

Results of surveys for trainers and users of training

The purpose of these surveys was to gather information about industry desires regarding training needs and training methods within the field of pig and pork production in order to develop educational material that will enhance the transfer of knowledge from the QPC-project.

The surveys were conducted in October 2007. One survey was sent to people involved in training to the pig and pork chain and one to users of training at different levels in the area. In total 169 responses were collected; 70 responses from users of training and 99 responses from trainers. The surveys were sent electronically to people involved in the project and to personal contacts of the project group. It is impossible to indicate the response rate because the surveys have been forwarded to contact lists in different organisations. Names of the responders were collected in order to make it possible to analyse each unique response and also to make personal contacts.

Profile of respondents

Responses were collected from people based in 20 countries; users representing 12 countries and trainers representing 19 countries (figure 1). All the countries participating in the project were represented.

Almost half of the users of training were based in enterprises at processing level, 10 % were farmers and 13 % were based in enterprises at service level and the remaining responders in umbrella organisations etc. Few responders were employed in enterprises at retail level (figure 2). This distribution affected the size of the organisations that were very different (figure 3); 20 % of the users of training were employed in very small enterprises (less than 10 people employed) and 20 % of the users of training in large organisations (more than 1000 people employed), the remaining users of training in middle sized organisations.

More than half of the teachers and trainers had a position in higher education institutions (figure 2). About 35 % were employed in private training companies and 10 % in other institutions. Correspondingly about one third of the responders were employed in big organisations, one third in middle sized (between 50 and 999 employees) and about one third in small organisations (less than 50 employees). See figure 3.

Few of the responders in both surveys had Internet access based on modem or ISDN (slowest speed). Surprisingly more trainers (14 %) than users of training (9 %) had this kind of access (figure 4). The highest speed of Internet access (direct connection) was more frequent among trainers (35 %) than among users of training (23 %). About 12 % of the responders in both surveys did not know their kind of Internet access and broadband was used by 57 % of the users and 38 % of the trainers respectively.

The users of training judged their need of training to be covered by the listed subject areas (figure 5). They pointed specifically on the following demands in descending order: Food safety (25 responders), quality management (22), HACCP/ISO systems (21), meat science (21), meat processing (20), market research relating to meat (18), animal hygiene in relation to pig production (17) and pig welfare and management (15).

Interestingly the responding trainers' subject areas corresponded well with the demands by the users of training. The trainers covered all the listed subject areas (figure 6). The eight most frequently subjects taught by the responders were in descending order: Meat science (50 responders), food safety (46), meat processing (41), HACCP/ISO systems (37), pig production

(33), pig welfare and management (29), microbiology (29) and quality management (28). Three trainers added that they taught innovation, management and communication.

The trainers in this survey had the following main target groups in descending order (figure 7): Meat processing (50 responses), slaughter (40), fattening (26), consulting (26), breeding (23), retailer (23) and pig production (22).

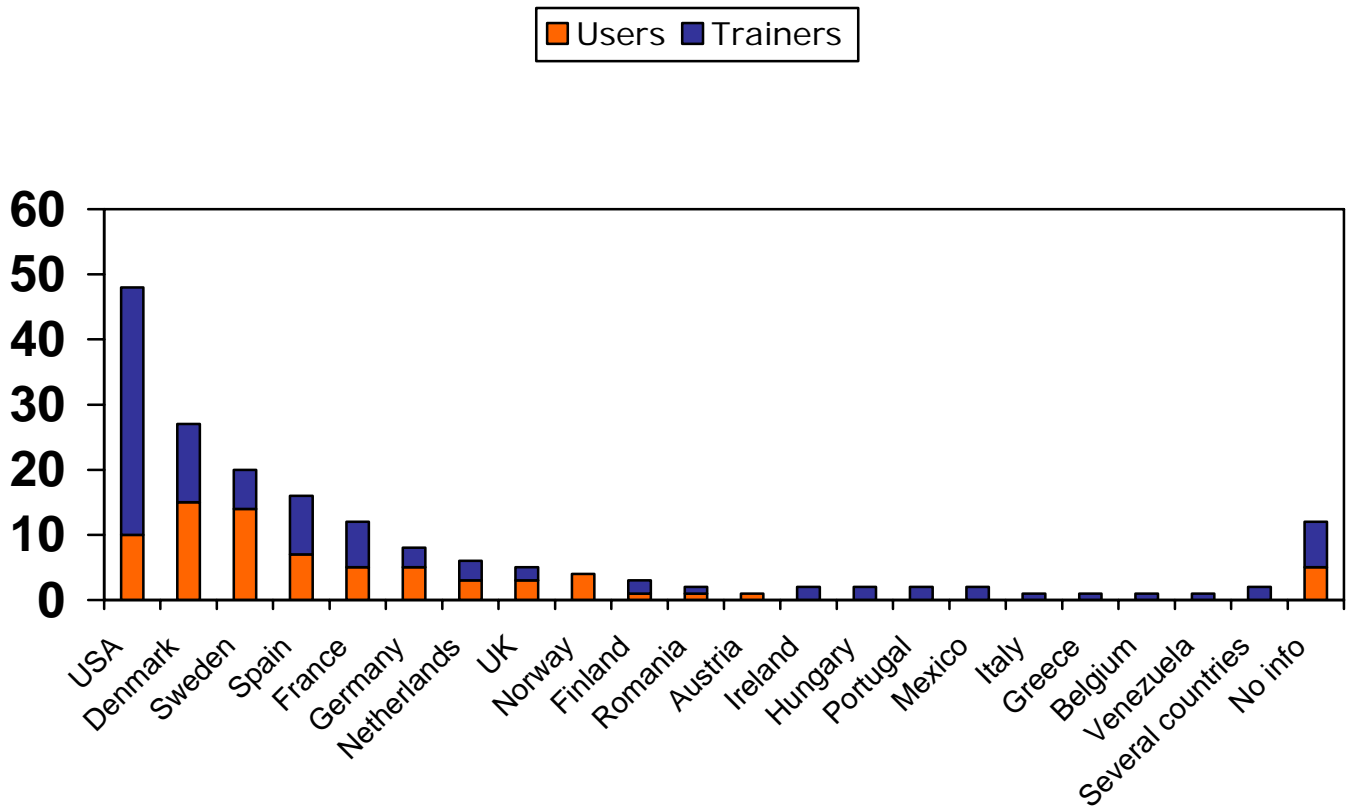
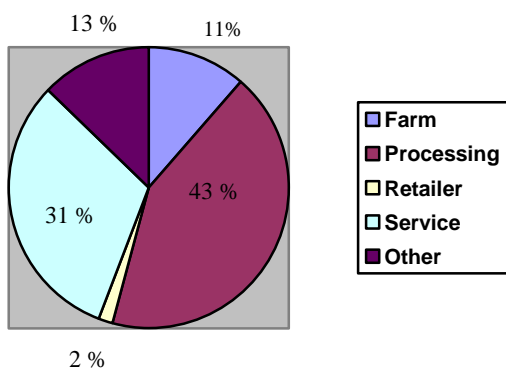


Figure 1. Number of responders based in different countries (70 users and 99 trainers).

