Practice makes perfect? Vets' information seeking behaviour and information use explored

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A random sample of UK veterinary practitioners was surveyed and interviewed on behalf of the Royal College of Veterinary Surgeons Wellcome Library to identify key issues in veterinary information use (IU) and information seeking behaviour (ISB).¹ A greater proportion of respondents used the Internet for veterinary information than used a veterinary library. However, conventional journals, textbooks and conferences were the main information sources used. Some variations in information source use by practice size and type and information type were identified. The majority of library users and non-users wanted enhanced library access via the Internet, especially to full-text journals.

Introduction

Librarianship and Information Science (LIS) research in the field of veterinary science is rare – arguably, the last UK LIS study was carried out by a student at City University in 1993, before the 'information explosion' occasioned by the Internet. This means that veterinary information services (VIS) have been effectively operating in a vacuum with regard to their users' needs, especially where electronic information is concerned.

This has particular resonance for vets in practice working 'on the front line', alone or as part of a small team, often based in rural areas, far away from VIS that are, by and large, intended (and funded) to support first and foremost the veterinary research undertaken by government or academic vets. Practising vets who need help sourcing information will ultimately turn to the Royal College of Veterinary Services Wellcome Library (RCVSWL), the 'profession's library' [1].

Accordingly, this research was undertaken on behalf of RCVSWL to determine present and future service issues by examining a

sample of veterinarians in practice, to discover where and by what means they looked for the information they needed and what use they made of it once found. It was intended to be a localised, microenvironmental study, which would complement a future macroenvironmental study on vets' information needs (IN).

Previous research

Pelzer and Leysen's 1991 survey of American vets can be considered the definitive veterinary ISB/IU research to date. It supported previous research by Drake and Woods which established that books were the primary information source used in critical care situations, and found that relatively little use was made of veterinary medical libraries, computer databases or extension services [2, 3]. The latter point was highlighted as having potentially negative implications for vets' awareness of current issues in preventative medicine and zoonoses. Journals were perceived as the most important source for 'keeping up-to-date', despite the fact that the information contained within would be at least one year old. Finally, although 50% of respondents had the use of a computer, hardly any used it for database searching.

¹ A full version of this research (including the original questionnaire) is available online at http://www.twales.freemove.co.uk/WALES/Infosurvey_99_for_web.pdf

The same authors' research (1988 [4], updated 1998 with Wiese [5]) into the library use and ISB of a cross-section of US veterinary medical students is useful mainly for its section on student use of electronic resources. VETCD, MEDLINE and BEASTCD were the most popular databases used, illustrating the general shift from print to computer indexes in library ISB/IU since 1988. In general, American veterinary students showed themselves to be pragmatic electronic resource users, acknowledging that other resources such as colleagues, CPD courses/workshops and conferences would continue to be their main sources of information.

The few studies of UK vets that have been undertaken tend towards the enumeration and quantification of veterinary information held in practices: numbers of books held, journals subscribed to, etc., as opposed to a deeper investigation of IN, IU or ISB. However, Bawden and Valleley's 1996 [6] (fieldwork 1993 [7]) survey is a good reference for its findings on computer use in practices. Little use was made of computers for storage or retrieval of veterinary information – accounting and administrative tasks predominated. There was a general lack of awareness of electronic resources with only 10% of respondents being aware of specific information sources. One third of respondents were happy with the amount of information available and the means of obtaining it. The remaining two thirds expressed some degree of dissatisfaction, being time-pressed vets who saw themselves faced with a mountain of information. This could only be addressed by VIS ensuring quick and easy access to information.

Raw had come to a similar conclusion some years previously [8]. He drew on a larger sample (537 practices) and chose to focus on practice library issues – subscriptions, book selection criteria, budgets etc. Respondents accused publishers of selling out-of-date books (due to the long lead times involved in preparing new editions) and preferred specialist material aimed at vets in practice rather than specialist 'esoteric' research material appearing in journals. Raw

pointed out that such research eventually filters down into the practice of tomorrow, but missed the fact that his respondents were requesting a selective dissemination of information (SDI) service in all but name.

