Educational researchers' use of information services on the World Wide Web

A survey prepared by the PERINE project

The Results from the Swiss Survey

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Introduction

PERINE is a Research Networks project funded by the European Commission.¹ This survey on the use of educational researchers of the World Wide Web was carried out in May and June 2002 as a part of the PERINE project.² PERINE is intended to improve the pedagogical and educational research information network for Europe. The survey was addressed to all individual members of the Swiss Society for Research in Education (SGBF), the only scientific society in Switzerland that unites all researchers in the field of education. The primary interest of this survey is to know more about the current use of the Internet by researchers. As the Internet itself and therefore also its use are very dynamic, it is planned to repeat the same survey in two years, in order to have the possibility to analyse the changes in the use. For the time being, this is to our knowledge the first survey that has been carried out in Switzerland for the specific group of educational researchers as Internet users.

Survey characteristics

In order not to bias the results in favour of those already using the Internet extensively, the survey was sent by post to all members of the Swiss Society for Research in Education. In total, 372 members were addressed, of which 241 (64.8%) came from the German speaking part of Switzerland and 230 were men (61.8%). 173 surveys were returned (46.5%). The return was slightly better for women and considerably better for residents in the German speaking part of Switzerland. Table 1 shows the personal characteristics of the survey respondents. These characteristics were subsequently used as control variables to test whether there were significant differences in the answers to the survey questions. All survey results are presented in the form of tables and graphs and the results of probit and ordered probit statistical analysis of the responses are shown in a written text. Detailed information on the latter can be given on demand.

¹ The Swiss participation in the PERINE project is funded by the Federal Office for Education and Science.
² The authors would like to thank Micheline Schmid and Andrea Jossen for their help in carrying out the survey and compiling the data.
### Table 1: Characteristics of respondents

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>63.9</td>
</tr>
<tr>
<td>Women</td>
<td>36.1</td>
</tr>
<tr>
<td>Age Group &lt;35</td>
<td>5.9</td>
</tr>
<tr>
<td>Age Group 35-50</td>
<td>42.0</td>
</tr>
<tr>
<td>Age Group &gt;51</td>
<td>51.5</td>
</tr>
<tr>
<td>No answer to the “age” question</td>
<td>0.6</td>
</tr>
<tr>
<td>French speaking</td>
<td>27.7</td>
</tr>
<tr>
<td>German speaking</td>
<td>72.3</td>
</tr>
<tr>
<td>Senior position</td>
<td>63.2</td>
</tr>
<tr>
<td>Intermediate position</td>
<td>32.0</td>
</tr>
<tr>
<td>Junior position</td>
<td>4.8</td>
</tr>
<tr>
<td>Lives in Switzerland</td>
<td>97.6</td>
</tr>
<tr>
<td>Works in University</td>
<td>22.0</td>
</tr>
<tr>
<td>Works in University of Applied Science (incl. Teacher Education)</td>
<td>24.1</td>
</tr>
<tr>
<td>Works in Research Institution</td>
<td>4.7</td>
</tr>
<tr>
<td>Works in School</td>
<td>8.4</td>
</tr>
<tr>
<td>Works in Administration</td>
<td>30.4</td>
</tr>
<tr>
<td>Works (others)</td>
<td>10.4</td>
</tr>
</tbody>
</table>

Although the population of the survey is the Swiss Society for Research in Education, the direct conduct of research is the least likely role in the work of the respondents. Many respondents work in fields were research is consulted and used but do not necessarily do research themselves (see Graph 1). The distinction is important, as the use of Internet does not exclusively cover research activities in this survey but rather persons that are involved or close to research in education.
Graph 1

Which of the following roles are included in your work?

- Writing for publications
- Editing/Publishing
- Administration
- Teaching
- Conduct of research
- Management of research
The frequency of the Web use in professional work
There are more or less two groups of users. Approximately two thirds of the respondents use the Internet on a daily base in their professional work and one third only uses it occasionally. The ordered probit analysis of the frequency of the use of the Web gave no significant differences in the responses according to personal characteristics. Only on the 10% level of significance users of the oldest age group use the web less frequently then the reference group (<35).

Graph 2

How frequent is your current use of the Web in your professional work?

- Daily: 69%
- Occasional: 29%
- Rare: 2%
- Non existent: 0%
The perception of the Web as a source of information

Most respondents consider the search for information on the Web as rather easy. Still, a comprehensive collection of Web-links for education is the question with the strongest support (with a significantly higher support by German speaking respondents).

