TOPIC 5 – COMPUTING PROFESSIONALS BODIES AND ITS CONDUCT

LEARNING OUTCOMES

By the end of this topics, you will be able to:

1. Explain a variety of professional bodies

2. Discuss the practice of computing professional body and its conduct
3.Classify the professional values, ethics, societies and communication in computing professionals

INTRODUCTION

Over time more functions were generated which include definition of codes of ethics / disciplinary actions on the violation of the codes, program or software accreditation standards, licensing of software commercial organizations and definition of certification criteria.

5.1 Definition of professionals

According to McConnell & Tripp (1999) Professional bodies are made up of groups of like minded professionals with knowledge on software engineering that oversee the quality of software products produced, the practice of software engineering and to protect the interest of the public. Professional bodies can also be referred to as professional associations, professional societies or professional organizations. Initially these associations were used to promote exchange of knowledge where professionals used to generate ideas and share amongst themselves to improve the software engineering industry.

5.2 Roles of computing professionals

The two major professional bodies, ACM and IEEE CS came together in 1993 with a mutual objective of promoting software engineering professionalism. Therefore the roles of these two professional bodies were defined on a common ground even though they disagreed on some key policies regarding accreditation and licensing (Mok 2010).

According to the IEEE Computer Society (n.d.), the mission of IEEE CS is to foster the technological advancement success for the public interest. This has been fulfilled by defining certification criteria for software engineering professionals as well as management of certification programs. For e.g. IEEE CS established the certified software development professional (CSDP) certification examination which was meant to raise standards of software

engineering professionalism for the public as well as for promotion (Mok 2010). Therefore certification and accreditation is a vital role for the professional bodies in order to achieve their goals of ensuring quality and safeguarding the public interest.

Licensing is another role of professional bodies which is a fundamental aspect of accreditation. The two major professional bodies are involved in licensing of other upcoming professional bodies and individuals in the software engineering industry. ACM established a task force on licensing of software engineers working on safety critical software to analyze the implications (Mok 2010).

Other roles include defining codes of ethics and setting the disciplinary actions for the individuals or organizations that violates the codes of ethics. They are also involved in professional development where professional body members share ideas and generate plans on how to develop the industry.

As mentioned by the above, the roles of professional bodies span a wide spectrum of the IT industry that governs the operations of software engineers. They aim at maintaining the quality by establishing accreditation standards, improving the standards by licensing software engineers and developing the skills of software engineers.

5.3 Professional values

Whilst personal values are set when we are young, professional values are discussed and instilled in us as adults. Professional bodies offer significant value to society in governance and ethics – by setting standards for behaviour and competence and sanctioning those who contravene them. In an uncertain world where government, trade associations and trade unions often have to think short term, one set of organisations stand out as providing a constant and consistent push for technical, productivity and welfare improvements – the professional bodies.

Despite their traditional associations, professional bodies have as their central activity the sharing and dissemination of information on how to make things better, whether that is improved techniques and processes, advances in technology or better worker welfare. And they don't exist to help their members compete, but to help them collaborate. The top value needed in the construction industry today, example:

- Productivity – through increasing the capability of the workforce by promoting best practice and sharing the latest advancements;
- Social mobility – by providing routes to entry for all and in providing trusted qualifications that remain open to individuals at any point within their career;
- Governance and ethics – by setting standards for behaviour and competence and sanctioning those who contravene them;
- International development – by exporting qualifications and professional services via growing international networks;

- Policy formation – by undertaking research which advances understanding of important issues and by sharing specialist knowledge with decision makers.
- Professional ethics where a person has joined a membership body, are governed not only by a persons own values, but also by those stipulated by the professional body.

5.4 Professional ethics in the context of computing

Ethics and ethical behaviour are central to professionalism. It does not matter how skilled and experienced a person becomes: if they behave dishonestly and without regard for the rights of others, they are not a professional person".

Members shall, in fulfilling their professional responsibilities and the duties which they undertake, have full regard to the public interest.

Members shall demonstrate a level of competence consistent with their class of membership.

Members shall at all time act with integrity so as to uphold and enhance the dignity, standing and reputation of the Institute.

Members undertaking work in a country other than their own shall observe these rules and regulations so far as they are applicable

5.5 Professional societies and its conduct

The commitment of individual professionals to the values central to their profession is what leads society to grant the professional group as well as individual members the authority and resources to pursue their self-determined work in the public interest. The scientific community has been vested by society with the power to determine who may enter the community, what knowledge and skills must be acquired to achieve professional status as a scientist, and by what standards of conduct individual scientists will be judged. In large measure, then, a scientist is defined by his or her relationship to the group or discipline, and the professional community is charged with developing means for ensuring that individual members act responsibly.

Such regulation, as manifested, for example, in administrative rules, is typically designed to stipulate what cannot be done; it rarely prescribes what should be done. It defines the floor, not the ceiling of expected behavior. But surely we expect more from scientists as advocates for responsible research practices. By appealing to their moral consciences and their collective commitment to ensuring the integrity of science, we seek to evoke from scientists a higher standard of behavior than that which can be commanded through regulation. And when that evocation is supported by professional norms that represent a distillation of collective reflection and experience, the likelihood of ethical behavior is substantially increased.

Furthermore, there are several practices that most researchers would consider deplorable and capable of compromising the integrity of science, such as gift authorship, repetitive publication,

and the selective presentation of research findings. Yet, these are not matters that ought to be subjected to the heavy hand of regulation. Rather, they are examples of practices that are more amenable to change through the process of critical self-examination that the professional community brings to bear on research practices and ethics, periodically reassessing them in the light of changing conditions and shifting perceptions of what constitutes proper behavior.