In Gerrard's research on veterinary practitioners' views on the Internet, it was reported that, although the level of Internet awareness was high, most vets were unsure about the Internet and the benefits it could offer them and that this uncertainty was the primary reason for vets not using it [9]. Of his sample 46% had no interest in CPD courses aimed at increasing Internet awareness – a key issue, the author reckoned, if the Internet is to be used to its full potential by the profession.

Biggs found that 75% of veterinary surgeons in general practice in Britain used computers as a work-aid, with 90% of recently qualified vets being computer users [10]. Seventy-five per cent of vets had access to a CD-ROM facility but less than half were on the Internet. Information on diseases and veterinary products (and their manufacturers) were the main focuses of Internet searches. Computer use was found to absorb on average under 10% of a vet's time. Finally, the author judged veterinary computer use to be 'fairly basic' as statistical analysis and accounting were found to be minority uses. This contrasts with Bawden and Valleley's findings.

Relevant ISB/IU research from other disciplines

Various medical ISB/IU studies of practitioners exist. Gravois *et al.* studied dental hygienists and suggested information evaluation and perceived barriers to information use as two worthy research areas [11]. Bowden *et al.* examined IN/ISB/IU of Texas physicians with particular attention to the availability of MEDLINE [12]. The authors found that personal collections of books and journals and consultations with colleagues were more important to physicians than MEDLINE. Lundeen *et al.* found geographic isolation, cost and inadequate technology to be the principal barriers to information use cited by rural health care workers in Hawaii (including, but not limited

to, General Practitioners (GPs)) [13]. Dee and Blazek reported that, for rural physicians, communication with colleagues provided immediate, accurate and reliable answers and would invariably save the time and effort required to consult books and journals, even those readily available in the GP's personal library [14]. Work by D'Alessandro *et al.* on Digital Health Science Libraries for rural physicians may also have implications for veterinary information provision [15]. Finally, Thompson provides a useful review of the literature on the characteristics of information resources preferred by primary care physicians with reference to ISB/IU [16]. Outside of the medical domain, work by Ellis in academic and industrial environments provides a solid theoretical base for user study research, while Wilson has reviewed non-LIS research on IN and ISB [17, 18, 19, 20].

Methodology

Questionnaires (paper and email versions) followed-up by semi-structured interviews were the methods of data collection selected. The advantages of this approach include: a large geographic 'reach', comparably quick and cheap data collection and the opportunity to explore attitudes and opinions in more detail. The main disadvantage is the reliance on the goodwill of time-pressed and 'questionnaire fatigued' vets to participate.

Topics covered in the questionnaires and interviews were based on key issues identified in the literature review. A pilot sample of vets tested question design, survey layout and closed question responses. The RCVS Practice Database (RPD) was used as the

sampling frame, from which a simple random sample was selected with the aid of random number tables. For the paper questionnaire, it was decided to use Valleley's sample size ($n = 100$) as a basis but with compensation for a longer survey ($n = 149$). The email questionnaire sample ($n = 60$) comprised vets whose email addresses had already been added to the RPD, or whose email addresses had been gleaned from three UK veterinary information websites [21, 22, 23]. The total sample population was thus 209. Pre-survey publicity, stamped addressed envelopes, official invitations, follow-up letters and a prize draw incentive (as recommended by Oppenheim [24]) were all used to boost the response rate.

The interview stage was conducted after the majority of questionnaires had been returned. Due to cost, time and field research constraints, seven interviews scheduled to last no more than an hour were undertaken. Candidates for interview were selected from respondents who had checked an interview consent box on the questionnaire on the basis of practice type, IT use, or geographical location.

Results

The final response rate was 39% ($n = 82$). This low rate is probably due to a combination of factors: survey length, subject matter and 'direct mail overload' affecting vets' attention and time. The email survey gained a slightly better response rate (42%) than the paper survey (38%). This may be because of the more 'immediate' nature of email, i.e. messages can be replied to quickly and easily with a

Table 1. Survey returns and interviews by practice type compared to UK totals

Practice type	Number (n)	Survey %	UK %*	Interviewed
Mixed	28	34	54	1
Large	5	6	1	1
Equine (100%)	3	4	3	1
Small	45	55	37	4
Poultry (100%)	1	1	0.3	0
Other	0	0	5	0
Total	82	100	100	7

*Source: RCVS Practice Database

click of a button (or, indeed, deleted!). Table 1 shows the final split of survey returns and interviews by practice type compared to estimated UK totals.

