



.Safe

Date: 30 June, 2001

**Name of Deliverable: Testing and evaluating
Deliverable Code: d03.1**

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**Part I
(Cover)**

Deliverable

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Abstract:

The aim of Dot.safe has been to undertake and evaluate across a set of contrasting contexts, cultures and languages a set of preparatory actions to provide European school teachers with effective means, messages and audiences for safe Internet use by young people inside and outside school.

The objective of this survey was first and foremost to find out something about potential users' view of the quality of the resources in relation to their use in education, but also how the different groups of respondents and nations evaluate the resources.

The main impression is that all groups are fairly consistent: the resources ought to be useful to teachers through out Europe as adaptable resources ready for larger scale use.

Dot.safe aim: "to raise teachers' awareness of the issues and solutions relating to safe Internet use in schools", has largely been achieved.

Keyword List:

Internet safety, safety awareness, testing, evaluation, pedagogical resources.

***Type: PU-public, LI-limited, RP-restricted**

****Nature: PR-Prototype, RE-Report, SP-Specification, TO-Tool, OT-Other**



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All work has been carried out with the financial support of the European Union



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Part II

Main conclusions

Testing and evaluation of resources catalogued under WP2 under Finland's supervision were carried out during the period February to May 2002. Testing was partly done parallel to evaluation, but evaluation was mainly carried out during the April through May period. 338 answers altogether were submitted from 8 countries, participation being somewhat uneven. A total of 24 resources have been evaluated; as a consequence of this large number there are of course considerable variations regarding the number of answers related to each individual resource.

In addition to assessing its usefulness as a pedagogical tool, each resource has been related to information about the respondents (age, sex, experience as users of ICT). Some interesting inconsistencies do occur, but the main impression is that all respondents, be they school leaders, ICT coordinators, primary or secondary school teachers, or experts, all agree to a large extent. The existing nuances have been the subject of some discussion, but we see no reason to suggest any particular measures be taken on their account.

It is difficult to draw any clear conclusion based on one survey consisting of one online questionnaire, but there are so many clear indications that the main objective of the project – to produce resources that contribute to raising the level of awareness in respect of Internet security – has largely been achieved.

The selection of resources has generally been evaluated as very good. The educational quality has an average value of 3.8, and since the median is 4, the next highest value, this gives quite a clear indication that the resources as a whole have been assessed to be very good. That there are small variations between nations and also between age groups and roles at school is less significant. The main conclusion must be that the resources will be a useful supplement to the schools in their work of raising the level of awareness regarding security and use of the Internet.



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Part III

The survey

A survey of the quality of resources that was collected and selected during WP2 (“WorkPackage 2”) was carried out in the participating countries during the period 1 April–31 May 2002. The data was collected using an online questionnaire and then automatically fed into a MySQL database at INDIRE (Italy) before it was later analysed at the Norwegian Board of Education with professional assistance from researcher Torbjørn Lund at the University of Tromsø (UiT) during the period 1 June–14 June.

The main purpose of the survey was to evaluate the resources that were catalogued under the second phase of the dotSAFE project, WP2. A total of 24 different resources were evaluated with the aid of a questionnaire posted on INDIRE’s website and linked directly to the database. The survey was carried out at various educational institutions in eight European countries.

The respondents

We received a total of 338 answers. The respondents were divided into groups according to country, age, position/role, gender and experience.

Is the pedagogical quality of the content good enough?

The respondents were asked to rank the different resources on a scale from 1 to 5 where 1 was lowest and 5 was highest. The result shows that the respondents evaluate the pedagogical quality of all the resources as generally good.

We see that the evaluations vary somewhat – averaging 3.74 – which must be said to be high. The highest value is 4.43 and the lowest is 3.00. The Netherlands and Finland have returned so few answers that these cannot be considered to be representative.

Since there are as many as 24 resources, there are an extremely varied number of respondents behind each resource: For this reason, it is not that interesting to look in detail at each individual resource, apart from noting that one is generally satisfied.

We have therefore chosen instead to look at the resources as a whole and to investigate how the different groups regard the resources, and whether they appear to be equally well suited to different countries, age groups, roles in the educational system, gender and experience. As examples quality compared to country and age, follows.

Pedagogical quality/country

The values returned are generally high, and there is little variation. Even in Italy, which is the lowest of the countries with enough respondents to allow it to be taken into consideration, the value here is 3.6 (very close to the average). We should therefore be able to say that the resources appear to be usable in several countries.

Pedagogical quality/age

The results are even in the age group 31–60 years (84 % of responses). In the youngest age group (12 %), a lower ranking has been given, while in the higher highest age group (4 %) the responses were slightly more positive.



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Is the quality of the content good enough? (As regards usability/ user friendliness)

The respondents were asked to grade the different resources on a scale from 1 to 5 where 1 was the lowest and 5 was the highest. The usability of all the resources was evaluated as being generally good.

We can conclude that the usability was assessed to be good for most resources, and that they have been ranked highly on average.

How much would you say you know about Internet security?

Grades from 1 (very little) to 5 (a lot)

The average value for evaluation of own expertise about Internet security was 3.3. We find some variation between, for example, the different countries.

To what extent to you think the use of such resources will increase readiness/awareness in respect of security?

Will use of the type of resources mentioned here raise awareness of security aspects – seen in relation to countries, age group, role in the educational system, gender and experience?

The values here are very even for all groups and are generally high! This indicates a widespread consensus that the resources can contribute positively to increased levels of awareness/readiness in respect of security.

How do you feel the resource can best be adapted as an educational activity? a) as part of other activities, b) as independent activity

Here there is a relatively high level of consensus. A full 75 % feel that the resources will function best as part of other activities. We see that there is a great deal of consensus about how the resource is to be used, except in Norway! Here a full 46 % of respondents feel that the resource should be used as an independent activity, and in this respect Norway sets itself apart from the other countries



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Part IV

Bibliography and references

- Project description (http://www.eun.org/eun.org2/eun/en/ds_main_/content.cfm?ov=7165&lang=en)
- WP 2/WP 3 description (http://www.eun.org/eun.org2/eun/en/ds_main_/sub_area.cfm?sa=428)
- dot.SAFE questionnaire (<http://www.bdp.it/safe/>) (online questionnaire)
- d02.1 Pilot materials set (educational)
(http://www.eun.org/eun.org2/eun/en/ds_main_/content.cfm?ov=13491&lang=en)
- Testing and evaluating report (enclosed)



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Work Package 3

Testing and evaluation

Results from the evaluation of resources



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Survey

A survey of the quality of resources that was collected and selected using WP2 (“WorkPackage 2”) was carried out in the participating countries during the period 1 April–31 May 2002. The data was collected using an online questionnaire and then automatically fed into a mySQL database at INDIRE (Italy) before it was later analysed at the Norwegian Board of Education with professional assistance from researcher Torbjørn Lund at the University of Tromsø (UiT) during the period 1 June–14 June.

