Providing Continuing Professional Development
In Small to Medium Sized Enterprises

A Survey Carried out by

Beti Williams
Department of Computer Science, University of Wales Swansea
Singleton Park, Swansea, SA2 8PP, e-mail: b.williams@swansea.ac.uk

Gerhard Manogg
iMAGiTECH Ltd, PO Box 108, Bridgend, CF35 5YJ, e-mail: gerhard@imagitech.co.uk

Computer Science Report Series, University of Wales Swansea
CSR 2-98

Abstract:

In order to assess the need and format of Continuing Professional Development in Information Technology (IT) in Small to Medium Sized Enterprises (SMEs) in the area of South Wales, a questionnaire has been devised. 30 SMEs have been interviewed and the results collected and analysed in this report.

We start with giving a brief summary of the methodology and analyse each section of the report in detail. A summary conclusion is drawn at the end of the report. It emerges that there is a perceived need for Continuing Professional Development in the area of IT, the most important constraint being time.

Introduction

The survey’s aim is to assess the need for continuing professional development in IT in Small to Medium Sized Enterprises (SMEs) in the area of South Wales. At the same time we assess the constraints and ideal forms for the delivery of training in general.

The survey is based on the attached questionnaire, each of which was completed by companies. All of the companies who completed the questionnaires were visited and a personal interview was conducted. Of a total of over 30 companies visited, 24 returned a fully completed questionnaire. The remaining companies were companies without IT structure which meant that most of the questions on the questionnaire did not apply.

The following sections summarise the results, section by section. An overall summary and conclusion is given at the end of the text. The analysis of the results was carried out using the Data Analysis package MultiView.
I. General Information:

Number of companies in this survey: 24

Sectors:

Hardware dealers 2
IT service companies (other than WWW pages) 3
WWW page service companies 1
Software development companies 9
Non-IT services 3
Manufacturing 6

Number of employees:

< 10 10
11 – 25 5
26 – 50 4
51 – 100 0
101 – 200 3
> 200 2

Computer structure:

22 of the companies possess a computer network, only 2 standalone computers. The 2 companies with standalone computers are both companies with less than 10 employees, one in the manufacturing sector, the other giving IT related services.

Internet:

All of the companies have access to the Internet.
9 via Modem
9 via ISDN line
6 via leased line

WWW page

9 companies do not have their own WWW page
7 have just a passive page
8 collect actively data via their page and from the Internet

Conclusion:

Although the number of companies surveyed is still small, we have reason to believe that the results found are not atypical. Clearly, all the companies that we surveyed did have some interest in IT.

This survey covers a number of sectors and sizes. 15 companies quoted as their central business interest IT, the remainder were non IT companies. Only one company cannot be considered to be an SME any longer, and indeed 10 have less than 10 employees.

22 of 24 companies have computer networks, ranging from simple peer-to-peer networks to sophisticated Client Server set ups involving several different operating systems.

All of the companies involved have access to the Internet in some form. This shows that for example a distance learning approach via the Internet would be viable.
II. IT personnel recruitment:

Only 1 company (software developers which have less than 10 employees!) agrees with the statement that recruiting good quality IT personnel is easy.  
19 of the companies disagree with the statement, whereas 4 take a neutral stance (3 with <10, and 1 with 11 – 25 employees), possibly because they have not tried yet.

Conclusion:

Recruitment of high quality IT Staff is not easy, simply because the demand for such personnel is high – a shortage of programmers is forecast for the end of this century. There is also the question of remuneration, good specialised staff costs money, and may be some of the difficulties stem from unrealistic pay expectations on both sides, and the difficulty as an SME to know where to look for IT staff. Additionally, most graduates prefer to work for a large organisation as opposed to an SME.

III. Types of training:

The question asked was how important the following types of training are within the company. 3 expresses neutral importance, smaller than three rather unimportant, and larger than three rather more important.

**Ongoing and undocumented training** was important in 19 companies, with neutral importance in just 5.

**Continuing Professional Development** was unimportant in 6 companies, 5 take a neutral stance, whereas 13 indicated that this form of training was important within their company.

Only one company considered **unsupervised on the job training** to be unimportant, 4 take a neutral stance, whereas in 19 this form of training is important.

**Supervised on the job training** was as important as unsupervised on the job training: Only one company deems it unimportant, 6 take a neutral stance, 17 deem it important.

**In-house courses** seem to be well spread across business sizes and the importance spreads over the whole spectrum. Even in the <10 company category in-house courses seem to take place.

**External courses** seem to be fairly important throughout the spectrum, with the exception of firms with less than 10 employees. 6 of the 10 firms in the survey state that external courses are unimportant forms of training, and only one in this category deems this form of training important. The correlation with the limiting factors time and cost are to be investigated.

Conclusions:

On-the-job training is by far the most important form of training in the companies that we surveyed. This seems to be the most widely used form of training, and as such is to be complemented in a CPD context by outside help, be it in the form of distance learning, information sites and sites where help can readily be found.
In house courses seem to be spread well across the spectrum, even within companies with very few employees. This is an encouraging sign, as it indicates that the information and skill is freely exchanged within any one company.

Although external courses seem to be fairly important in companies that have reached a certain size, in very small firms there is just simply not enough time nor money for employees to attend courses. This could be addressed by organising courses locally at times when people can attend and by backing the courses up with a distance learning package.

IV. Encouraging CPD

Some 15 of the surveyed companies either do not encourage CPD, deem it not applicable within their company, or take a neutral stance. 6 of the 10 companies surveyed with less than 10 employees do not encourage CPD.

Conclusions:

CPD requires at present a large investment in time and money, resources that very small companies simply do not possess. The simple fact of thinking about such a facility requires a quiet mindset, and in SMEs the reality is that unless income is generated there is no need to even think about further development.