Computer usage

All respondents used a computer (rarely an Apple or Unix system). Laptop use was reported by just 17% of respondents and palmtop use 8%. The most popular computer activity was word-processing followed by accounts/invoicing and label printing (in that order). The least popular activity was website design or maintenance followed by veterinary note taking and database searching. If, for the purposes of analysis, email communication, internet searches, database searches, veterinary note taking and multimedia use are considered to be the principal examples of ISB from the list of activities given, the percentage of ISB activity out of total computer activity can be calculated. Thus ISB comprised just under a third (29%) of all respondent computer activity. There was no significant difference found between patterns of computer activity by practice type, size, or age group.

The Internet

'The biggest waste of time known to man', lamented one respondent. But the majority of vets disagreed – 66% used the Internet for work related purposes and a further 11% were using it for non-work related purposes. Of the remainder, there was a small group of vets who were 'Internet converts', i.e. they stated they would use it if they had the time. Only three respondents had no idea what use the Internet would be to their work. Despite the recent press attention on the comparatively high cost of using the Internet in the UK, compared to the USA, due to local call charges, such costs were not perceived as a barrier to Internet use with only one respondent mentioning them. The remaining 11% of respondents had other undeclared reasons for not using the Internet at present. Just over half the mixed animal practice respondents (54%) used the Internet for any purpose, as did 69% of the small animal practice respondents. All the equine practice respondents in the survey used the Internet and all

bar one of the large animal practice respondents.

An analysis of Internet use by age reveals that it is the younger vet respondents who were least likely to be online (three out of seven), however this category is under represented in the survey. With this in mind, it was found that the 31–40 age group were the category using the Net the most (73%), followed by the 41–50 age group (67%) and the 51–59 age group (60%).

How did the sample of vets find out about Internet resources? Three main sources emerge (in rank order, most popular first): online sources (comprising surfing, browsing type activities, search engines, newsgroups and mailing lists), published literature sources (e.g. adverts, articles in journals or newspapers) and oral sources (colleagues and word of mouth).

And once these vets are online, what then? Some degree of caution should be exercised here as some of the categories of online resource provided were interpreted differently by different respondents. However, it is fair to claim that 83% of respondents who used the Internet for work went to professional institution websites at least occasionally, and 79% to veterinary information websites.

As for the categories of websites that were not visited, 78% of Internet respondents never used library catalogues on the Web. The word 'never' is perhaps too strong here as null responses are included: somebody ticking a 'never' box is obviously making a stronger statement than the person who leaves it blank, so 'do not use' is a more appropriate interpretation. But, semantics aside, the inescapable conclusion is that library catalogues are not being used, in spite of major recent capital investment in them by VIS.

However, mailing lists are used even less (85% of Internet respondents did not use them) and 74% of Internet respondents never used newsgroups, publishers' websites, or online newspapers in their veterinary work. The low reported use of online databases is also important as it shows that a veterinary equivalent is needed of the various MEDLINE gateways on the Net. Vets do use MEDLINE – this was the most cited example of an online

database in the survey – but it is first and foremost intended for the medical profession and so its coverage is not specialised enough for veterinary users. Other frequently cited Internet resources were the Ministry of Agriculture, Farming and Fisheries (MAFF) site and the BSAVA web pages.

Although fully aware of the Net's potential as an information resource, it is fair to say that all the interviewees were at least frustrated by it in its current state, if not openly hostile. One saw an important role for the Net, thanks to its speed and immediacy, as the profession's preferred internal publishing/communication medium for position statements and professional issues. Speed of publication was also a key factor in another's appreciation of FEMS online as it facilitates current awareness. The Internet's immediacy was also valued by a third interviewee as it means there is the tantalising possibility of being able to satisfy any information need instantly.

Email

Around 79% of respondents had the use of an email address and the majority of them used email for work related communication. 64% of the survey's vets can be described as truly 'wired', using both Internet and email to help them with their practice work. An additional 16% used email and not the Internet in their work and 17% vice versa.