The main purpose of the survey was to evaluate the resources that were collected in the second phase of the dotSAFE project, WP2. A total of 24 different resources were evaluated with the aid of a questionnaire posted on INDIRE’s website and linked directly to the database. The survey was carried out at various educational institutions in eight European countries. Each of the countries was asked to contact ten schools where the principal, ICT coordinator and one teacher were requested to familiarize themselves with the resources and complete the questionnaire. It was our express wish that each respondent would review four different resources of his/her choosing and answer the questionnaire for each of them.

The objective of the survey was first and foremost to find out something about potential users’ view of the quality of the resources in relation to their use in education, but also how the different groups of respondents and nations evaluate the resources, and which differences exist between the various groups of respondents.

Erroneous sources/limitations/framework conditions

Several limiting factors must be taken into consideration before the material is analysed. There has been limited time available, both for the respondents and for those who have been responsible for analysing the data. This may be one reason why several of the respondents have evaluated *fewer* than four resources. A larger number of replies would have secured that the data were as statistically representative as possible.

Structure of the report

The remainder of this report has the following structure:

- A: Number of respondents in different groups
- B: Evaluation of pedagogical quality, distributed by different groups
- C: Evaluation of user-friendliness/quality, distributed by different groups
- D: How does one evaluate one’s own safety expertise, distributed by different groups
- E: Does use of resources increase awareness/readiness in respect of safety?
- F: How are the resources to be used?
- G: Framework conditions

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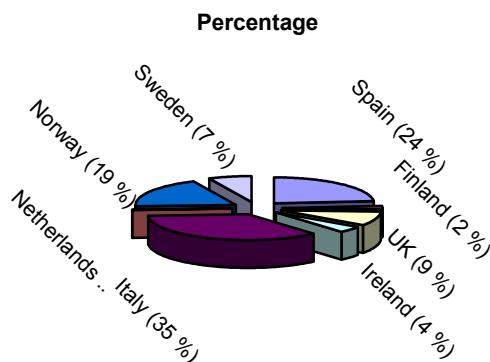
A Number of respondents

Number of respondents – country

Answers were received from the United Kingdom, Ireland, Finland, Sweden, Spain, Norway, the Netherlands and Italy.

Figure A.1

country	answers
Spain	77
Finland	7
UK	29
Ireland	13
Italy	115
Netherlands	1
Norway	61
Sweden	23

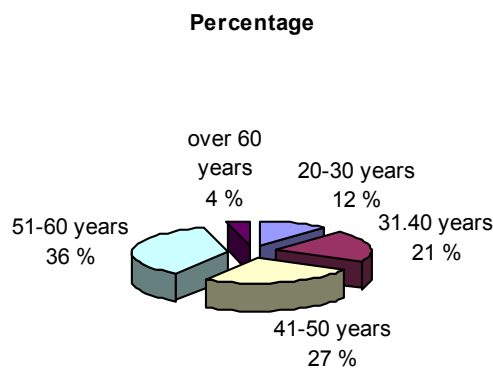


Number of respondents – age

The figure below shows that the respondents are distributed fairly evenly by age, with a slight under-representation in the youngest and oldest age groups.

Figure A.2

age	answers
20-30 years	40
31-40 years	70
41-50 years	90
51-60 years	125
over 60 years	13



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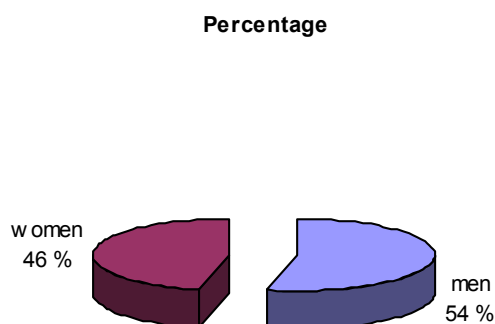
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Number of respondents – gender

The number of responses is fairly evenly distributed between genders.

gender	answers
men	173
women	149

Figure A.3



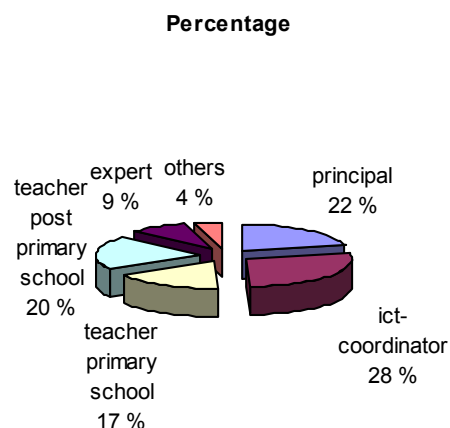
Number of respondents – role

The respondents are placed in six different roles/categories:

Principal, ICT coordinator, teacher primary school, teacher post primary school, expert and others.

Figure A.4

position	answers
principal	73
ict-coordinator	94
teacher primary school	58
teacher post primary school	68
expert	30
others	15



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Naturally enough ICT coordinators make up the largest group and teachers are distributed evenly between primary schools/and post primary schools. The expert group consists of teachers at the Virtual School, and they are regarded as experts since they are experienced Internet users.

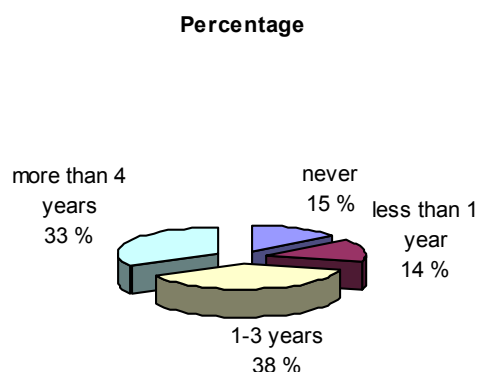
Number of respondents – experience

As we can see, the groups “more than 4 years” (33 %) and “1–3 years” (38 %) account for 71 % of respondents. It would appear that a large share of the respondents have experience of using the Internet in teaching over a long period of time. This may mean that they have acquired some competence in using this in teaching. At the same time a relatively high percentage feel they have little experience of using the Internet in teaching, and thus little or no expertise in this field.

