

PROFESSIONAL DEVELOPMENT FOR IT PROFESSIONALS

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Abstract

Professional development is the continuing education, technical training and practical experience necessary for those aspiring to attain professionalism and also for those who want to maintain it. Personal commitment from IT professionals to upgrade and update themselves is required. The employers, professional societies and educational establishments can all play their parts to ensure that high standards in the IT profession will be maintained.

Introduction

The professional development of an IT professional is the continuing education, technical training and work experience necessary for him to attain or maintain professionalism. Professional development is a progressive process through which he develops his technical competence and capabilities. This process normally begins with a formal course of studies and practical training in the professional area. This process continues and is intensified in the working environment where he practises as a professional. Any field with changing technology carries the risk of technical obsolescence and constant upgrading and updating of skills and knowledge is therefore essential.

This article focuses on the need for those aspiring to be IT professionals and for those who are already qualified professionals to develop themselves continually. They should be personally committed to acquire the necessary skills, knowledge and experience in order to become professionals or to continue to practise as professionals. A professional society can make professional development compulsory for its members. It can also help to ensure that adequate

professional development opportunities are made available to its members. Employers who regard their IT professionals as important company assets should encourage them in their professional development efforts and at the same time maintain corporate IT expertise. Supportive employers will also find that turnover of IT professionals would be reduced and recruitment of IT professionals would be much easier.

Stages of Professional Development

We have to distinguish between initial professional development and continuing professional development. Initial professional development is the formal education, practical training and experience in the working environment necessary for those who want to attain professionalism. Initial professional development is considered complete only when these aspirants actually qualify as IT professionals. However, professional development does not cease once they are qualified. Continuing professional development is necessary; what they have achieved in the initial stage of professional development have to be built upon and extended in order to maintain or enhance their professionalism.

Initial Professional Development

To become fit to practise as full-fledged IT professionals, aspirants should have received a well-balanced and well-integrated professional development programme that includes formal education, practical training and experience in the working environment that involved a fair amount of responsibility. A member of a recognised professional society is generally regarded as being fit to practise.

The British Computer Society, for example, normally requires applicants for full membership to have successfully completed or to be exempted from its Part I and II professional examinations. In addition, they should have at least four years of relevant working experience in the industry [1]. To qualify for full membership of the Singapore Computer Society (SCS), applicants with a degree in Computer Science or a related academic discipline should have five years of relevant working experience. Various other routes are available for aspirants to attain full membership of the Society [2]. Although currently there is no clear definition of what relevant experience is, each application is scrutinized and experiences claimed are carefully checked and validated by a membership committee. The membership committee must be satisfied with both the quality of formal courses attended, and the relevance of the training and experience received by the applicants.

Both the industry and the academic institutions should be jointly responsible for providing the education, training and experience required by aspirant IT professionals during their initial professional development stage.

Continuing Professional Development

Great importance must be attached to continuing professional development. There is a need for systematic continuing professional development in order to raise the standard of competence amongst IT professionals.

Expertise an IT professional may wish to develop include:

- a specialist technologies partially covered or not covered during the initial professional development stage;
- b new technologies which have appeared since the time he qualified;
- c knowledge of what others are doing in his own or related fields;
- d knowledge of relevant social, economic, legal or other developments and their implications;
- e project management or managerial skills.

It is normal for an IT professional to be able to obtain new knowledge in their day-to-day work through his contacts with his colleagues, customers and vendors. Regular changes in jobs and assignments also allow the development of professional and personal capabilities. To supplement such structured training and experience, more formal continuing professional development programmes should be considered. These include postgraduate courses, short courses, conferences, seminars and workshops organized by academic institutions or professional bodies.

Who should be concerned with Professional Development?

The main impetus for stepping up professional development activities should come from the individual professionals and their employers. The educational institutions can instill the importance of professional and self development in their students. The professional society can provide the needed encouragement and can even make it a requirement for all its members.

Self Development Efforts

All IT professionals should be personally committed to and responsible for their professional development. They have to find the time and support to participate in professional development activities to benefit their companies as well as themselves.

Every IT professional should establish for himself a professional development plan. To be able to come up with such a plan, he has to review all past professional development efforts and his long term and short term goals. He then has to draw up specific plans to achieve these goals. He will have to monitor his progress regularly and renew his plans accordingly.

In Singapore, aspirants to the IT profession need very little persuasion to embark on programmes that will lead to some paper qualifications. However, they need to be guided so that a more structured approach to professional development is adopted. Those who are already qualified IT professionals must be encouraged to maintain their professionalism.

Role of the Employers

Companies benefit in many ways by offering professional development opportunities to their staff [3]. Technically competent and knowledgeable workers perform more effectively and the value of their contributions to their employers will be greater. Recruitment and retention of capable staff will be easier. Companies who do not offer their employees opportunities to develop their expertise and to widen their knowledge will experience high staff turnover as their employees seek better career and professional development opportunities elsewhere.

On-the-job training is normally available in most firms but this is limited by the expertise available within. Most firms therefore supplement on-the-job training with other programmes. Private training firms can also be engaged to conduct the training programmes and instructors from such firms are usually well-recognised and have some reputation. Similarly outside consultants can also be hired for in-house classroom training. Courses conducted by vendors tend to be very product-oriented but will continue to be an important source of training. Self-study courses which are usually multi-media in nature (with a mixture of video tapes, cassettes, diskettes, reading materials, etc.) are best for staff who want to learn at their own pace.