Therefore SMEs in general, especially very small firms, need to be supplied with ways and means to overcome this shortage of resources, by making the process affordable and straight forward, in both, time and money.

V. Limiting factors for training

The question read: “What do you perceive as being the main limiting factor for Training / Continuing Professional Development?” The companies were asked to express agreement or disagreement.

21 out of the 24 companies surveyed agree that time is one of the main limiting factors. Only one company disagreed and 2 expressed a neutral view.

6 companies disagreed when asked whether money was a limiting factor, 4 take a neutral stance, and 14 agreed with this statement.

No external infrastructure: 10 companies take a neutral stance here, 9 agree that the lack of external infrastructure for training is a limiting factor for training, but 5 disagree, i.e. they maintain that the lack of an external infrastructure is not a limiting factor for training.

Staff poaching: A fairly even spread, no particular agreement or disagreement on this point. There seem to be no certain trends in conjunction with company size etc.

Higher Salary: More companies seem to disagree to the fact that staff asking for higher salary is a limiting factor to training. 11 companies disagreed, 5 agreed and 8 take a neutral stance.
Conclusions:

Time is the one singular item of shortage in the training arena within SMEs. Money can be a problem, but is not cited as often as time as a limiting factor for training.

The question about the lack of external infrastructure is problematic, because people do not seem to know about the lack or existence of an infrastructure in their field of interest and indeed further training and CPD. We can therefore not draw any conclusion from this question.

Potential staff poaching or higher salary demands do not seem to be seen as major considerations or obstacles to training or CPD.

Overall, any training and CPD activity organised for SMEs will need to work around the time and money restrictions that people in SMEs see.

VI. Desire to obtain IiP status:

15 companies either have IiP in place (1 company), have started the process (1 company) or express interest in gaining the status (13 companies). 9 companies either express no interest or feel that IiP would not be applicable to them. Of the 9 companies with negative feelings 6 have less than 10 employees and 2 between 11 and 25 employees.

Conclusion:

Gaining IiP status is helped by establishing a structured approach to CPD and staff training. It is not surprising that it is the smallest SMEs that are not interested in gaining the status, least not because of the time and effort as well as paperwork and cost it involves, but also because of its attraction only to "larger" organisations (>25 staff) with stronger needs for recruitment and the threat of higher staff turnover.

VII. Problems attracting IT Staff:

6 companies state that they do not recruit or have never recruited IT Staff (probably because they are too small). Of the remaining 16, 8 state not to have any recruitment problems for IT staff, 10 state to have difficulties to recruit IT staff.

Conclusion:

The picture here is mixed, and no real conclusion can be drawn from this.

VIII. Usefulness of IT CPD framework for SMEs

1 company (with less than 10 employees) states that such a scheme would not be applicable to them.
Of the remainder (23 companies) only 2 companies state not to believe such a scheme to be useful. 13 would find it useful to establish a CPD framework for SMEs, 8 hold a neutral view.

**Conclusion:**

We feel encouraged at this response, and take it that building a CPD scheme designed specifically to address the requirements and constraints of an SME would be very welcome in the area of IT.

**IX. Learn about new CPD programme**

The vast majority of the surveyed companies would like to know more about a new CPD scheme for IT and SMEs - 20 of 24. Only 3 declared to be uninterested.

**Conclusion:**

This result shows that in SMEs the need for CPD in IT is keenly felt.

**X. Specify Training Attributes**

The last section concerns the following question:

“**How do you rate the following attributes for the training of your employees?**”

**Low cost:**

Only 6 of 24 companies stated that low cost was not important in the current training of their employees, 5 said it was neither important nor unimportant, 12 agreed that low cost was important.

**Outside Working hours:**

For 13 companies it is important that the training takes place outside working hours, this is particularly so for small companies (with less than 50 employees), 8 take a neutral stance, and only 5 state that it is not important that the training takes place outside working hours (in particular in all companies in the survey with more than 100 employees).

**On the Job training:**

5 companies state that this form of training is unimportant. 6 take a neutral stance whereas for 13 companies this is an important factor in their overall training.

**Content tailored:**

21 companies state that content tailored training is important in their training strategy. This is highly significant and needs to be borne in mind when designing CPD courses.

**Held Locally:**

12 companies find it important that the training is held locally. 9 take a neutral stance whereas only 3 do not find it important that the training is held locally.

**Organised specifically for the company:**

An even split emerges here, 10 think it is important that the training is organised specifically for the company, 6 take a neutral stance, and 8 do not think that it is important.
Recognition of the training by outside body:
16 companies consider this to be important, 3 take a neutral stance and 5 companies consider this to be unimportant

Conclusion:

Low cost and outside working hours seem to be the most desirable features of training. Alongside these fundamental constraints companies prefer to attend tailored courses, organised locally and recognised by an outside body.

In general the courses need not be organised specifically for a company, but "general" sessions with a commonly tailored content seem to be seen as being desirable.

Again, the training put forward in any new scheme needs to fit to these requirements.

XI. Overall conclusion

The results of this survey confirm the following points:

The following attributes are seen as major limiting factors in training:
- Time
- Money
where time is much more critical than money.

There is strong evidence that SMEs would look favourably on the establishment of a CPD scheme designed specifically to address their needs.

All the companies surveyed were connected to the Internet.

Therefore we can justifiably set out to design a CPD and training scheme, that takes into account all the above mentioned constraints and fulfils the "wish-list" mentioned above:

1. Low Cost
2. Outside working hours
3. Organised locally
4. Tailored content
5. Recognised by an external organisation
6. Integrates well with On-the-Job training