Those who are naturally not reached by this survey are those who have not yet begun to use the Internet.

Figure A.5

experience	answers
never	50
less than 1 year	49
1-3 years	127
more than 4 years	112



B Pedagogical quality of the resources

Question: “Is the pedagogical quality of the content good enough?”

The respondents were asked to rank the different resources on a scale from 1 to 5 where 1 was lowest and 5 was highest. The result shows that the respondents evaluate the pedagogical quality of all the resources as generally good.

We see that the evaluations vary somewhat – averaging 3.74 – which must be said to be high. The highest value is 4.43 and the lowest is 3.00. The Netherlands and Finland have returned so few answers that these cannot be considered to be representative.

Since there are as many as 24 resources, there are an extremely varied number of respondents behind each resource: For this reason, it is not that interesting to look in detail at each individual resource, apart from noting that one is generally satisfied.



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We have therefore chosen instead to look at the resources as a whole and to investigate how the different groups regard the resources, and whether they appear to be equally well suited to different countries, age groups, roles in the educational system, gender and experience. The general question is thus: "Is the pedagogical quality of the resource good enough?"

resource	pedagogical quality
1. Netiquette for primary schools	3,27
2. Netiquette for post primary schools	3,52
3. Netiquette for teachers	3,79
4. School gets access to Internet	3,90
5. Pupils use Internet for their project work	4,20
6. Pupil search Internet for themselves	3,83
7. Revealing private information	3,71
8. Pupils download materials	3,80
9. Publishing	4,00
10. School's website	3,82
11. Pupil's website	3,50
12. Catrooms	3,29
13. Newsgroups	4,00
14. Operating rules	3,50
15. Slides with advice for teachers explaining to parents	3,84
16. Slides with advice for teacher- training	3,95
17. AUP: Introduction	3,71
18. AUP: Precautions for privacy and safety	3,56
19. AUP: Legislation	3,50
20. AUP: Basic rules	3,58
21. AUP. Rules for primary schools	4,15
22. AUP: Rules for post primary schools	3,86
23. AUP: Rules at home	3,50
24. AUP: Letter to parents and parent's consent	4,07

Pedagogical quality/country

Figure B.1



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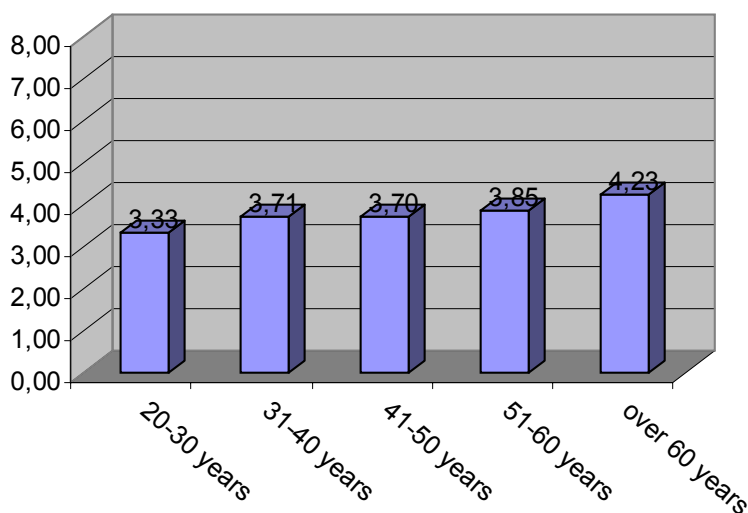
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The values returned are generally high, and there is little variation. Even in Italy, which is the lowest of the countries with enough respondents to allow it to be taken into consideration, the value here is 3.6 (very close to the average). We should therefore be able to say that the resources appear to be usable in several countries. The Netherlands and Finland had so few respondents that we have chosen to ignore them.

Pedagogical quality/age

The results are even in the age group 31–60 years (84 % of responses). In the youngest age group (12 %), a lower ranking has been given, while in the higher highest age group (4 %) the responses were slightly more positive. It is interesting to note that it appears that one considers the quality to be better the older one gets. We have chosen to interpret this as though the experienced educator sees the benefit of this type of resource.

Figure B.2



Pedagogical quality/gender

There are no great differences between the genders. Even though we do not wish to draw any conclusions, we note that on average women's evaluations are higher.

Figure B.3

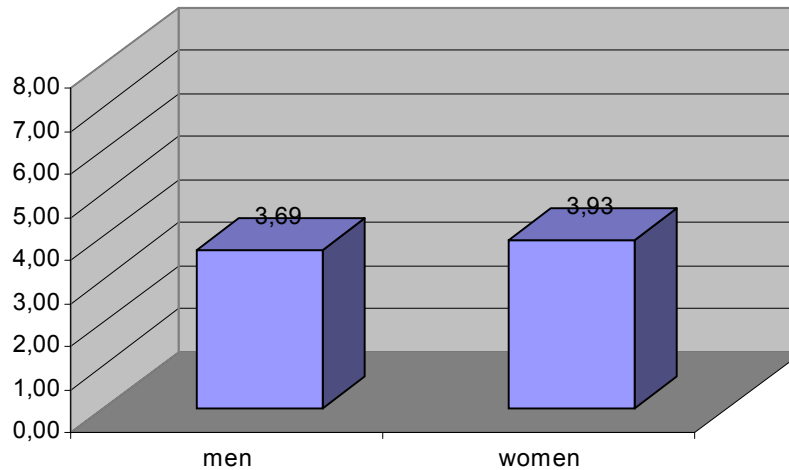
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Pedagogical quality/role

The comparison between the various roles and the evaluation of resources shows significant differences. Teachers at primary school level are more positive than their colleagues at post primary school level. This may indicate that the resources have found greater support by primary school teachers as a target group than the target group post primary school teachers. It is interesting to note that the rankings of ICT coordinators and experts are very harmonious. These are groups which may be expected to have the greatest ICT competence. It is difficult to interpret why the ratings by principals are so low. One reason may be that they generally have little contact with teaching, and are thus not affected or have the same knowledge of use of the resources in teaching.