Graph 3

Your perception of the Web as a source of information?

[Bar chart showing responses to various statements about the Web as a source of information, with a scale from strongly agree to strongly disagree.]
Respondents working in universities seem to be more convinced by advanced search facilities and consequently less convinced by simple search facilities. The variable quality of the Web seems to be a bigger problem for the older respondents and respondents working in a junior position. There were no significant differences in the response pattern on all other questions.

**How successful is the Web in specific work situations?**

It is striking that the respondents regarded the Web as the least successful in specific research-related work situations, like compiling and sharing research results, publishing research results or finding new partners for research.

It is also evident, that the more passive the task is, the more the Web is regarded as an appropriate and a successful work tool. Ordered probit analysis per response category showed that older respondents considered the Web as less successful in research related situations (finding material for research, finding new partners for research and getting information about education professionals). German speaking respondents regarded the Web as less successful in the following work situations: getting information about education professionals, publishing research results and compiling and sharing research results. Not surprisingly respondents working in administration regarded the Web as more successful for finding material for administration but less successful for getting information on researchers and institutions. For the latter, respondents working in universities regarded the Web as being helpful. Respondents working in schools had significantly different responses in the case of getting information on education professionals and getting information on researchers and institutions (less successful in both cases). Overall, the differences between the respondents groups are not sizeable and one could have the impression, that the Web is regarded to be successful in frequent work situations. Therefore we cannot always conclude from the responses that the Web is more or is less successful, if the work situation itself is not very common.
Graph 4

How successful is your use of the Web in the following work situations?

<table>
<thead>
<tr>
<th>Work situations</th>
<th>Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtaining information on research projects and networks</td>
<td></td>
</tr>
<tr>
<td>Compiling and sharing research results</td>
<td></td>
</tr>
<tr>
<td>Finding out about courses or study offers</td>
<td></td>
</tr>
<tr>
<td>Getting information about education professionals</td>
<td></td>
</tr>
<tr>
<td>Getting information about educational institutions</td>
<td></td>
</tr>
<tr>
<td>Getting information on researchers and institutions</td>
<td></td>
</tr>
<tr>
<td>Publishing other materials</td>
<td></td>
</tr>
<tr>
<td>Publishing research results</td>
<td></td>
</tr>
<tr>
<td>Getting information on conferences</td>
<td></td>
</tr>
<tr>
<td>Arranging journeys</td>
<td></td>
</tr>
<tr>
<td>Obtaining information on project application and management</td>
<td></td>
</tr>
<tr>
<td>Finding special expertise</td>
<td></td>
</tr>
<tr>
<td>Finding new partners for research</td>
<td></td>
</tr>
<tr>
<td>Obtaining information on current events and policies</td>
<td></td>
</tr>
<tr>
<td>Finding material for administration</td>
<td></td>
</tr>
<tr>
<td>Finding material for teaching</td>
<td></td>
</tr>
<tr>
<td>Finding material for research</td>
<td></td>
</tr>
</tbody>
</table>

with success | with little or no success | not used at all
Graph 5

Anticipated use of Web for work situations

- Obtaining information on research projects and networks
- Compiling and sharing research results
- Finding out about courses or study offers
- Getting information about education professionals
- Getting information about educational institutions
- Getting information on researchers and institutions
- Publishing other materials
- Publishing research results
- Getting information on conferences
- Arranging journeys
- Obtaining information on project application and management
- Finding special expertise
- Finding new partners for research
- Obtaining information on current events and policies
- Finding material for administration
- Finding material for teaching
- Finding material for research
Graph 6

Change between actual and future use of Web for work

- Obtaining information on research projects and networks
- Compiling and sharing research results
- Finding out about courses or study offers
- Getting information about education professionals
- Getting information about educational institutions
- Obtaining information on current events and policies
- Finding special expertise
- Finding new partners for research
- Obtaining information on project application and management
- Arranging journeys
- Getting information on conferences
- Publishing other materials
- Publishing research results
- Getting information on researchers and institutions
- Getting information about educational institutions
- Getting information about education professionals
- Finding out about courses or study offers
- Compiling and sharing research results
- Obtaining information on research projects and networks
In a second set of questions we asked the respondents how they considered the use of the Web in the future. The work situations were the same as in the question on the current use (see Graph 5). Graph 6 shows the differences in points between the responses on the current use and those on the future use. In general, the Web is expected to be more successful in all work situations described in the survey. Although the increase in the expected successfulness is the biggest for the work situations with the least good results in the current situation, some differences remain but diminished. Regarding the differences in the response pattern the ordered probit analysis showed – as expected – even less significant differences as in the case of the current use of the Web. A significant difference remained between the German and the French-speaking respondents. The latter were still significantly more positive about the use of the Web for publishing, compiling and sharing research results as well as for arranging journeys. Older respondents and those working in schools regarded the Web as being less successful for finding new research partners.