The majority of respondents seemed to be emailing other vets in the UK and 69% were corresponding with vets working in other countries. On the other hand, 91% of vets using email for their work did not exchange information with laboratories. Librarians did not fare well either with only 18% of the respective sample emailing them. As for clients and practice colleagues, it seems that just under a third of respondents were exchanging information with these categories of people. 62% of respondents who used email for work were communicating with between one and three types of recipient. 9% could be described as 'email addicts' as they were emailing seven or more types of recipient.

Leaving aside personal, non-work related information which predominated, clinical

and case related information appeared to be the most popular type of information being exchanged, closely followed by practice management information. The relatively low amount of personal research information exchanged is noteworthy (7 responses out of 87).

Although, on the basis of the survey findings, it can be argued that email use is in its infancy in terms of ISB, some of the interviewees indicated that this situation might change rapidly. One stated that email use rises exponentially once it is used fairly regularly and becomes part of the daily routine. Another vet, a heavy email user, was of the opinion that email use saved paper and that having an email address was a vital part of client relations. Regular use gives rise to experimentation, explaining one of the fascinating interview findings – the use of flatbed scanners to exchange document images. One vet participated in a virtual vet community in which meeting proceedings and journal articles were exchanged via email and post. Another exchanged non-clinical information with his brother (also a vet) as well as maps and CVs with prospective visitors.

CD-ROMs

Of the 80 respondents who answered the question on CD-ROM usage in the past month, 12.5% indicated that they did not use CD-ROMs at all, while the majority (40%) had not used a CD-ROM in the previous month (19 of these were Internet users, 13 were not). The remaining 38 respondents were hardly heavy CD-ROM users as only 3 of them had used CD-ROMs 15 or more times in the previous month.

CD-ROMs were used mainly for 'staying current' (presumably as part of the vets' continuing professional development requirements) by 78% of regular users. This compares with 55% of regular users consulting CD-ROMs to answer patient care questions and 36% consulting them for personal research purposes. It was also found that regular CD-ROM users overwhelmingly (89%) preferred to search CD-ROMs by themselves rather than delegate their searches to somebody else.

Vetstream products dominate the veterinary CD-ROM market. Twenty respondents reported using CD-Canis, while twelve used the CD-Felis and five CD-Equus. Eight respondents used Vision. The response for MEDLINE (3) was probably not accurate, as many respondents may have considered it to be an Internet resource (e.g. via Grateful Med) rather than a CD-ROM or database.

Vetstream CD-ROMs were discussed in three interviews. Opinions were negative on the whole: the third interviewee found them to be expensive, clumsy to navigate through and conservative in that they do not go beyond the standard techniques that most vets know anyway. One vet obviously appreciated CD-Canis and CD-Felis as he worked essentially alone in a small animal practice and reasoned that the kind of information included on them obviated an online version. He did, however, acknowledge their limited scope/coverage. Another vet had looked at CD-Equus and found it to be expensive and, once again, not particularly detailed compared with journal articles. Another found the data compendia and formularies that are now available on CD-ROM to be more useful. Finally, one interviewee signalled an information need fulfilled particularly well by the CD-ROM medium – the communication of conference proceedings.

Are CD-ROMs threatened by the Internet? Although the third interviewee was pro-Internet, the second preferred CD-ROMs as she found that she wasted a lot of time using databases on the Internet. The fifth saw no need to tie up his telephone line when he had perfectly adequate information on CD-ROM. The sixth had suffered slow download times when online which made him appreciate CD-ROMs for their accessibility and portability as well as the functionality of certain interfaces. He was also concerned about general image quality. The fourth vet thought that CD-ROMs would replace paper journals, something that would facilitate indexing and searching. The first interviewee, however, was not impressed with the CD-ROMs she had seen due to their basic level. For her, books provided a viable alternative to the Internet.

The survey revealed four major reasons

for CD-ROM non-use: lack of easy access, lack of time, lack of equipment and uncertainty over which databases to use. Reasons which were not considered important (and scored equally lowly) were: cost of searching, preferring others to search, dislike of computers, wrong kind of information and no access to journals once references found.