Figure B.4

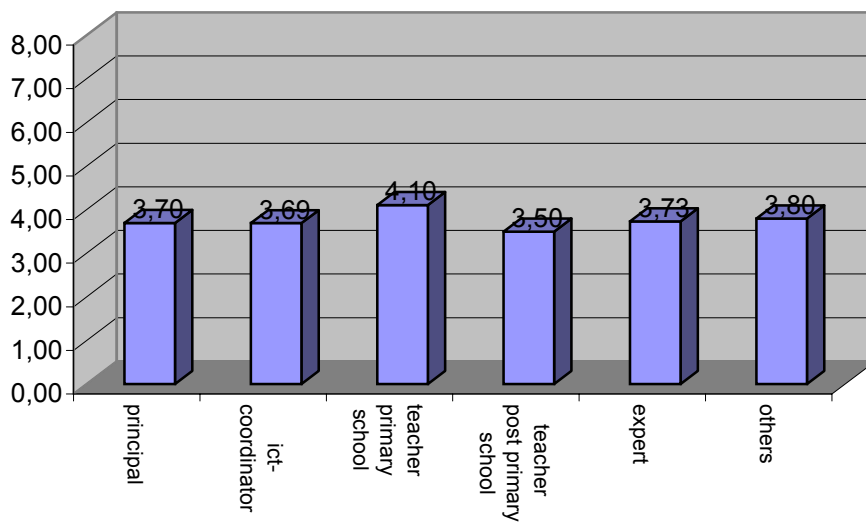


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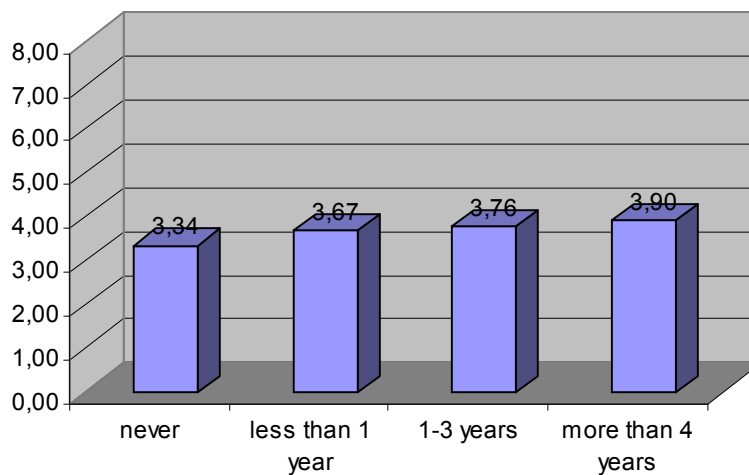
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Pedagogical quality/experience

Experience is related to the following question: “*How long have you used the Internet in your teaching?*” Distribution between the four different groups was very similar. The “never” group is somewhat lower than the other groups. There is possibly a connection between experience/competence and one’s understanding of the different resources.

Figure B.5





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C Usability

Question: "Is the quality of the content good enough?" (As regards usability)

The respondents were asked to grade the different resources on a scale from 1 to 5 where 1 was the lowest and 5 was the highest. The usability of all the resources was evaluated as being generally good.

The average score for usability was somewhat lower than the average score for pedagogical quality (average = 3.61). The difference is nevertheless so small that it has little significance. The lowest value was 2.57 and the highest value was 4.20. We can conclude that the usability was assessed to be good for most resources, and that they have been ranked highly on average.

As we did in the previous section, we will consider usability in relation to country, age group, role in the educational system, gender and experience.

resource	usability
1. Netiquette for primary schools	3,18
2. Netiquette for post primary schools	3,22
3. Netiquette for teachers	3,66
4. School gets access to Internet	3,55
5. Pupils use Internet for their project work	4,20
6. Pupil search Internet for themselves	3,67
7. Revealing private information	3,43
8. Pupils download materials	4,00
9. Publishing	3,80
10. School's website	3,64
11. Pupil's website	3,00
12. Chatrooms	2,57
13. Newsgroups	4,00
14. Operating rules	3,50
15. Slides with advice for teachers explaining to parents	3,97
16. Slides with advice for teacher- training	3,73
17. AUP: Introduction	4,06
18. AUP: Precautions for privacy and safety	3,13
19. AUP: Legislation	3,40
20. AUP: Basic rules	3,58
21. AUP. Rules for primary schools	3,85
22. AUP: Rules for post primary schools	3,79
23. AUP: Rules at home	3,50
24. AUP: Letter to parents and parent's consent	4,13



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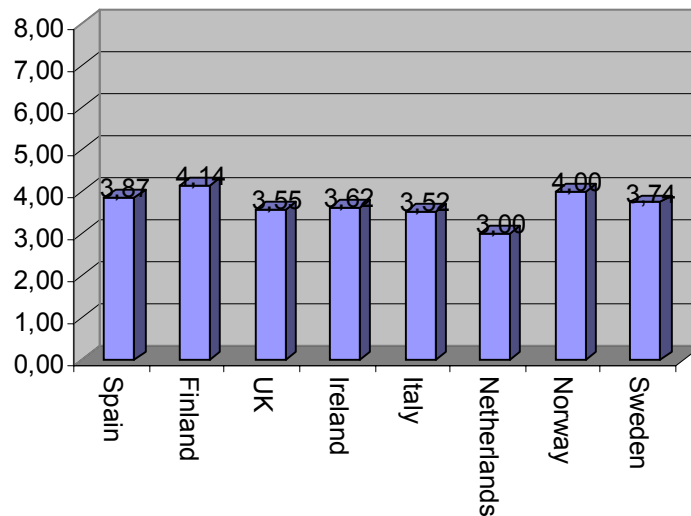
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Usability/country

Here we see the same trend as in figure B.1. The grades for usability are even, with the United Kingdom slightly below average.

Figure C.1



Usability/age

The grades are evenly distributed among the different age groups, but interestingly enough the youngest age group gives the lowest grade. (See figure E.4)