Role of the Education and Training Institutions

Academic institutions and professional education centres are aware of the need for professional development programmes and have responded positively by providing full-time and part-time degree and diploma courses. Short courses, seminars, conferences, workshops, etc., offered by educational and professional institutions, are also beneficial to professionals who want to upgrade and update themselves.

One important area in which the academic institutions should look into is to give self-development skills high priority in skill development programmes [4]. Students must realize that lifelong professional development is necessary and that it should be part of their career plans.

Role of the Professional Society

One of the aims of a professional society, like the Singapore Computer Society, is to raise industry standard. An effective way to achieve this is to ensure that its members are actively involved in professional development.

The Society has to ensure that those who intend to join the IT profession should have undergone a suitable education and training programme to prepare them for careers in computing. It is equally important for the Society to ensure that those who are already qualified and practising as IT professionals would continue to develop themselves technically and professionally. Indeed the effectiveness and value of their contributions in the industry will depend on whether they would continue to develop themselves. Those who want to continue to hold full professional status and to maintain professionalism should attempt to upgrade and update themselves systematically. The Society should help them to do so.

Some of the ways and means for the Society to encourage professional development are:

- a organize professional development activities;
- b introduce a Professional Development Scheme (PDS);
- c require society members to commit themselves (through the code of professional practice) to increase their competence;
- d give recognition to employers who actively support and participate in professional development activities;

- e establish closer ties with educational institutions to ensure that courses, seminars, etc. provided will meet the professional development needs of its members and the needs of the IT industry.

Professional development activities like conferences, seminars and workshops should be organized on a regular basis. The Special Interest Groups should also step up their activities. More Special Interest Groups should also be formed to meet the diverse needs and interests of its members. Collaboration with an established professional education centre to provide regular professional development programmes to Society members would be useful. A Resource Centre should also be established to provide, among other things, the following facilities and services:

- a the latest published materials (books, journals, periodicals, etc) on a full range of IT subjects;
- b career and professional development counselling;
- c multi-media training materials for self-study..

The Singapore Computer Society should also consider introducing a Professional Development Scheme (PDS) [5,6]. This is an effective means to ensure that members will be committed to professional development. Those who want to apply for membership should demonstrate that they have adequate relevant education, training and experience. Those who wants to continue as members will have to keep their knowledge up-to-date. The establishment of a review mechanism is also necessary in such a scheme. Society members must ensure that all the courses they have attended, all training they have received and all work experience are accurately recorded and validated. The record will have to be submitted for review when an application, for full membership or for renewal of membership, is made. Initially, the PDS can focus on the pre qualification (initial) stage of professional development. The scope of the PDS can be widened later to include the post qualifying (continuing) stage.

Although the responsibility for progress under the PDS belongs to the individual, the employer can also play an important role. They can give their approval and support for the scheme. The employer can:

- a provide financial support for attendance at courses, conferences, workshops, etc.;
- b providing enough time (including study leave) for professional development activities;

- c providing incentives and recognition to employees for their professional development efforts.

The above benefits are normally part of a company's staff training or staff welfare scheme.

Although there is no statutory requirement in Singapore for employers to spend a certain percentage of their annual payroll on training and development of their staff, it is known that certain enlightened employers are already doing this. Financial support and paid study leave are given to staff participating in approved professional development activities. To encourage the employers, some forms of recognition (awards, publicity, etc) should be given for their contributions to the professional development of their IT staff.

A professional society can also require its members to commit themselves, through its professional code of conduct, to maintain professional competence [2,7,8]. For example, members of the Singapore Computer Society are obligated to "always aim to increase their competence [2]." They have to continue to upgrade their skills and knowledge, and be aware of relevant development in the technology they are involved in. However, a code like this has very little force. Since IT professionals do not need a licence to work, all the Society can do is to threaten to expel members from the Society if they do not comply. In other places where IT professionals are registered, the professional societies may require their members to be recertified yearly or biennially in order to retain their membership or to remain in the register. In order to be recertified, they must have obtained a certain number of education and training hours in a year.

One other area that the Society can be involved in is the accreditation of the many diploma, advanced diploma, postgraduate diploma, degree and postgraduate degree courses run by the various tertiary institutions in Singapore. The objective is to ensure that employers, practising professionals and academics are involved in the design of the courses and that adequate resources (including qualified teachers) are available to run these courses. The Society should be able to indicate to students, educational bodies and employers which courses meet the requirements for a balanced and relevant education in IT.

Conclusion

Professional development is a continuing process. Aspirant IT professionals must undergo a balanced and well-integrated professional development programme comprising of formal education, practical training and experience in the working environment before they are deemed fit to begin practice.

Continuing professional development of qualified professionals is necessary in order to enhance their contributions and to allow them to keep abreast of developments in their own field or to extend their expertise. Personal commitment from IT professionals to upgrade and update themselves is required. The employers, professional societies and educational bodies can all play a part to ensure that high standards in the IT profession will be maintained.

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Information on Author

Mr David Chan is currently Director of the Centre for Computer Studies and Chairman of the Professional Development Board, Singapore Computer Society. Mr Chan has a MSc (Computer Science) degree from the University of St Andrews, UK, and fifteen years of experience in the computer industry. He has been involved in software development and implementation, project management, data processing management, consultancy and computer education. He has served in the Councils of the Data Processing Management Association and the Singapore Computer Society. He is Fellow of the British Computer Society.