A panel session—Accreditation of computer-oriented academic programs

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PANEL OVERVIEW—Gerald E. Wagner

The term “accreditation” is defined by the Standard College Dictionary as, “The granting of approved status to an academic institution by an accrediting body after an examination of its courses, standards, etc.” Traditionally different levels of accreditation have been available. For example, individual degree programs (majors) can be accredited, total programs can be accredited such as is provided by the American Assembly of Collegiate Schools of Business (AACSB), and entire university programs can be accredited. This panel will limit itself to the topic of accreditation as it applies to a single academic program. The actual name of the computer degree program is insignificant for the purposes of this presentation and all computer-oriented degree programs are included whether they be called “Computer Science,” “Business Data Processing,” “Information Systems,” “Information Science,” or something else. The entire subject or accreditation will be reviewed—both pro and con—as it relates to these programs.

Any decision to accredit or not to accredit academic computer degree programs could have a serious impact on many different groups within our society. The positive and negative aspects of accreditation will be discussed as it relates to: (1) students (both Community College and University), (2) degree-granting institutions, and (3) future employers of the graduates of the degree programs.

Many different professional organizations have attempted to define curricular patterns, but as of this date, no attempt has been made to provide a method for evaluating academic programs. These past efforts have not been wasted though and any efforts to develop accreditation “standards” could and should utilize much of knowledge gained through experiences of these other groups. Some of the relevant efforts in this area will be discussed as they relate to the accreditation process.

Further insight may be gained regarding the accreditation process by reviewing the history of other accreditation groups. In particular, the American Assembly of Collegiate Schools of Business and the Engineers Council for Professional Development will be discussed for that purpose.

Although accreditation has its inherent problems, the benefits to be gained appear to outweigh any of the potential problems or disadvantages that may result. The panel members recommend that immediate steps be taken to develop a workable accreditation process. The first step to be taken would be to establish a committee with representatives from business, professional associations and academic institutions. Furthermore, it is recommended that any efforts to develop accreditation standards must recognize the different roles that different types of computer degree programs play in our society. Any standards must be designed to encourage creativity—not stifle it—as long as the “creativity” does not detract from or change the overall objectives of the academic program.

ACCREDITATION OF COMMUNITY COLLEGE DATA PROCESSING PROGRAMS—Don B. Medley

Black’s Law Dictionary defines accreditation as “To send with credentials as an envoy.” The New Century Dictionary by Appleton-Century-Crofts, Inc. defines accredit as follows:

To bring into credit; invest with credit or authority; also to send with credentials; also, to give credence to; believe; trust; also, to credit with something ascribed.

My concern is that we in higher education are sending our graduates out with credentials as an envoy and the credentials are being rejected. Considerable effort has been expended by the government and the several professional organizations in the definition of curriculum patterns for programs at all levels of higher education but little has been done to accredit or validate the programs after they are implemented. Probably the most active organization to work on curriculum development and design has been the Association for Computing Machinery (ACM). A curriculum working paper containing recommendations and guidelines...
for a community and junior college career program in computer programming was published in the Special Interest Group on Computer Science Education (SIGCSE) bulletin in June, 1977.

The paper addresses the courses required in such a program and the detail content of each course is defined. The instructional resources, equipment and faculty needs are covered but the only comments related to accreditation deal with articulation. While this developmental work and the followup effort defined in the articulation section are extremely important and must be continued and expanded, there is also a pressing need for a formal evaluation program that will accredit the offerings of particular institutions.

An evaluation system for community college occupational program (COPES) has existed in California since 1971. COPES is a system for voluntary evaluation of occupational programs administered through the Chancellor's Office, California Community Colleges in Sacramento, California. Among the top strengths of the COPES evaluation as rated by the COPES teams are:

- Qualifications of instructional staff
- Occupational experience of instructors
- Quality of occupational instruction
- Administration's commitment to occupational education
- Adequacy and availability of instructional materials
- Updating of instructional content and method
- Utilization of instructional facilities and equipment

Another case for accreditation standards is developing with the expansion of the programs offering college credit for "Life Learning and Experience". Perhaps the professional associations could work with the College Entrance Examination Board and have the information systems included in their long-range examination of American education called Future Directions for a Learning Society.