Figure C.2

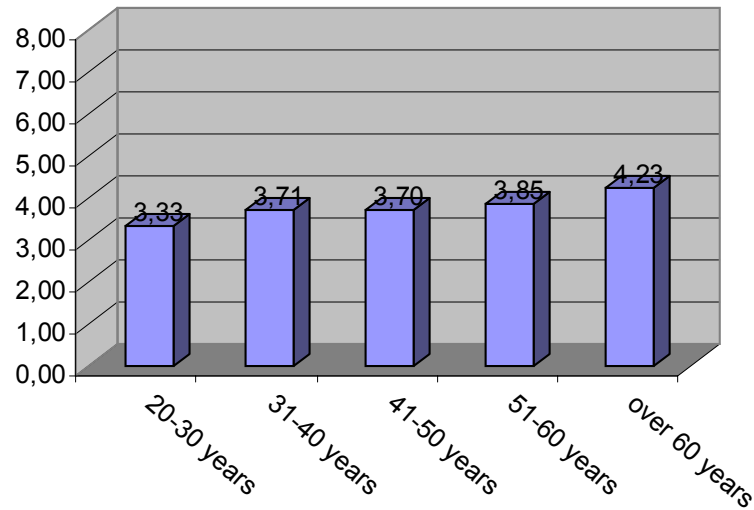
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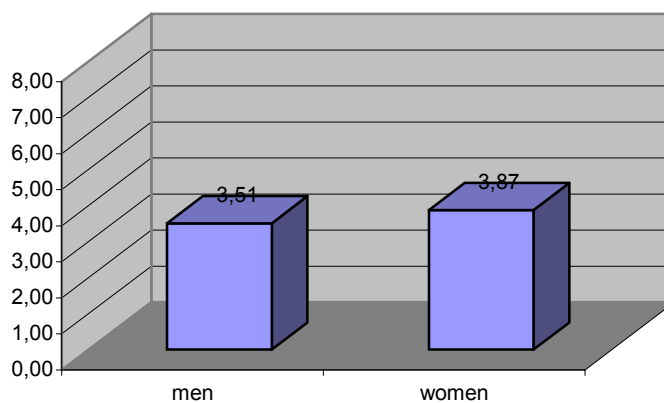
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Usability/gender

It is worth noting that women give the resources scores that are half a point higher than those given by men. The difference is greater here than in the question on pedagogical quality (figure B.3). Once again, it is difficult to draw any significant conclusions on the basis of this difference, but we note its presence.

Figure C.3



Usability/role

The scores do not vary much, but we note that the teachers' scores are highest. This may indicate that the teachers are the best target group for the resources. This fits well with the fact that the resources are designed for use in teaching.

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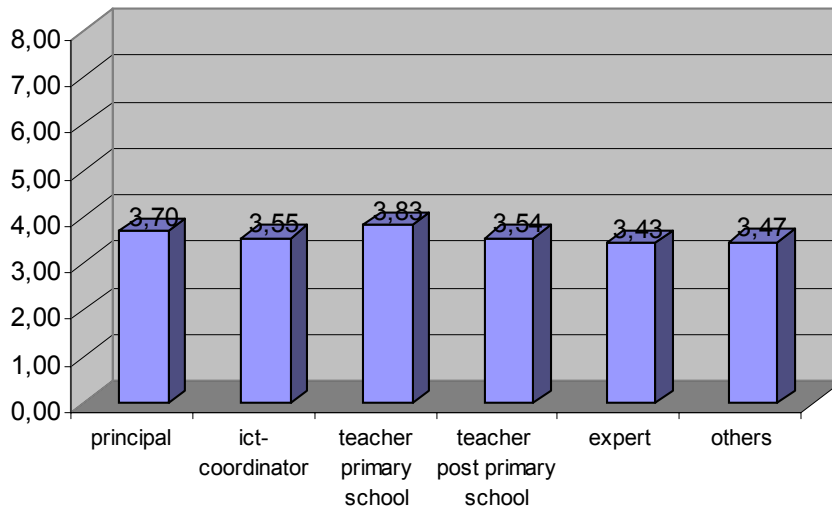
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Once again, we see harmonious scores from the groups “ICT coordinator” and “expert”.

Figure C.4



Usability/experience

The differences are small here, but the ratings of those who have no experience (the “never” group) are lower than those of the other groups. This is a trend that is mirrored in the responses in figure B.5. This may indicate that there is a link between the evaluation of resources and competence/experience.

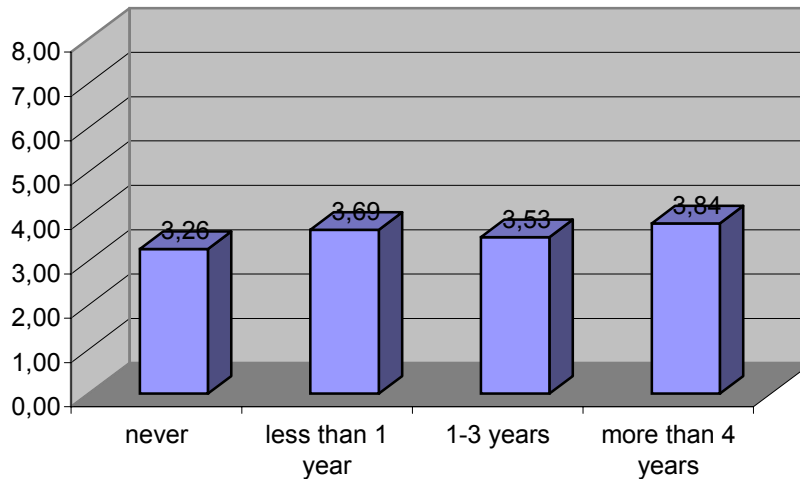
Figure C.5

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D Evaluation of own expertise regarding security

Question: “How much would you say you know about Internet security?”

Grades from **1** (very little) to **5** (a lot)

The average value for evaluation of own expertise about Internet security was 3.3, but there was greater variation here than in the evaluation of resources. We find a relatively large amount of variation between, for example, the different countries and will discuss this finding in this section.

We will also look at the security aspect in relation to age groups, roles in the educational system, gender and experience.

Expertise regarding Internet security/country

Here the results are fairly similar, with the exception of Spain which is considerably below the rest of the country with its average of 2.40.

It is worth noting that Italy's rankings are also somewhat lower. Could this indicate that the work on problem issues concerning Internet security has not progressed as much in Italy and Spain as in some other countries, or are there other explanations? There are far too many uncertain factors for us to claim anything with any certainty.