USER



TRAINER

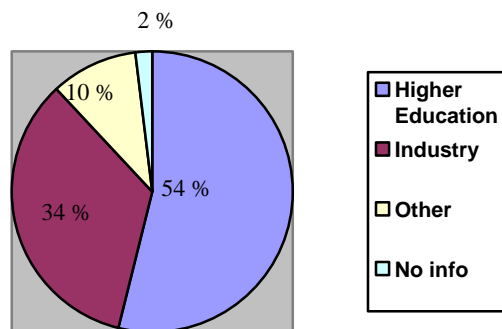
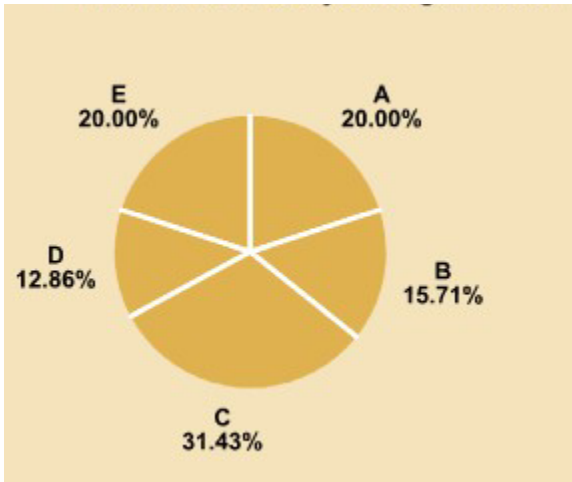


Figure 2. Proportion of responders in different types of organisations. Users: A) Farm level, B) Processing level, C) Retailer level, D) Service level, E) Other. Trainers: A) Higher Education, B) Industry, C) Other, D) No information.

USER



TRAINER

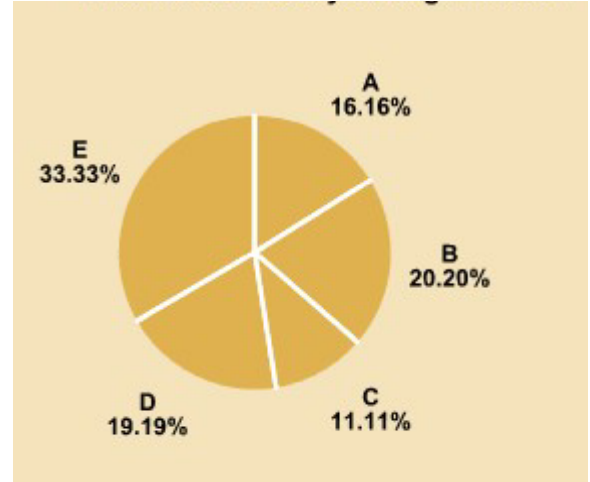
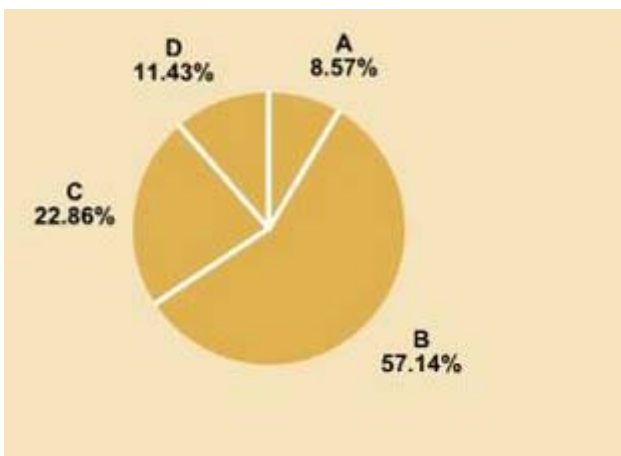


Figure 3. Proportion of responders based in organisations with different size (number of people employed). A) < 10, B) Between 10 and 49, C) Between 50 and 249, D) Between 250 and 999, E) More than 1000.

USER



TRAINER

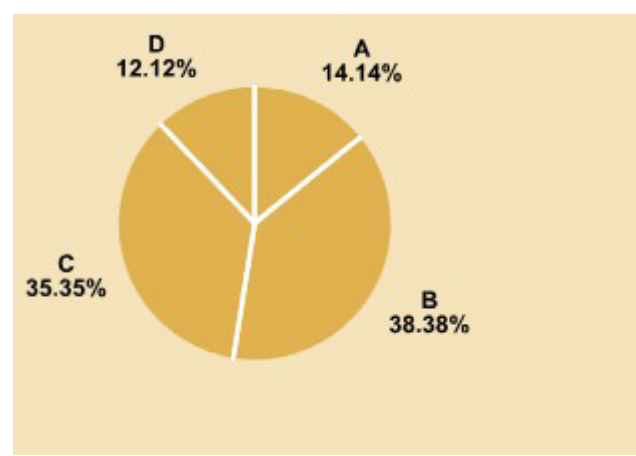


Figure 4. Proportion of responders with different kind of Internet access. A) Modem/ISDN, B) Broadband, C) Direct connection, D) Don't know.

