to explore NHS librarians', library staff and their users' attitudes to these technologies from an emic or 'insider' perspective. The 'insider' knowledge of the researcher provided the tacit knowledge necessary for construction of the multiple realities that emerged from the data. This was achieved by adapting Pickard's qualitative research framework.<sup>21</sup> The research design included a holistic case study of the South Tees NHS library based at JCUH carried out in three phases: a qualitative questionnaire embedded in the Netflakes *startpage*; in-depth interviews with 4 librarians and 7 paraprofessional library staff and two reflective questionnaires, one sent to external librarians who had implemented startpages and one internally to library staff.<sup>22-24</sup> Librarians, paraprofessional staff and clinical/non clinical staff were included in this study to provide the holistic overview needed for evaluation.

### ***Initial questionnaire***

The initial questionnaire was embedded into South Tees Hospital's library service Netvibes welcome page, allowing NHS clinical staff to participate in the evaluation when they visited the page, and enabling new visitors to the site the opportunity to air their views about the usability of the Netvibes interface. One of the main aims of this study was to determine whether the Netvibes page provides NHS staff with evidence and support in clinical decision-making and CPD. A combination of question formats were used for this study, both the Likert and Thurstone scales were used along with open-ended questions, allowing "the scale to reflect the absolute attitudes of respondents rather than their relative attitude."<sup>21</sup> The questionnaire was available for users for a period of one month, and resulted in 51 responses.

### ***Interviews***

For the purpose of this study semi structured interviews were adopted. The questions used in the initial questionnaire were also asked of the four medical staff interviewed, thus giving the researcher and interviewee the possibility for further clarification and expansion. All interview participants were allowed to check and verify the data following analysis.

## ***Reflective Questionnaires***

An electronic reflective questionnaire was constructed and emailed out to six NHS librarians who had created either the Netvibes or Pageflakes *startpage* via email. The format of this questionnaire and the questions asked were compiled to obtain the best responses that would ascertain the effectiveness of startpages within NHS libraries. These took the form of open-ended questions, giving the opportunity for expansion on their reasons and experiences of creating a startpage. They were also asked about their perceptions of Web 2.0 technologies within NHS libraries. A second reflective questionnaire was emailed to twelve NHS library paraprofessional staff, of which five responded. This questionnaire focused on perceived levels of personal skills and knowledge needed to use and promote this resource.

## **Research findings and discussion**

### ***Initial questionnaire***

The results from the initial questionnaire embedded in the Netvibes portal revealed that a variety of resources are being used by trust staff to keep themselves up to date with current health information. Discussion with colleagues was the most popular method of keeping up to date on a daily basis for 58% of respondents, whereas journals and newspapers were a popular choice for access on a weekly basis. Other methods used were: Meetings/Committees; Current affairs radio channel; Professional discussion forums; Scientific and clinical meetings; Journal club; Teaching sessions; Symposia and conferences. The majority of respondents (71%) indicated that they accessed work related information both at home and within the workplace. Respondents were asked to rate the usefulness of Netvibes across a number of criteria. The results show that users rated the Netvibes portal as **good** overall across the criteria used:

- User friendly interface (0% Poor; 26.7% Adequate; 60% Good; 13.3% Excellent).
- Usefulness (6.7% Poor; 26.7% Adequate; 40% Good; 26.7% Excellent).
- Fulfilling your CPD requirements (20% Poor; 26.7% Adequate; 53.3% Good; 0% Excellent).
- Fulfilling your clinical requirements (20% Poor; 33.3% Adequate; 33.3% Good; 13.3% Excellent).

- Speed of loading (6.7% Poor; 40% Adequate; 46.7% Good; 6.7% Excellent).

When asked if they experienced any problems using the Netvibes portal, 87% said no problems were encountered. When it came to influencing behaviour, the information accessed via Netvibes had the greatest influence on advice given to colleagues (69%); changed some aspect of patient care or treatment (57%); occasional change in advice given to patients or carers (43%). Information relating to confirmed patient care was occasionally influenced (30%). Aspects which were rarely or never influenced by information found via Netvibes were: commissioning, contracting, audit, funded research and managing costs and choice of tests. Evidence indicated that the information accessed often impacted on users' prior knowledge, belief, and curiosity, whilst the majority of respondents learned something new, there was no evidence of any impact on users' course work. When asked their view on the potential of Web 2.0 technologies for NHS library use the majority of users (70%) agreed that it had great potential and will appeal to most customers. Additional comments were provided by a number of staff:

*"I have looked at the Netvibes page and I can see that it is very useful but I still prefer to use my own tried and trusted methods"* (Consultant)

*"Looked at it, like it and will use it"* (Specialist Registrar)

*"Great, informative and automatically updated and no login required"* (Junior Doctor)

*"Have looked at it but don't know how to use it properly"* (Nurse)

### **Librarian questionnaire and interview responses**

There were six reflective questionnaires gathered from librarians located at regional and national libraries and four librarians were interviewed face to face. The main reason identified for creating *startpage* was to provide a *"current awareness service"* for NHS staff. One librarian wanted to *"raise awareness regarding library services, and provide an information service to staff"*. Another claimed *"our staff have difficulty locating information on our trusts Intranet page"* so links to relevant documents were included on their Netvibes page. Another stated that the Netvibes portal was a *"timesaving measure"* so departments could be *"alerted quickly when alerts/updates arise from the many different sources"*. For another, the idea of creating a *startpage* occurred after attending a workshop on *startpages* which she claims *"was very inspiring and it went from there"*. None of the librarians had

consulted with their Trusts' ICT departments before creating their portal. As one librarian put it *"we tried it and it worked so we continued"*, whilst, another reported that *"IT were not involved and are possibly not fully aware of the Pageflakes site"*.