**Techniques in using the Web**

The most used technique to start a search on the Web is still to consult one of the search engines like Google, Yahoo or Altavista. Older respondents (compared to the reference category <35), however, seem to use them significantly less often than the younger ones. Second to search engines are individual bookmarks who are less often used by German speaking respondents and respondents working in schools. The latter on the other hand rely more often on links provided by others, so do also respondents of the higher age categories. One of the few gender differences concerns the use of email lists. Those are significantly more used by women. The same holds for respondents working in intermediate positions compared to those working in senior positions.
Graph 7

Which are your starting points for finding information in the Web?

- Email lists
- Recommendations from colleagues
- References from print media
- Links provided by others
- Own set of bookmarks
- Email lists
- Search engines (Alta Vista, Google, usw.)

Use:
- Often
- Seldom
- Not at all
Concerning the most popular sources already used by researchers in education, we find a clear preference for the homepages of government agencies and the one of the Swiss Coordination Centre for Research in Education. Concerning the two most used sources, there are no significant patterns detectable between different groups of respondents. Much less often used are professional portals like the Schoolnet or Educa. There seems to be also a clear preference for national providers of content. Overall, the responses are rather uniform with only a few significant differences. Respondents working in universities use Educa significantly less and on-line research journals, information on teacher-training agencies, ERIC and FIS significantly more than others do. German speaking respondents use more frequently Schoolnet and on-line libraries and less often on-line research journals and FIS (apparently they know Germany better or use other German sources). Older respondents use significantly less often on-line newspapers, on-line research journals (they probably have a printed copy in both cases), ERIC, teacher training agencies and the European Training Village. Age seems to be the best single predictor for the use of specific sources.

Regarding the future, there is a strong wish for more specific information and even more specifically on research in education (see Graph 9). Professional help and outside services seem to correspond to a high demand. Except for one question, there are no significant differences in the response pattern between the different groups of respondents. The exception concerns the time saving devices that are significantly less important for respondents working in universities and universities of applied sciences. The positive explanation for this would be, that they already have powerful devices installed at their work places.
Graph 8

Which of the following information sources have you used?

- (Foreign) National Governments
- European Training Village
- EURYDICE
- FIS (Germany)
- Eric (USA)
- Teacher Training Agencies
- On-line research journals
- On-line newspapers
- On-line Libraries
- Homepages of Government agencies
- Schoolnet CH
- CSRE
- Educa

Use

- more than once
- once
- never

1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3
Graph 9

Which factors could help to use the Web more effectively?

- Better structured information
- Information platform for research in education
- More help functions in the use of the Net
- Better split between essential and non-important information
- More training for the use of the Net
- More time saving devices

Factors

Importance

not important

very important
Conclusions

The survey results presented in this study show clearly, that the use of the Web in daily professional work is already a reality and that providers of information have to take this into account when disseminating their services. The results also show that there is no clear separation (any more?) between different users but rather a surprisingly high degree of homogeneity. The argument, that the exclusive use of the Web for the dissemination of information could provoke a “digital divide” between users and non-users of the Web, seems to be more and more outdated. This is good news for the providers who had so far been forced to apply costly dual strategies of disseminating information through both, the traditional (printed information) and the new (Web) channel.

In contrast perhaps to the newest techniques developed (virtual campuses, virtual school rooms, virtual research groups, etc.), the use of the Web seems still to be rather static. Passive strategies (finding information) still dominate the more active and interactive use of the Web. The question for the providers of information, however, still remains, whether an investment in more interactive Web tools might be useful or not. The use of the Web might well be some sort of push and pull, where the provision of more interactive tools (push) could trigger (pull) the demand.

Respondents anticipate that the use of the Web for professional work will increase further over time and therefore an increase in the investment in Internet resources from the side of providers of information seems to be opportune. This investment will, however, be costly, as more focused and quality controlled information seems to be the top priority of users. In a time, when it will become even easier for everybody to put information in the Web, professional “brokers” of information will be needed more than ever.

As we move forward in expanding the Web-services for the research community it will be interesting to compare the results of this survey with those of the repetition of this survey in two years.