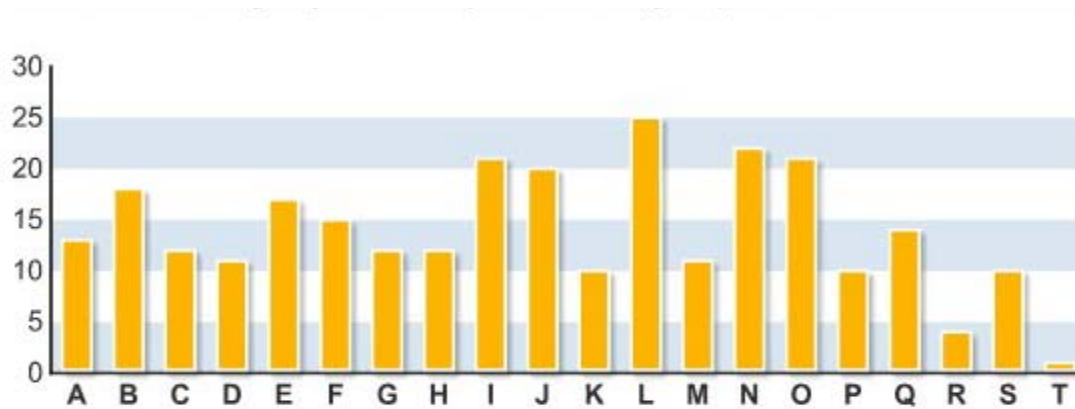


Figure 5. Number of users needing training in different subject areas.

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|--|--|
| A) Consumer behaviour | K) Microbiology |
| B) Market research in relation to meat | L) Food safety |
| C) Pig production | M) Food bio security |
| D) Sustainable pig production | N) Quality management |
| E) Animal hygiene in relation to pig production | O) HACCP / ISO systems |
| F) Pig welfare and management | P) Disease control programmes |
| G) Pig genetics | Q) Nutritional science |
| H) Molecular biology in relation to muscle biology | R) Logistics |
| I) Meat science | S) Life cycle assessment in relation to meat |
| J) Meat processing | T) Other |

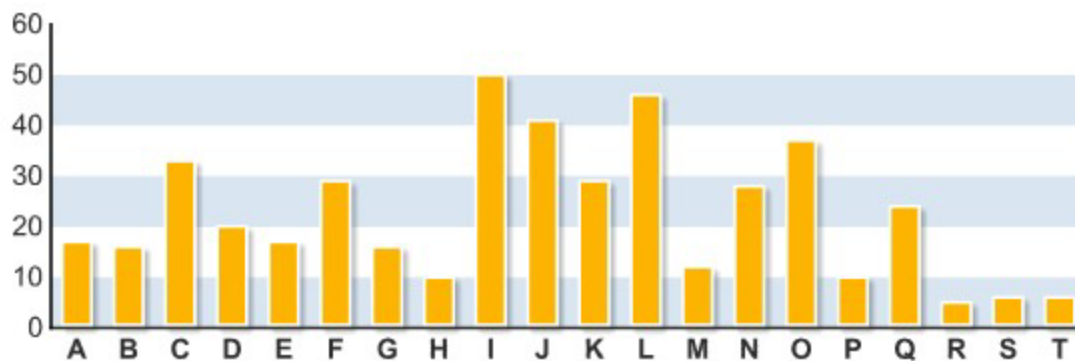


Figure 6. Number of trainers teaching different subject areas.

- | | |
|--|--|
| A) Consumer behaviour | K) Microbiology |
| B) Market research in relation to meat | L) Food safety |
| C) Pig production | M) Food bio security |
| D) Sustainable pig production | N) Quality management |
| E) Animal hygiene in relation to pig production | O) HACCP / ISO systems |
| F) Pig welfare and management | P) Disease control programmes |
| G) Pig genetics | Q) Nutritional science |
| H) Molecular biology in relation to muscle biology | R) Logistics |
| I) Meat science | S) Life cycle assessment in relation to meat |
| J) Meat processing | T) Other |

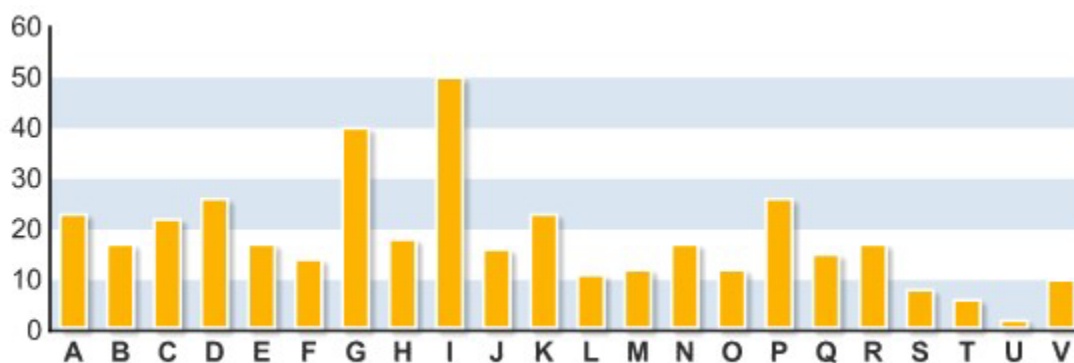


Figure 7. Number of trainers teaching different target groups.

- | | |
|-----------------------------|---|
| A) Breeding | L) Production of food additives |
| B) Multiplier | M) Veterinarian |
| C) Piglet production | N) Laboratories |
| D) Fattening | O) Market research |
| E) Feed production | P) Consulting |
| F) Housing | Q) Inspection/certification |
| G) Slaughter | R) Providing Quality Management Systems |
| H) Deboning | S) Logistics/transportation |
| I) Meat processing | T) Provider of IT Systems |
| J) Whole saler | U) Auctions |
| K) Retailer | V) Other |

Use of e-learning and problem-based learning

The results of the survey gave an overview of the present use of e-learning and problem-based learning.

From figure 8 it can be concluded that e-learning in most organisations only was used to a small extent (users 41 %, trainers 39 %), thus 5 % of the users and 12 % of the trainers answered that e-learning was used to a large extent. 28 % of the users and 18 % of the trainers answered that they “not at all use e-learning”. A big majority (63 % of the users and 83 % of the trainers) answered that they believe in an increase in the use of e-learning over the next 5 years (figure 9), this was most predominant among trainers whereas 27 % users answered that they did not know.

Figure 10 illustrates the use of problem based learning (active learning based on real situations). 25 % of the users of training answered that problem based learning was used to a large extend whereas 32 % of the trainers answered that. Few trainers and trainee agreed on that active learning based on real situations was uncommon (users 8 % and trainers 5 %). The use of problem based learning is very likely to increase according to most of the responders; only about 9 % of all the responders believed that the use of problem based learning would not increase within their organisations (figure 11). 23 % of the users of training did not know anything about the future use of problem based learning.