Preferred communication media

The closed question relating to this issue did not generate an entirely satisfactory set of data either as 16 of the 79 respondents gave multiple answers when only one response was required. However, the rank order of preferred media is unchanged after using either an elimination or compensation strategy in analysis: (favourite first) email, paper document in the post, Internet site, fax, telephone, floppy disk and audio cassette/other. Note that no distinction was made between different kinds of telephone. Fax and telephone are almost interchangeable in the rankings. For the 18 respondents who stated that neither they nor their practice had an email address, information in paper document form through the post was the preferred medium followed by fax and telephone.

Respondents' preferred means of obtaining information when working away from the practice was also explored in order to gauge the potential use of portable communication/information devices. Out of the 61 respondents who answered the question, 5 stated they would wait until they returned to the practice to get the information they needed. Fifteen used mobile telephones. An additional 31 vets said they used the telephone, which may or may not include mobile equipment. Interestingly, 7 vets stated they used books. Laptop use was reported by 8 respondents. Pagers were used by only 3 respondents.

Preferred information sources

However many respondents might be using the Internet and/or databases, these kinds of sources were not high up at all in the overall scheme of veterinary information seeking (Table 2). Journal articles, textbooks and conferences were the sources of choice for drug,

diagnostic and therapeutic information. Use of other sources varied. It was found, for example, that promotional literature was considered to be a particularly important source for drug information (77% of respondents used it), as were company representatives (73%), and practice colleagues (68%). On the other hand, the relatively low overall use of databases and websites is probably a reflection of the quality of information provided and, especially in the case of websites, of a lack of credibility (i.e. sites that are biased and are neither peer-reviewed nor officially approved).

Information source use by practice type

A tentative analysis was made of variations in source use for each information type by small animal and mixed practice types. Mixed practice respondents used an average of three

information sources for each information type, while the equivalent figure for small animal practices was six. Once again, these figures should be treated with caution because of sample size and response rate.

For drug information needs, it can be argued that respondents working in small animal practices were using practice records as an information source to a much greater extent than their peers in mixed animal practices (76% versus 32%). A similar relationship existed for 'other vets' as a resource (64% small animal use versus 39% mixed animal use). Small animal practice respondents were also using electronic information resources to a greater extent (+17% in the case of databases). On the other hand, mixed animal practitioners were making greater use of encyclopaedia and compendia than small animal practice practitioners and, while the

Table 2. Sources ranked by number of responses by information type

Information source*	Drug (n)	Rank	Diag (n)	Rank	Ther (n)	Rank	Total (n)	Rank
Journal articles	72	1	78	1	73	1	223	1
Textbooks	71	2	71	2	73	2	215	2
Conferences	63	3	71	2	69	3	203	3
Promotional literature	63	3	29	12	47	8	139	8
Company representatives	60	5	18	18	40	10	118	10
Practice colleagues	56	6	64	5	63	4	183	4
Training courses/workshops	48	7	61	6	57	6	166	6
Conference proceedings	47	8	51	7	50	7	148	7
Encyclopaedia/compendia	45	9	31	11	38	11	114	11
Other vets	45	9	65	4	61	5	171	5
Personal notes/files	43	11	43	8	42	9	128	9
Current awareness publications	31	12	35	10	33	12	99	12
Practice records	30	13	25	13	29	13	84	13
Other books	25	14	23	14	29	13	77	14
Databases	21	15	22	15	21	15	64	16
Internet sites	20	16	21	17	21	15	62	17
References/citations	18	17	22	15	18	17	58	18
Abstracting/indexing services	17	18	17	19	15	19	49	19
Laboratory	15	19	42	9	17	18	74	15
Annual reviews	10	20	10	20	11	20	31	20
Other	7	21	5	21	5	21	17	21

*Respondents could select more than one source

overall finding that journal articles were the preferred resource for drug information still holds, textbooks, promotional literature and company representatives were of equal importance to mixed animal practitioners – more than the overall rankings in Table 2 would suggest.