All the librarians agreed that the creation of a *startpage* was very advantageous, with many stating that the most important factor was that it provides *"a single point of reference"*. When asked about disadvantages, again all librarians were in agreement that *"speed of loading"* was a major issue, for both the Netvibes and Pageflakes portals. A major disadvantage for one librarian, who had created a Pageflakes portal, was that *"we have no control over the sponsorship adverts which began appearing in Jan 2010"*. A disadvantage for others was *"the lack of technical advice/support other than via the Netvibes/Pageflakes forums"*. The fact that both the Netvibes/Pageflakes startpages are available to use free of charge was the deciding factor for the majority of librarians to use them. Although Netvibes and Pageflakes work with Internet Explorer 6 (IE6), librarians who had access to IE7 noted that startpages seem to *"load that much quicker"* and those with access to Firefox observed that *"is better still"*. All respondents agreed that their *startpages* were relatively easy to create but everybody was unanimous that a lot of *"staff time"* had been spent on setting it up. Other uncertainties and hurdles to overcome included being unsure about whether *"we use all the elements of the system very well"* and one librarian felt that the Netvibes portal was *"difficult to customise and add our branding"*. When asked how they had publicised their portals, the use of promotional leaflets was a common theme, as was incorporating information about the portals during staff inductions. Other approaches were to *"offer live demonstrations"* and send *"global emails alerting users of this service"*. A popular choice for most librarians was to promote their *startpages* in the *"staff newsletter"* and by placing a *"link on the Intranet"*. One librarian said it had led to spin-off pages, including a *"trust research portal"*, an *"e-learning portal"* and for the duration of the recent pandemic *"a flu portal"*. When asked if they had provided training for their library staff in the use of their portals, only five claimed to offer a structured programme. All librarians agreed that the only cost incurred to them was the amount of *"staff time which was extensive"* in setting up the *startpage*. For one librarian the fact that they had not incurred any cost was *"the reason they had implemented it"*.



Evaluation of the startpages is proving problematic for most libraries, with respondents claiming that it is still early days to perform a full evaluation. The only evaluation one librarian had was from *“feedback, which led to some improvements of the site”*, while most librarians responded that *“user stats”* were difficult to obtain on both the Netvibes and Pageflakes portals.

### ***Library assistants’ questionnaire and interview responses***

Reflective questionnaires were gathered from five library assistants from regional and national libraries and seven library assistants were interviewed face to face. When asked how they felt about using these technologies at work most responded positively: *“I think that libraries must keep up with new technologies”* and *“I like to move with the times”*. Other respondents related more to the negative aspects of these technologies, such as, *“you just get used to using these technologies and then they change it.”* Speed issues regarding the use of these technologies were felt to be *“very frustrating”*. Half of the library assistants reported that they were undertaking the *‘23 things’ training programme*.<sup>18</sup> Most agreed that this was a very informative programme and helped to *“raise awareness”* of all the different Web 2.0 technologies available. Whilst other library assistants stated that although their managers had not provided adequate training, they had a basic understanding of Web 2.0 technologies. It was felt that *“more clarity was needed on the use of these terms...I feel very threatened by all this, everybody just assumes that I will know what they are talking about”*. The majority agreed that the *‘23 things’* training was more than adequate to meet the needs of *“even the most techno phobic amongst us”*. Other suggestions included an *“away day”* and *“in-depth user guides”*. All respondents stated that they are actively encouraged to try new technologies and integrate them into the work environment. When asked their views on Web 2.0 technologies the majority agreed with the statement that they have great potential and will appeal to most customers.

### **Key findings**

The key findings from this study can be summarised as:

- Slow loading speed of both Netvibes and Pageflakes hinders use.
- Both portals are easily adaptable to meet user needs.

- Significant staff time needed initially.
- Maintenance time is minimal.
- For the majority of users at JCUH the Netvibes portal aids both their CPD and clinical requirements
- Library staff identified their own 'knowledge gap' in their understanding of Web 2.0 buzzwords and technologies
- The '23 things' training programme is very effective at meeting the training needs for all the library assistants currently undergoing this programme

### **Implications for practice**

The results revealed that for the staff at JCUH the Netvibes portal is an effective current awareness programme. Few users experienced significant problems when accessing the portal, with the majority rating the resource as useful, user-friendly interface and controversially, speed of loading. One of the key advantages of *startpages* is that they are widely accessible.

General recommendations:

1. Plan staff time effectively and consult with other NHS libraries who have created a current awareness programme to share best practice
2. Make sure that there is a reason for users to return to the portal by checking RSS feeds and other links regularly
3. Involve your ICT department and get them to understand the huge benefits these portals have for the organisation as a whole.
4. Seek approval to upgrade to either Internet Explorer 7 or 8 or consider alternative browsers such as Firefox
5. Focus on user needs, get your users involved on page content relevant to their speciality and needs
6. Involve all library staff in the set-up of the portal and offer training as a prerequisite for frontline staff

The treatment and the care of patients are seen as a 'high priority' for all NHS staff, clinical or otherwise. Patient care can only continue to improve through the

continuing professional development of all NHS staff. If they fail to do this then patient care may suffer as a result. Health libraries cannot afford to remain at a standstill especially in this digital era. They must evolve to meet the needs of their users by embracing new technologies and integrating them wherever possible into their service provision.

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