The result of the survey showed that users and trainers to about the same extend are familiar with modern technique in training, with a tendency of trainers to be superior. It should be noted that only 63 users of training and 90 trainers answered these questions. All users and trainers were used to power-point presentations (figure 12 and 13). Video-clips were familiar to 66 % of the users and 76 % of the trainers; on-line lecture notes were familiar to 27 % of the users and 49 % of the trainers; sound files to 30 % of users and 42 % of trainers.

The surveys clearly shows (figure 14) that face-to-face training with electronic learning resources is the most popular setting for training (67 % of users and 73 % of trainers) whereas more users than trainers preferred e-learning with no or few face-to-face meetings (22 % and 12 % respectively) .

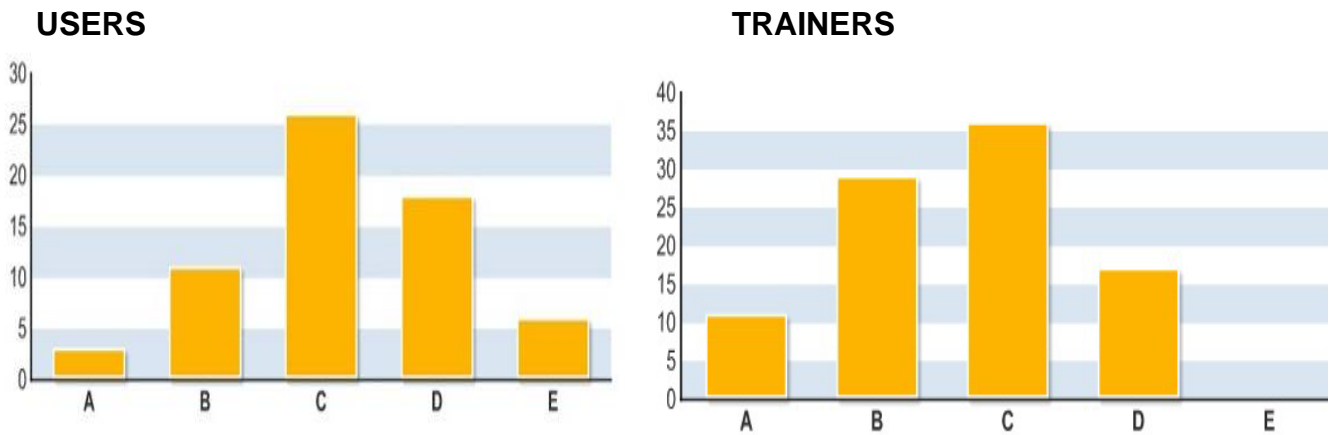


Figure 8. Responders present use of e-learning. A) To a large extent, B) Moderately C) A little, D) Not at all, E) I don't know.

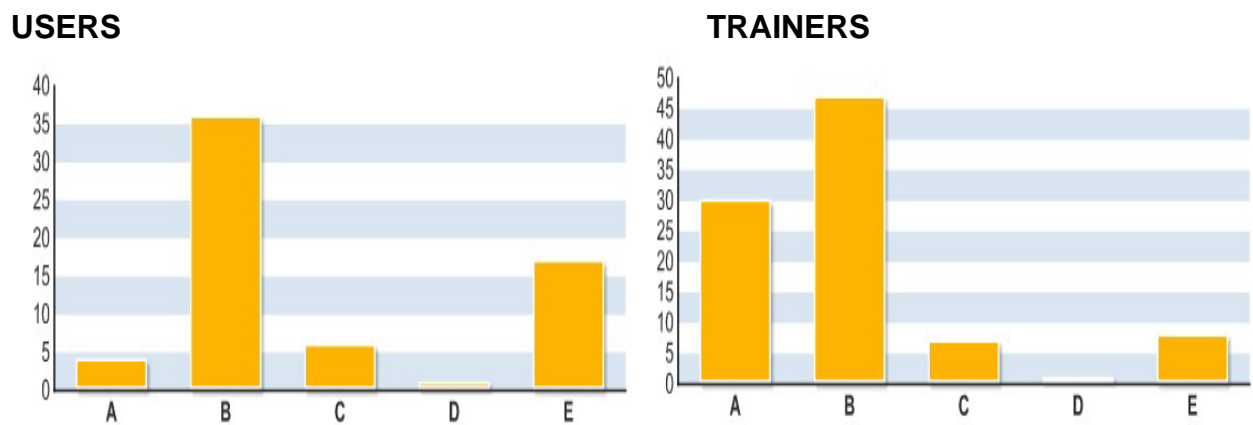
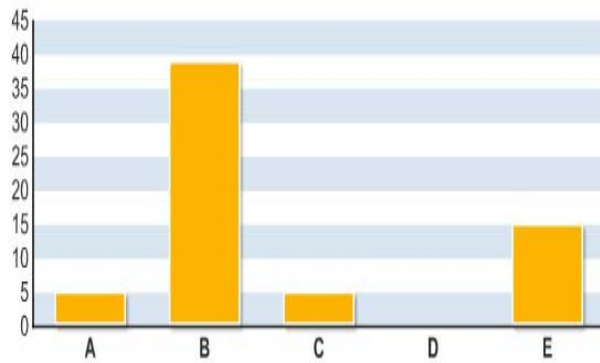


Figure 9. Responders expected use of e-learning over the next five years. A) Extremely likely, B) Likely, C) Unlikely, D) Extremely unlikely, E) I don't know.



Figure 10. Responders present use of problem based learning. A) A large extent, B) Moderately, C) A little, D) Not at all, E) I don't know.

USERS



TRAINERS

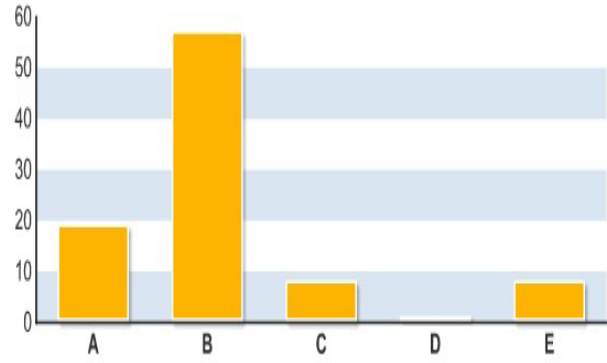


Figure 11. Responders expected use of problem based learning over the next five years. A) Extremely likely, B) Likely, C) Unlikely, D) Extremely unlikely, E) I don't know.