There was a more defined 'information use hierarchy' for diagnostic information sources on the small animal side than on the mixed animal. In other words, mixed animal practice respondents were making greater use of a wider range of resources for this kind of information than their small animal practice peers. On reflection this is common sense – the wide variety of animal species seen by mixed animal practices, with all their respective conditions, must make calls on a wider variety of diagnostic information sources than is needed for a small animal practice. And it is this variety that may explain the greater use by mixed animal practice respondents of particular information resources such as training courses/workshops (+11%), practice colleagues (+8%) and laboratories (+13%) to help them cope.

Once again, small animal practices made greater use of databases for diagnostic information and abstracting/indexing services (33%:11% and 47%:36% respectively). However, there was a roughly similar use of Internet sites, albeit low in priority. One curiosity is that the small animal practice respondents reported significantly greater use of promotional literature (+23%) for this type of information. As suggested previously, promotional literature could be being used in conjunction with other information sources.

For therapeutic information, training courses/workshops featured more prominently in mixed animal practice respondents' routines (79% versus 67%), as did the use of practice records (46% versus 31%). On the other hand, current awareness publications, personal notes/files, references/citations, databases, abstracting/indexing services and laboratories were all used more (at least +10% for each one) by small animal practice respondents. The small animal practices in the survey used a wider variety of sources for

therapeutic information than the mixed animal practices.

Information source use by practice size

A couple of observations can be made. Firstly, the apparently low use of electronic resources by 'super' (i.e. 11+ vets) practices, especially use of databases. This practice type in the survey did not use any abstracting/indexing services or annual reviews for any information type and reported very low use of references/citations. Further research is clearly needed here to confirm or deny these findings.

For one-vet practices, a clustering effect can be observed, especially for diagnostic and therapeutic information. That is, a small group of sources were used consistently more than others: journal articles, textbooks, conferences, other vets and conference proceedings. Only when drug information was needed were additional sources used to a similar extent: promotional literature, company representatives and personal notes/files. As for small (1-3 man) practices, it is fair to say that they generally used a wider variety of sources than other size practices.

Medium sized practices in the survey rated practice colleagues highly – the most useful information source for therapeutic information along with textbooks and second most useful source for diagnostic information. It is expected that this trend would also apply to super practices but their representation is too small in this survey to be certain.

Keeping up-to-date

Journals appear to be the most popular source for current awareness purposes (Table 3). However, it can be argued that meetings, courses and seminars all constitute a 'many to one' oral information source and consequently it is *this* kind of source that is the most used. Certainly, there is an overall balance between the use of published and oral sources. Responses such as 'CPD' and 'reading' conceivably included both journal reading, books and courses and so cloud interpretation. It is clear, though, that electronic information sources (and possibly one to one sources as well) were not regarded as

Table 3. Answers to open question – how do you keep up-to-date?

Classification				Total
Published	Journals			58
	of which:	Veterinary Record	10	
		JSAP	7	
		In Practice	5	
		Other named examples	15	
Oral (1 - ∞ - 1)	Books			12
	Other literature			13
	Reading (unspecified)			11
	Meetings			35
	Courses			20
Oral (1 - 1)	Conferences			9
	Seminars/lectures			6
	Congresses			4
	Colleagues			11
	Other vets			7
Electronic	Other contacts			4
	CD-ROMs			7
	Internet related			6
	Audio cassettes			2
				15
Miscellaneous	Other activities			4
	CPD (unspecified)			7
				11
Total responses				216

being important, despite the fact they both offer the possibility of being the most current information sources of all.

Emergency sources

A similar conclusion was reached for respondents' optimum sources of information in emergency situations. The humble book (textbook or reference) was the main life support system (sic) with 45% of responses followed by practice colleagues with 18%. There is really little to choose between the remaining responses. Electronic information sources were clearly not regarded as being suitable for the job.

Barriers to IU

Time, cost and inadequate information skills training (in that order) were regarded as the main barriers to IU. Time barriers were twice as significant for respondents as cost barriers. This response was anticipated and an additional question gave respondents the opportunity to consider three possible solutions to the time problem, extracted from previous research. The results showed a very marginal preference for the 'circuit librarian' idea (+2) over 'onsite information intermediary' and 'personal intermediary at information service'.