Figure D.1

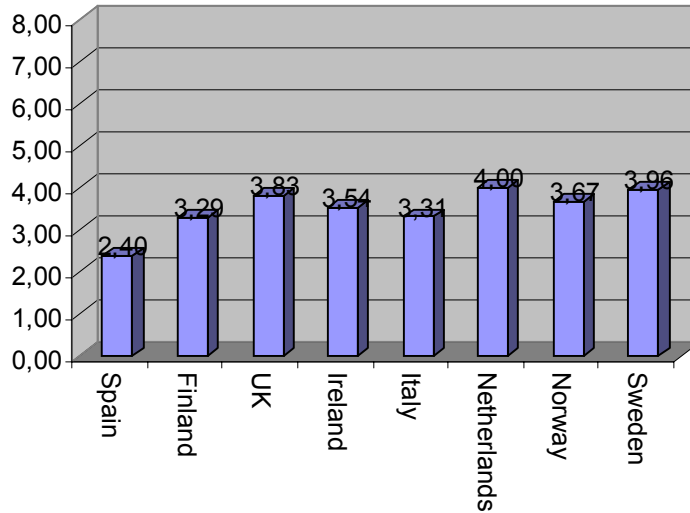


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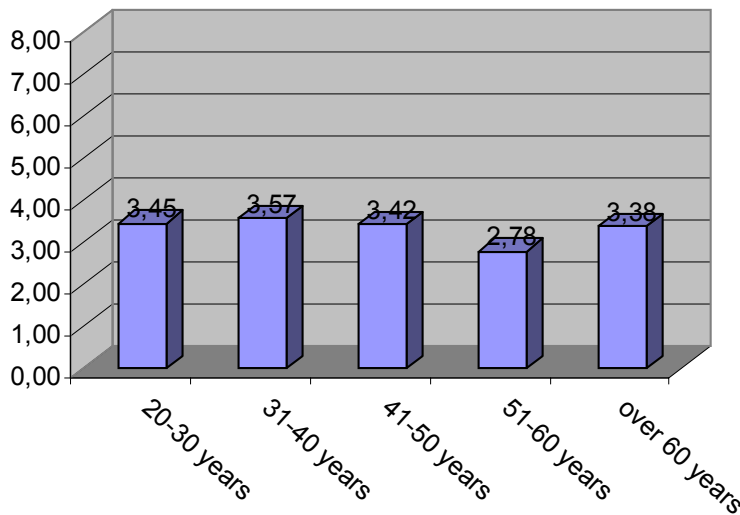
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Expertise regarding Internet security/age

It is worth noting that the evaluation of own expertise falls so noticeably in the group “51–60 years”. The average values of the other groups are very even.

Figure D.2



Expertise regarding Internet security/gender

Women and men respond somewhat differently to the question of how much they know about Internet security. Men rate themselves somewhat higher than the women in the survey.

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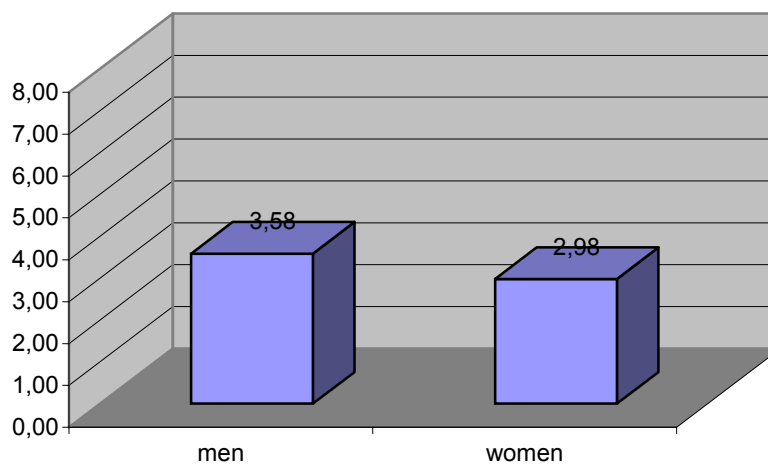
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It is likely that men are more frequent users of the Internet than women, and that they are more concerned with aspects relating to machinery and the Internet beyond purely communicative and interactive matters. Women are usually more user-oriented, while men are more interested in how things work, including, perhaps, security aspects.

Figure D.3



Expertise regarding Internet security/role

In respect of this question, the responses are as one may expect. People with an expected high level of expertise (ICT coordinators/experts) score highest. Teachers score lower, and the principals score lowest! The teachers scored similarly. Perhaps we should have expected a higher score for experts and principals, both of whom have formal responsibility for ensuring that this work is taken seriously. The same also applies to ICT coordinators.

Figure D.4

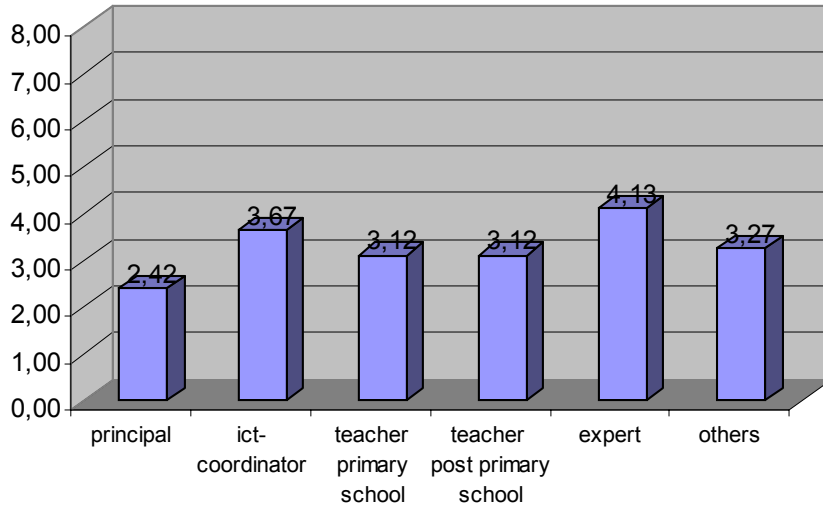


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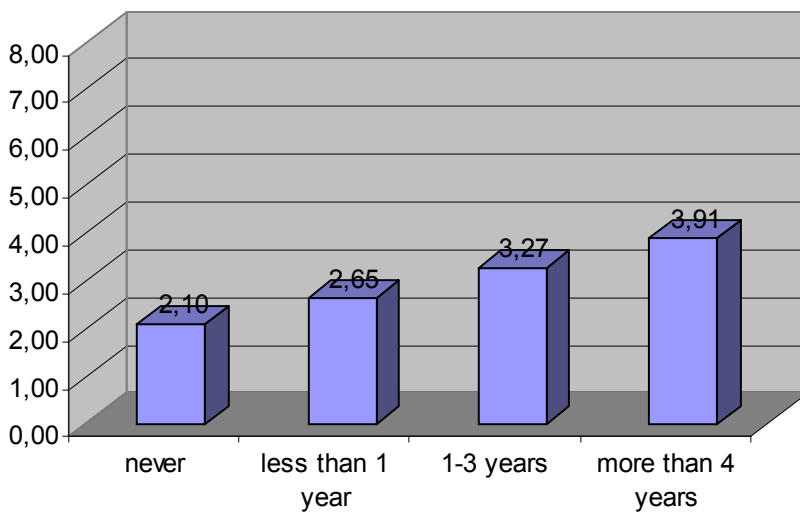
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Expertise regarding Internet security/experience

In respect of this question too, it would appear that the responses are as expected. Here the trend is clear. The respondents evaluated their own expertise regarding Internet security as being higher the more experience they had. Between the group “never” and the group “more than 4 years” there is a difference of a full 1.20 points!