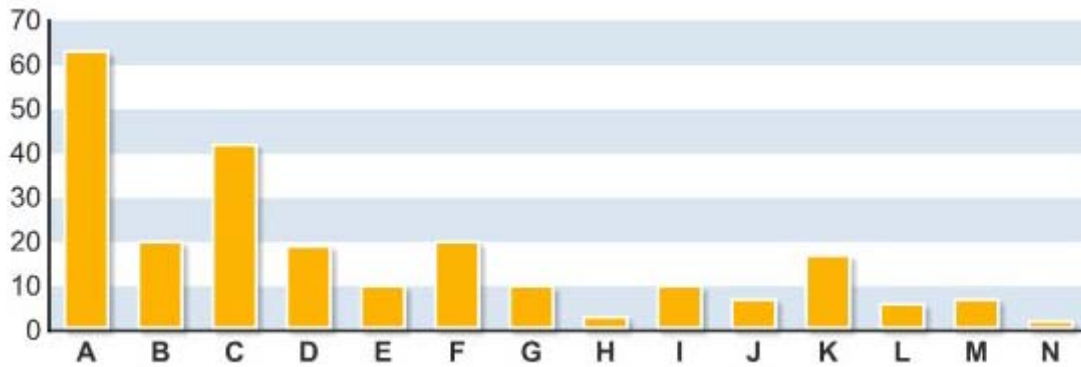


Figure 12. Number of users of training familiar with different electronic learning resources

- A) PowerPoint presentations
- B) Multislide presentation
- C) Video clips
- D) Sound files
- E) Simulations
- F) Animations
- G) Role play
- H) Podcasting, MP3

- I) Webcasting lectures
- J) Hand-held response devices
- K) On-line lecture notes
- L) On-line assessment
- M) On-line evaluation
- N) Other

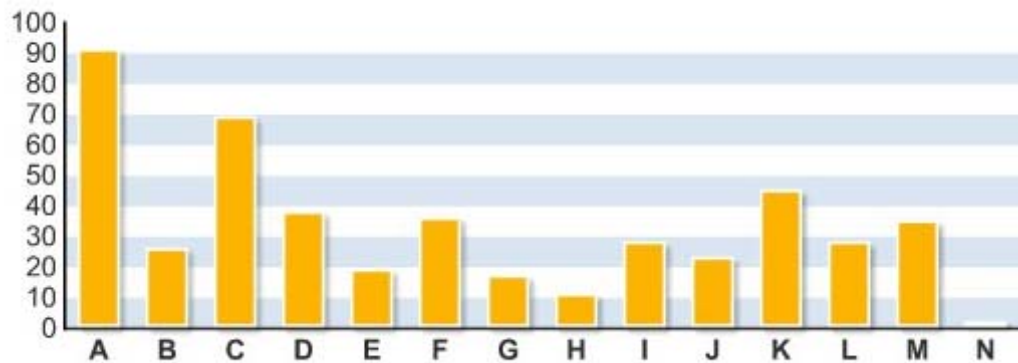
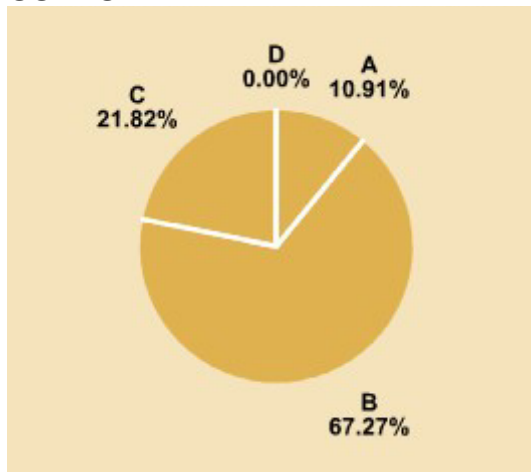


Figure 13. Number of trainers familiar with different electronic learning resources

USERS



TRAINERS

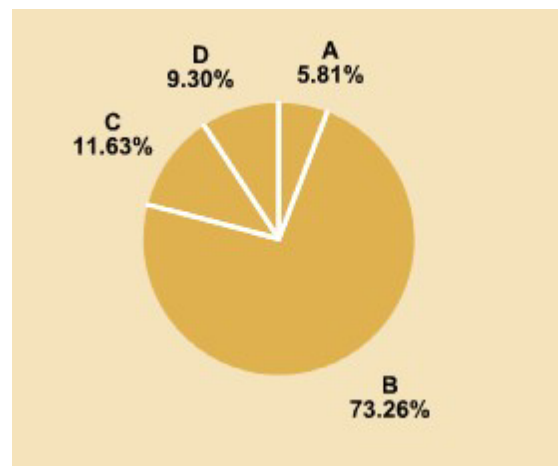


Figure 14. Proportion of responders who prefer training resources for different settings
A) Face-to-face training without electronic learning resources,
B) Face-to-face training with electronic learning resources,
C) E-learning with no or few face-to-face meetings,
D) Don't know.

Trainers interest of participating in a teaching and training network

The trainers were asked if they would be willing to share their existing electronic learning resources (figure 15). Many responders (26 %) claimed that they did not have anything to share. More than half of the remaining responders were positive to share their learning resources (16 responders without a royalty fee and 16 responders with a royalty fee). The answer was independent of where the responders were based. Only 8 responders (10 %) answered “no”, whereas 24 % of the responders answered that they did not know if they were willing to share their learning resources.

The interest in evaluating pilot versions of electronic learning resources developed within the project was high (figure 16). About 26 % answered “yes, very much”, 25 % “from time to time” and 24 % “only occasionally”. 10 % of the responders answered that they were not at all interested and 15 % did not know.

Almost all responders were interested in taking part in a virtual community on teaching and training (figure 17). About 23 % claimed that they were “very interested”, 29 % “moderately interested” and 26 % “slightly interested”. Only 8 responders (10 %) answered that they had no interest and 13 % did not know. From figure 18 it can be concluded that e-mail is the most likely tool to be used in a virtual community but that the other tools suggested also seem to be of interest. Discussion forum and blogs seems to be most popular whereas few of the responders want to use chat and wiki.

The interest in receiving on-line training in the use of electronic learning resources was relatively high (figure 19). Only 13 % had no interest and 6 % did not know. The interest in receiving on-line training in problem based learning was also relatively high (figure 20). Only 10 % have no interest and 9 % did not know.