However, the largest response was comprised of don't knows, no preferences and

null responses (48%). This can be interpreted in several ways. Firstly, as a genuine expression of ignorance. Secondly, as a passive response, e.g. it is not for me to know the answers, others must present solutions to me. Thirdly, as an acknowledgement that there may not be a definite answer, with it being left to the individual vet's discretion to decide what action to take (if any) about time pressures. It should also be noted that respondents were given space to suggest their own ideas and only six chose to do so.

Problems with information sources

It is clear that currency of information (Table 4) was the most pressing problem with vets having to grapple with out-of-date information. One respondent pointed out that rapid changes in medicine and therapeutics, especially in disciplines such as anaesthesia, are rendering textbooks out-of-date as soon as they are published. Problems with availability and content here are also of concern. The former category encompasses occasions where colleagues or referral vets are unavailable at the time when the information need is most urgent, or where books have been left at home, or the information is at another practice in whatever form. Content problems refer to poor coverage of a topic, lack of detail on rarer topics, or conflicting/biased advice.

The fact that the cost of information does not appear to be a significant issue is worth retaining as is a particular example of a design problem – poor indexing. This refers not only to indexing of documents for a database or search engine but also for paper journals. Finally, at the risk of being provocative, it may be that the major problem was respondents' lack of information skills.

Evaluation of information

'Credibility of source' was by far the most significant evaluative criterion used with 40 out of 76 respondents allocating it first or second position out of the list provided. 'Personal experience' came second (n = 38) and 'discussion with practice colleagues' in third place (n = 25). 'Methodology used' and 'consultation with professional association' was hardly used as evaluating criteria.

Veterinary libraries

55% of respondents used a veterinary library and for 68% of these, RCVSWL was the most important library. No other veterinary library scored significantly. Of the 37 respondents who did not use veterinary libraries, 21 were Internet users, although that is not to suggest cause and effect. The opportunity was taken to ask these 37 non-users what (if anything) would prompt them to use a veterinary library

Table 4. ISB problems

Problem	Example(s)	Number (n)*
Currency related	Out-of-date	19
Availability	Colleague busy	16
Content related	Biased, irrelevant	16
Physical	Bulky, hard to file	9
Design related	Poor indexing	9
Time consuming	-	8
Speed of access/delivery	Internet downloads	8
Finding the known reference	-	4
Lack of resource awareness	Where to look?	3
Too many sources	-	3
Other	Cost	3
Total responses		98

*Respondents could specify more than one problem.

and the majority of responses stated 'improve access via the Internet', i.e. accessing library resources online to download entire articles, reviews etc. This was a wish shared by the majority of library users.

Veterinary libraries were primarily used for article/reference chasing (43% of the 69 responses to the question). The more general literature searching activity accounted for a further 19% of responses. Book or journal loans (26%) were thus not the principal library service used by respondents. One activity was mentioned that had not been previously considered – a minority of respondents were using veterinary libraries to evaluate textbooks before purchasing them.

A private affair?

One finding from the interview stage deserves further research – the strongly held view by an interviewee that any ISB should be done in private, that is to say, not in front of the client. This arose when discussing the potential use of portable data assistants when on call – the vet was adamant that consulting any source in front of a client was frowned upon as it was not seen to be 'professional'.

Conclusions

At first, it seems that the findings from this research merely confirm those published previously. Journals and textbooks continue to be the information sources of choice for practitioners in this survey's sample, just as they were some 20 years ago when Drake and Woods conducted their research. Despite advances in technology, books are still the emergency information source *par excellence* as (re)confirmed by Pelzer and Leysen in 1991. Even if more practices in this survey had computers (100%) than was the case for Valleley in 1993 (77%), the same conclusion applies now as did then – administrative tasks such as word-processing and accounting comprise the majority of computer activity, despite the arrival of the Net and email. What is more, the major barrier to IU identified by Raw – lack of time – is still as prominent as ever.

New ground has been covered, though, especially with regard to the Internet. More

vets in this survey were using the Net for their work than were in Gerrard's survey (68% versus 28%) and there appeared to be less uncertainty about getting connected. Let it not be forgotten that more respondents reported using the Net for their work than reported using a veterinary library (by whatever means). This is in spite of the fact that RCVSWL and, recently, the Royal Veterinary College, have both invested in Sirsi's UNICORN library management system, which permits user friendly remote catalogue interrogation/interaction via the client World Wide Web browser.