ACCREDITATION: PROBLEMS AND PERSPECTIVE—Eugene B. Smith

Computer Science education has evolved over the last 25 years to a significant element of many academic programs. The level of training varies from introductory material for all students to the research oriented PhD degree. The scope of the material covered and the location of the instruction within the University vary widely. The level of maturity of this field dealing with computers and their use has reached a point where there should be a concerted effort to initiate some predefined measure of quality control over the instruction being provided. Accreditation is an accepted vehicle for identifying and maintaining a specified level of quality for academic programs.

If one were to contemplate advocating accreditation for computer related educational programs, it is important to understand what the term accreditation implies. This paper will provide a discussion of the functions of accreditation, the types of accreditation, and the accreditation procedure.

Educational institutions in the United States are not controlled by a single Federal ministry. Accrediting bodies include governmental agencies, regional associations, and programmatic associations. Both institutions and program areas within institutions may receive various types of accreditation. Some consideration must be given to the levels of the institution which would be included in any accreditation effort.

A brief discussion of other accreditation groups should provide some insight into the approach which could be taken in implementing this type of effort. References to the history of the American Assembly of Collegiate Schools of Business (AACSB) and The Engineers Council for Professional Development will be provided.

A better understanding of the accreditation process and identification of the players who must participate in such an activity will provide an atmosphere within which potential problem areas can be identified. Considering the state and scope of computer oriented education, now is the time to begin an attempt to develop a workable accreditation process. A reasonable first step would be to establish a qualified task force with the dedication required to initiate an accreditation effort. A coalition of business and academic representatives, with the support of the professional associations should be formed.

ACCREDITATION—A UNIVERSITY PERSPECTIVE—Thomas H. Athey

Universities have a major part to play in the training of individuals who desire to become EDP professionals. The significance of this role will increase in the near future as user organizations progress to more sophisticated and encompassing computer-based information systems. These types of systems will require individuals who have sufficient skills at the entry level to make a meaningful contribution to the organization plus a broad enough perspective to function effectively in society. Universities are uniquely qualified to assume this responsibility.

There are many groups who should be vitally interested in the training process performed by the university. These stakeholders include employers, associated departments within the universities, junior colleges and high schools, and students. These stakeholders need reliable evidence concerning the excellence of curriculum and the resultant competency of the graduates who desire to apply these learned EDP skills.

One of the ways of developing indicators of quality and competency is through the accreditation process. In the past, this has been attempted by several professional organizations within the EDP field. The initial work has been in establishing the resources utilized in the various programs to include measurement of the type of equipment available, the number of faculty, etc. The next stage in development
has been in curriculum building. Establishing the types of courses and patterns that seem to be most appropriate for acquiring particular EDP skills and perspectives. A most ambitious approach has been put forth by the Accreditation Research Committee of AACSB. They are concentrating on a value added method by which they propose to measure competence levels of knowledge, skills, aptitudes, attitudes, and personal characteristics of individuals who complete various programs.

While the major advantage of accreditation is the resulting verification process, there are several other benefits which could accrue from a well designed plan. These would include (1) development of more meaningful and effective articulation agreements between junior colleges and universities, (2) explicit recognition of the highly different orientations required of curriculum aimed at different segments of the EDP professional market, and (3) the development of aptitude tests which are much more inclusive and valid than the present programmer’s aptitude tests.

The accreditation process is not without its potential disadvantages. These include (1) a strong tendency to insure uniformity of programs, which could result in stifling innovation, (2) the possibility exists for universities to become too vocationally oriented and forget that their mission is education, and (3) if any type of mass testing is required, not being able to constantly update the testing procedure to reflect the needs of the rapidly changing field.

Overall the case for an accreditation process seems very strong. However, to be successfully implemented the accreditation body must include representatives from each of the major stakeholders in the training process and useful measures of competency must be determined.