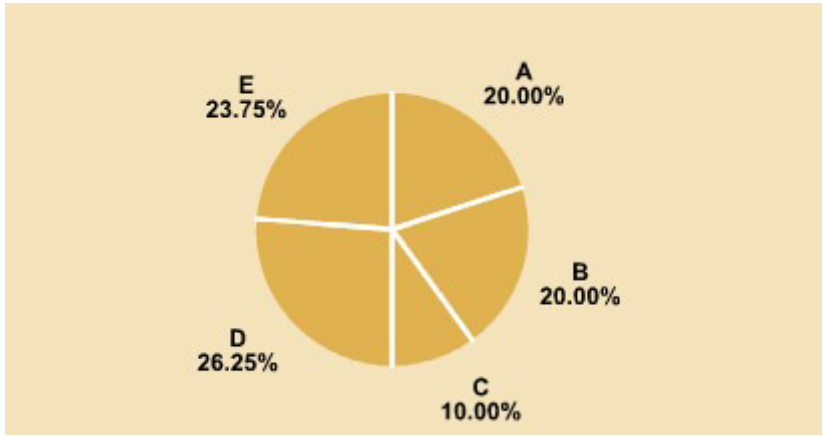


Figure 15. The trainer's willingness to share existing electronic learning resources. A) Yes, without a royalty fee, B) Yes, with a royalty fee, C) No (8 responses), D) I do not have anything to share, E) I don't know.

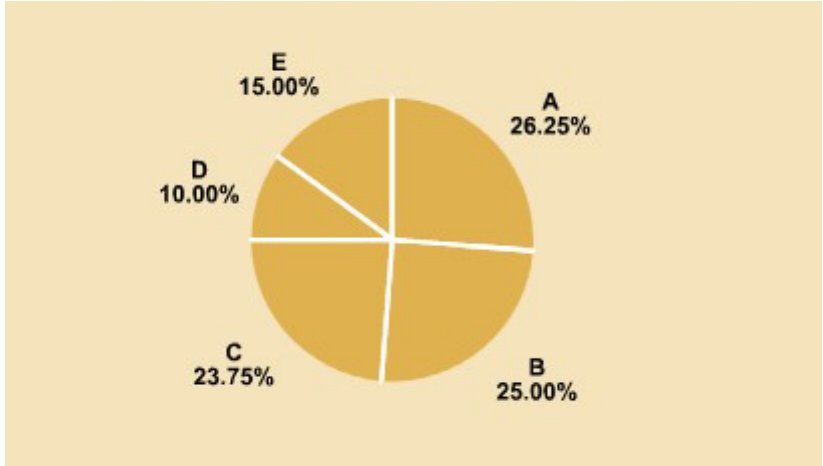


Figure 16. Proportion of trainers who want to participate in evaluation of pilot versions of electronic learning resources. A) Yes, very much, B) From time to time, C) Only occasionally, D) No interest, E) I don't know.

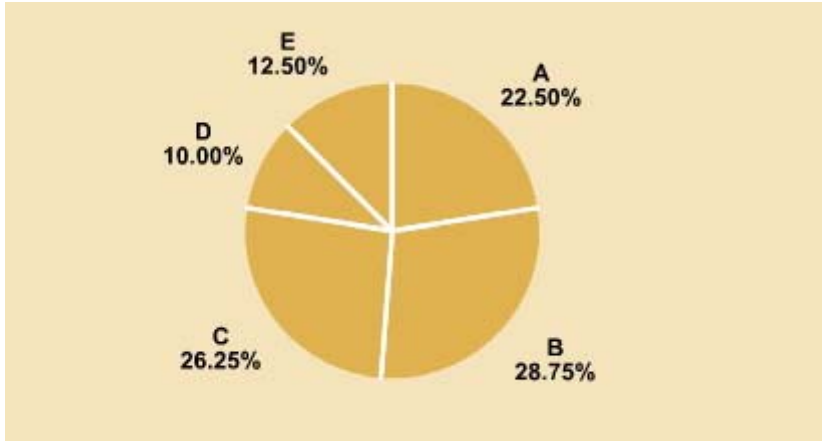


Figure 17. Proportion of trainer's who want to participate in a virtual community. A) Yes, very much, B) Moderately interested, C) Slightly interested, D) No interest, E) I don't know.

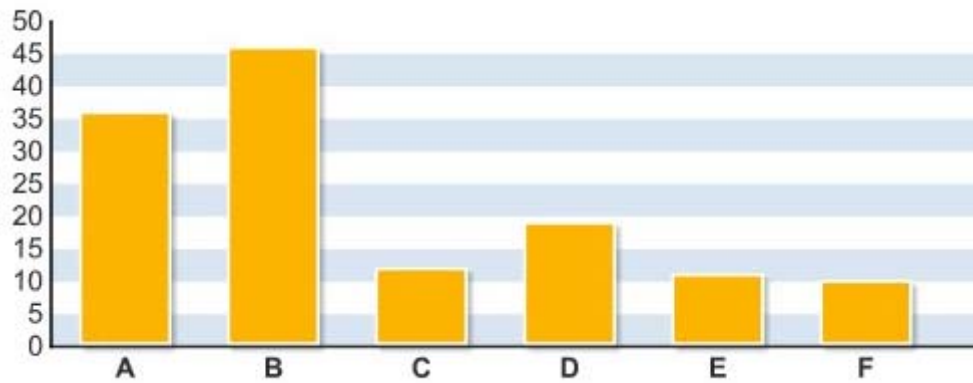


Figure 18. Proportion of trainer's who want to use the different kind of tools in a virtual community. A) Discussion forum, B) E-mail, C) Chat, D)Blog, E) Wiki, F) Don't know

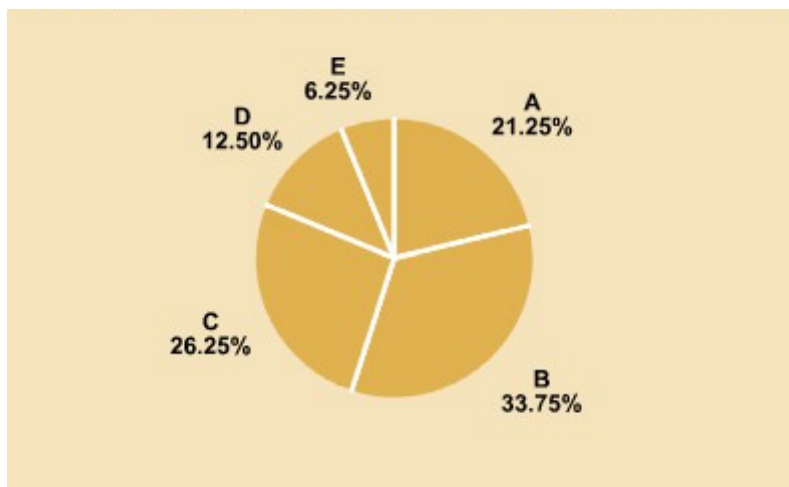


Figure 19. Proportion of trainers who want to receive on-line training in the use of electronic resources. A) Yes, very interested, B) Moderately interested, C) Slightly interested, D) No interest, E) I don't know.