Survey comments and interviews revealed that lack of publicity was partly to blame, but mainly it was the assumption that such systems fulfilled a proven practitioner need for bibliographic information via the Internet. In reality, it was found that there was a far stronger demand by VIS users and non-users alike for online full-text journal information and that an opportunity existed for the RCVSWL, as the 'profession's library', to assume a leading Internet role in filtering the useful from the useless on behalf of the profession. The principal of enhanced online veterinary information provision is thus the key service implication for RCVSWL that can be identified from current veterinary ISB/IU.

This should not be a surprise. It was anticipated in a 1994 article by the RCVSWL librarian at the time, Benita Horder [1, p. 556]:

Future possibilities for our users may well include dial-up access, not only to our catalogue, but also CD-ROM databases. Electronic publishing is likely to increase over the next decade. Further specialisation and the need for continuing professional development will lead to increasing use. Individual access to databases is likely to become more widespread, but there will still be a need for the librarian as an intermediary and to provide the backing services of photocopying and lending.

Horder was writing just before the Internet became a public network and so was advocating direct dial-up as opposed to dial-up via a proxy, which is now commonplace.

However, her predictions then are now a reality thanks to the potential of the Internet. It remains to be seen if VIS (and more specifically, RCVSWL) are willing and able to tap it.

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The following people are thanked for their invaluable assistance: Liz Armitage, David Bawden, Katie Wales, John Collins, Simon Jackson, Washiela Jacobs, Simon Jackson, Yioda Panayiotou, Brian Wales and Tom Roper.

The century of film: bibliographic control and legal deposit of the moving image

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1895 saw the dawn of film – a new publication medium that we associate particularly with the century that has just ended. The survival of films and of information about them has been severely hampered in the UK by the absence of legal deposit. At the beginning of the new century, proposals to remedy that situation would not only benefit film but might, for the new digital media, help to prevent the loss of treasures on the scale of that suffered by film in the twentieth century.

Introduction

It seems appropriate at the beginning of a new century to look back at the state of our knowledge about the publications of the previous one. It seems particularly appropriate when, as in the case of film, the publication medium belongs almost entirely to the previous century – indeed it represented a revolutionary technological innovation at the start of the twentieth century. Such a review might help us to learn some lessons, and this is very appropriate at a time when methods of production and distribution of the moving image are undergoing dramatic changes, again because of the advent of new technologies.

Of the films that were produced in this country during the first thirty years of the existence of film technology, in other words the 'silent' era, probably no more than 20% survives. We have to use the word 'probably' because we do not have a complete record of all the films that were produced and we shall probably never be absolutely sure what has been lost. Even now occasional 'treasures' are rediscovered. In the absence of any formal requirement to register films, such as that established by the Library of Congress in the United States, the information that we do have about films produced during that period has had to be painstakingly pieced together from surviving copies of company film catalogues, from the surviving films and fragments of films, and from the trade magazines of the period, notably, for this country, *Bioscope* and

Kinematograph Weekly and its various related titles. Of the films from the 'sound' era, usually regarded as having begun in 1927, perhaps 50% survives. For this period the records are rather better because, following the Cinematograph Films Act of 1927, it became a requirement to register the titles of films and their footage with the Board of Trade.

The development of film catalogues

The earliest attempt to provide a systematic record of films in this country dates back to 1934 when the first issue of the British Film Institute's *Monthly Film Bulletin* appeared. At that time the film records were very brief:

THIS IS THE LIFE. British Lion.

Censor's Certificate 'U'.

Broad comedy with Binnie Hale and Gordon Harker.

The publication covered educational films as well as feature and short films. It also established the tradition of including not just British films but also those imported into this country. As the foreword to the first issue said:

The British Film Institute, in deciding to publish a monthly bulletin of current educational and documentary films is endeavouring to meet a difficulty which has been experienced for sometime past by various organisations and individuals who have realised the possibilities of the film and who have been anxious to make use