Figure D.5





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E Does use of the resources raise awareness/readiness?

Question: “To what extent to you think the use of such resources will increase readiness/awareness in respect of security?”

Will use of the type of resources mentioned here raise awareness of security aspects – seen in relation to countries, age group, role in the educational system, gender and experience?

Does use of the resources raise awareness/readiness in respect of security?/country

The values here are very even for all countries and are generally high! This indicates a widespread consensus that the resources can contribute positively to increased levels of awareness/readiness in respect of security.

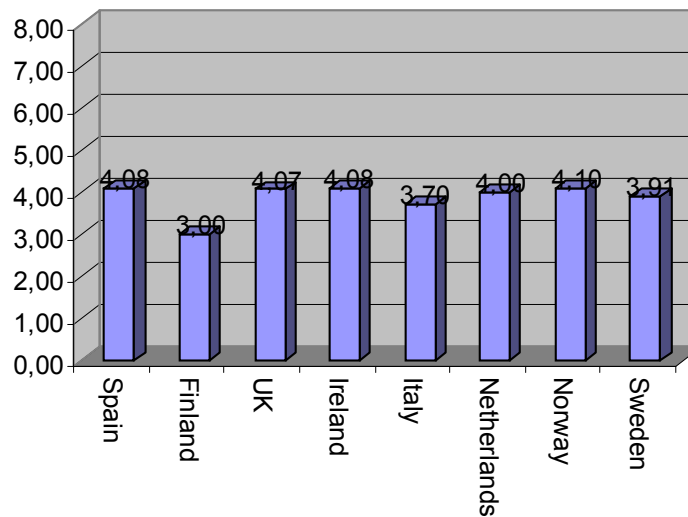
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Figure E.1



Does use of the resources raise awareness/readiness in respect of security?/role

Once again the scores are even and high, although teachers score highest again of all groups. This fits well with the results in B.4 and C.4.

The resources again appear to be best received by the group “primary school teacher”, i.e. that the resources suit this particular target group best.

Figure E.2

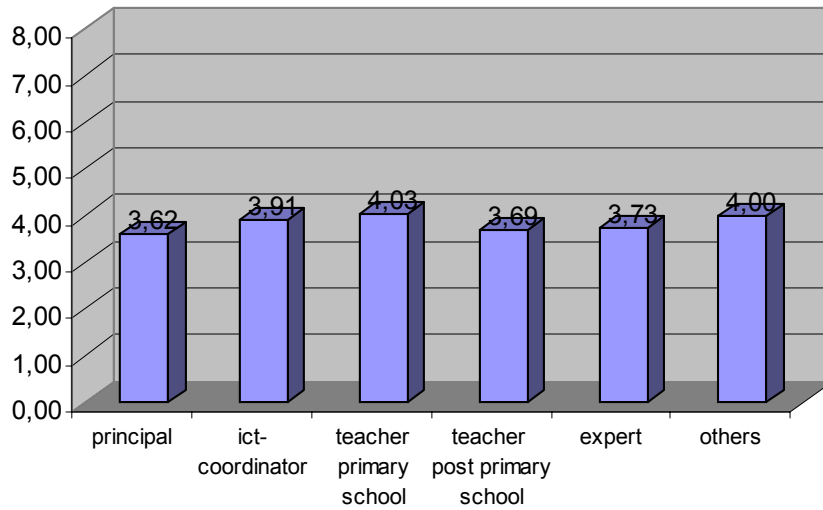


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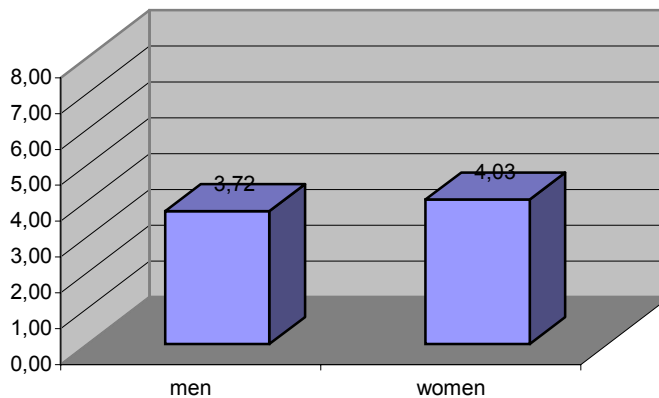
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Does use of the resources raise awareness/readiness in respect of security?/gender

We see there is a gender difference of 0.30 points. Women in the survey are generally more positive to the effect of the resources than men.

Figure E.3



Does use of the resources raise awareness/readiness in respect of security?/age

The grades are very even, although the youngest are somewhat less positive and the eldest are a little more positive. We believe we can see a reoccurring trend in this survey: The youngest respondents and those with least experience are those who give the resources the lowest grades. This may indicate that the ability to see opportunities increases with experience, and that this has an effect on evaluations.