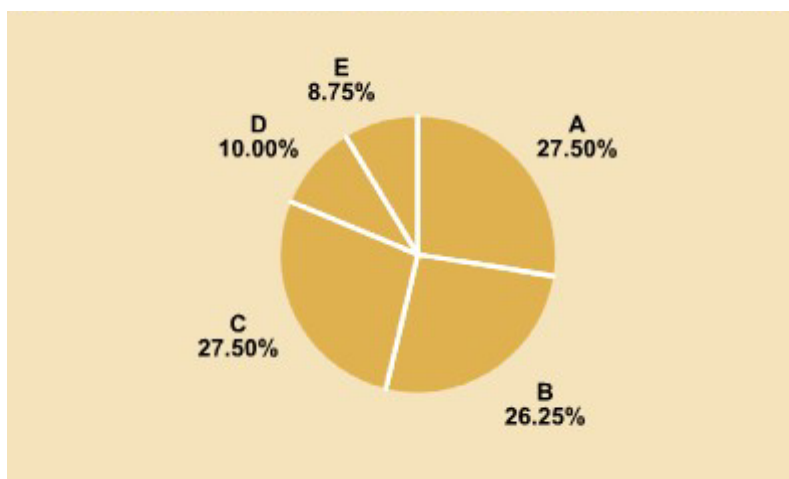


Figure 20. Proportion of trainers who want to receive on-line training in problem-based learning A) Yes, very interested, B) Moderately interested, C) Slightly interested, D) No interest, E) I don't know.

Users expectation on training

The users of training were asked if they would like a certificate after training which resulted in divergent responses (figure 21). Most of the users of training (69 %) wanted to get a certificate only 10 responders (18 %) did not want a certificate and 7 responders (13 %) did not know. A majority (30 out of 55 responders) wanted to do an assessment and 15 responders wanted to get ECTS for their achievement.

From figure 22 it can be concluded that the users of training only wanted to spend few hours per week on training. The majority (56 %) wanted to spend less than two hours per week, 42 % between two and five hours per week and less than two % wanted to spend more time per week.

Half of the users of training were willing to pay for training if they preferably got acknowledgement of time or ECTS credits (figure 23). 20 % were not willing to pay for training and 10 % claimed that it depended on quality and cost.

A big proportion of the users of training (56 %) wanted training in other languages than English (figure 24). The responders in this survey pointed at the following languages in descending order: Swedish (10), French (5), Danish (4), German (3), Dutch (3) and Norwegian (2). It should be mentioned that also 36 % of the trainers preferred the training resources in other languages than English. The languages were in descending order: Spanish/Catalan (8), Danish (7), Swedish (4), French (3), German (2), Portuguesa (2), Dutch (1), Finish (1) & Russian (1).

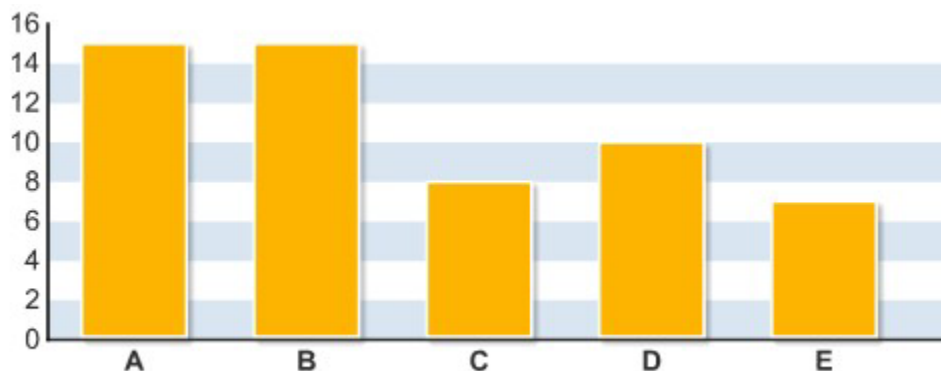


Figure 21. Proportion of users of training who would like to get a certificate after a training activity.

- A) Yes, a certificate of achievement including ECTS (after assessment),
- B) Yes, a certificate of achievement including study hours (after assessment),
- C) Yes, a certificate for participation, based on study hours (no assessment),
- D) No, E) Don't know.

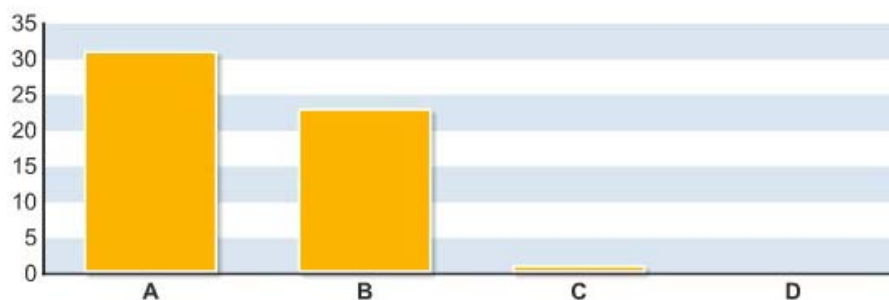


Figure 22. Proportion of users of training who are willing to spend different time on training.

- A) Fewer than 2 hour per week, B) Between 2 and 5 hours per week,
- C) Between 6 and 10 hours per week, D) More than 10 hours per week.