Figure E.4

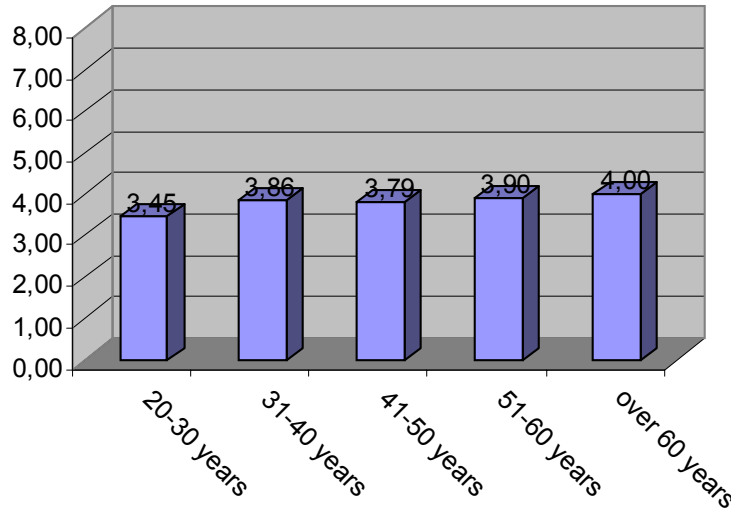


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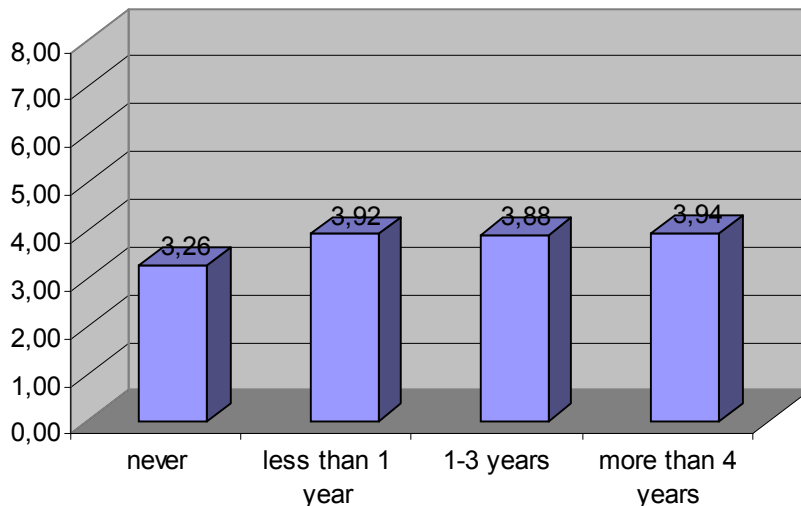
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Does use of the resources raise awareness/readiness in respect of security?/experience

People with least experience are most negative to the effect of such resources. In other respects the evaluations are very even. One explanation of this may be that one sees more opportunities for each resource as one's level of expertise increases. People with more experience see more opportunities than those people with little experience.

Figure E.5



F How are the resources to be used?

Question: “How do you feel the resource can best be adapted as an educational activity?”

a) “as part of other activities”, b) “as independent activity”

Here there is a relatively high level of consensus. A full 75 % feel that the resources will function best as part of other activities. We have also looked at this question in relation to country, gender, role and experience.

How are the resources to be used?/country

We see that there is a great deal of consensus about how the resource is to be used, except in Norway! Here a full 46 % of respondents feel that the resource should be used as an independent activity, and in this respect Norway sets itself apart from the other countries, where 77% feel that the resource should be part of other activities. (The Netherlands and Finland have been ignored since not enough responses were received from these countries.) This is a rather large and very surprising difference in the view of educational practices.

Norway has a fairly large installed base of computers, and one explanation as to why Norway sets itself apart may be that one regards computers and their use as isolated phenomena regardless of whether they are used in a school context or during leisure time. Use of computers as a leisure-time activity during free time at school and use as a time-filler after school work has been done may explain such an effect.

Another explanation may be the teachers' lack of expertise in respect of integrating this into an educational context.

A third explanation, which ties in with the first explanation, may be that teaching has so far concentrated solely on developing skills in using the computer and software.

Figure F.1

country	unknown	as part of other educational activities	as independent activity
Spain	0%	94%	6%
Finland	0%	100%	0%
Great Britain	7%	76%	17%
Ireland	0%	62%	38%
Italy	4%	71%	25%
Norway	13%	41%	46%
Sweden	0%	74%	26%

How are the resources to be used?/experience



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Here there are small differences between the groups, which is somewhat surprising. One could perhaps have expected greater differences between the groups. At the same time one can clearly see that the percentage of “*as part of other educational activities*” increases with increased experience.

Figure F.2

experience	unknown	as part of other educational activities	as independent activity
<i>never</i>	14%	58%	28%
<i>less than 1 year</i>	10%	66%	24%
<i>1-3 years</i>	2%	72%	26%
<i>more than 4 years</i>	10%	72%	18%

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How are the resources to be used?/ role

In respect of this question, the primary school teachers stand out as having a larger percentage who respond "as independent activity" (36 %). This may be because pure skills training is used to a larger extent in this type of school. The average is 23.17 %.

Figure F.3

position	unknown	as part of other educational activities	as independent activity
<i>principal</i>	8%	73%	19%
<i>ict-coordinator</i>	9%	64%	27%
<i>teacher primary scho</i>	5%	59%	36%
<i>teacher post primary</i>	4%	80%	16%
<i>expert</i>	13%	64%	23%
<i>other</i>	7%	86%	7%

G Framework conditions

Strategies/rules concerning Internet use/educational quality/country

Are there differences between the countries in respect of the question: "Has your school already begun to employ strategies/rules concerning Internet use and will this have an effect on the evaluation of educational quality?"

As regards the number of schools with strategies in place, Ireland is the only country with a high share of schools that do not have such strategies/rules in place. (Once again, we have chosen to ignore Finland and the Netherlands, who have returned very few replies.)

We see that there are very small differences between those who have and those who have not implemented strategies concerning use of the Internet as regards evaluation of the educational quality of the resources.

Figure G.1

Country	Yes	no
Spain	85 %	15 %
Italy	77 %	23 %
Ireland	54 %	46 %
Great Britain	86 %	14 %
Norway	82 %	18 %
Sweden	83 %	17 %



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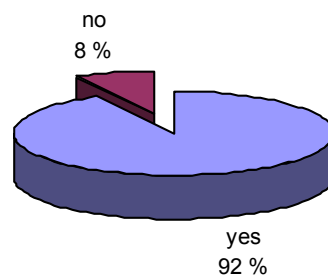
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LAN/land

The share of schools that do not have a LAN (Local Area Network) is very small. This would suggest that the infrastructure is largely in place. (Only 8% of schools are without a LAN).

The figure below shows the average of all countries in the survey.

Figure G.2



H Main conclusion

It is difficult to draw any clear conclusion based on one survey consisting of only one online questionnaire. The fact that the survey was only conducted via the Internet excludes a large number of users. To increase reliability and validity, the survey should have been followed up by, for example, interviews and observations and perhaps it should have been conducted among another group of teachers as well.

Having said this, there are so many clear indications that the main objective of the project – to produce resources that contribute to raising the level of awareness in respect of Internet security – has largely been achieved.

The selection of resources has generally been evaluated as very good. The educational quality has an average value of 3.8, and since the median is 4, the next highest value, this gives quite a clear indication that the resources as a whole have been assessed to be very good. That there are small variations between nations and also between age groups and roles at school is less significant. The main conclusion must be that the resources will be a useful supplement to the schools in their work of raising the level of awareness regarding security and use of the Internet.