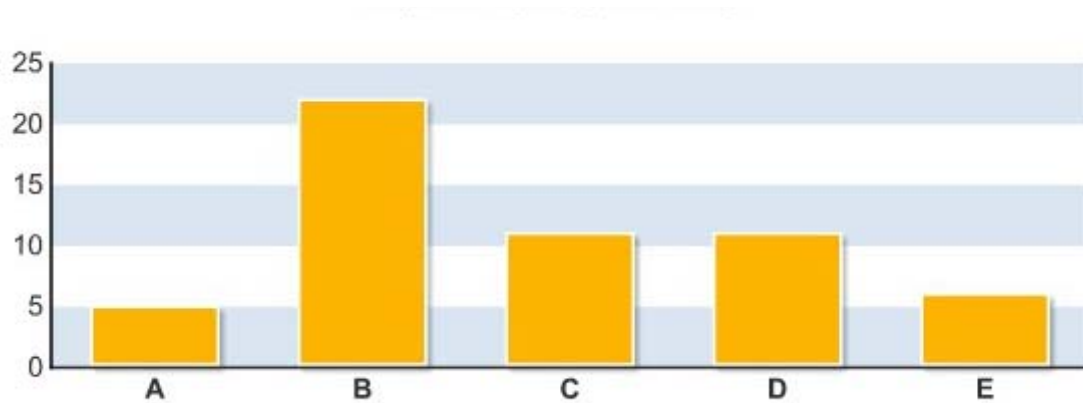


Figure 23. The proportion of users of training who are willing to pay for training. A) Yes, with ECTS credits, B) Yes, with acknowledgement of time, C) No, D) Do not know, E) Other.

USERS

TRAINERS

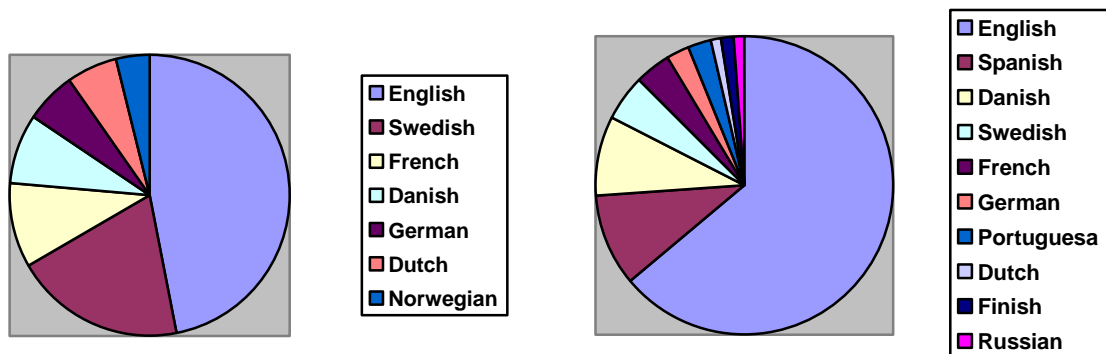


Figure 24. The proportion of responders wanting training in different languages.

Summary

The responders seemed to be representative regarding geographical distribution and in which organisations they were based. The trainers had a relative even distribution on target groups although meat processing and slaughter were the most frequent.

The Internet access was good for both users of training and trainers, only 9 % respectively 14 % had slow connection via modem/ISDN. It should be emphasised that the response rate for users of training was low and that the users responding to the electronic survey are expected to be the early adapters of Internet. Thus the proportion of users with slow connection is in general expected to be higher.

Users of training pointed at eight important subject areas to focus the training on: Food safety, quality management, HACCP/ISO systems, meat science, meat processing, market research relating to meat, animal hygiene in relation to pig production and pig welfare and management.

Correspondingly many of the trainers can fulfil these demands by providing training in most of the same subject areas. Only few of the responding trainers were teaching “market research relating to meat” and “animal hygiene in relation to pig production”.

The use of e-learning was limited whereas the use of active learning based on real situations was rather common. The survey indicated that problem based learning and especially e-learning will increase the coming five years. The expected future trend was most dramatic for trainers.

The result of the survey showed that users and trainers to about the same extend are familiar with modern technique in training, with a tendency of trainers to be superior. PowerPoint presentations were the major electronic learning resource and few of the responders were familiar with “more advanced“ learning resources like simulations and pod-casting.

The surveys clearly showed that face-to-face training with electronic learning resources is the most popular setting for training. A higher proportion of users of training than trainers preferred e-learning with no or few face-to-face meetings.

A great deal of trainers was positive to share their existing electronic learning resources although many trainers did not have anything to share. They were also positive to take part in piloting new developed learning resources.

The interest among trainers of taking part in a virtual community was high and e-mail, discussion forum and blogs seemed to be the most likely tools to be used in the community. A majority of the trainers seemed to be interested in receiving on-line training in e-learning and problem based learning.

A great proportion of users of training wanted to get a certificate after training. Most of the users of training wanted to do an assessment and about half of these wanted to get the certificated including ECTS whereas the other half wanted a certificate based on study hours. To some users of training it did not seem to be important to get a certificate but to learn and gain knowledge. It might turn out that a great proportion of the target group is self-learners who want to be able to use standalone training resources.

The users of training did not want to allocate more time than maximum two hours per week on training. This is a clear signal that the learning resources should be relatively short in order to allocate time and to be able to do the training session without interruptions.

Half of the users of training were willing to pay for training if they preferably got acknowledgment for time or ECTS credits. Among users only 20 % were not willing to pay for training and 10 % claimed that it depended on quality and cost.

A big proportion of the users of training (56 %) wanted training in other languages than English and also 36 % of the trainers preferred the training resources in other languages. It seems to be important to deliver training in Spanish, French and German (and probably the Nordic languages) languages in order to successfully disseminate the results from the project Q-PorkChains.

Conclusions

1. Internet access is good, only about 10 % had slow connections.
2. Subjects of high priority are: Food safety, quality management and HACCP, meat science and meat processing as well as market research and animal hygiene and welfare.
3. The trainers provide training in the above subjects but only few give training in “market research relating to meat” and “animal hygiene in relation to pig production”.
4. Use of e-learning is limited; use of problem-based learning is common.
5. People involved in training expect that e-learning and problem-based learning will increase in the coming five years.
6. Few electronic learning resources are available in the subject areas apart from PowerPoint presentations which are the major electronic learning resource.
7. Face-to-face training with electronic learning resources is the most popular setting for training although 22% of the users of training wish to do training purely online.
8. Many trainers want to share their existing electronic learning resources.
9. There is great interest for taking part in a virtual community within the subject areas for Q-PorkChains, e-mail and discussion forum are attractive tools for communication.
10. Many trainers want to receive on-line training in e-learning and problem-based-learning.
11. Many users of training want do an assessment and to receive a certificate after training but 18 % of users only want to gain knowledge.
12. Only few hours can be spend on training and only half of the users are willing to pay for training.
13. Training should be delivered in English and a few other languages in order to reach the pork chains.