

The ASA Consideration of Accreditation

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Abstract

Several years ago, the ASA considered certification but chose not to institute a certification program. Since then, three other statistical societies have successfully implemented accreditation programs. The ASA Task Force on Accreditation, reviewed these three programs and conducted focus groups and surveys of ASA members. Based on the interest expressed in the focus groups and survey, the Task Force recommendation to the ASA Board was the establishment of an ASA Committee to develop the basic structure of an accreditation program and present that to the Board for its consideration. This paper presents the work of the task force and its recommendations and the progress to date of the Committee on Accreditation.

KEY WORDS: accreditation

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Formal recognition of statistical practice is now offered by three statistical societies, chartering by the Royal Statistical Society (RSS), and accreditation by the Statistical Society of Canada (SSC) (Chapman (2007)), and the Statistical Society of Australia, Inc. (SSAI). Although there are differences in the structure and complexity of the different societies' programs, their accreditation decisions are based on a combination of professional and academic credentials, applicant's body of work and involvement in the profession, and recommendations from experienced statisticians. They all offer two levels of accreditation, a first level for less experienced statisticians and a second level for more senior statisticians. The programs can be reviewed by following the related links on the ASA website, www.amstat.org.

Long time ASA members will recall that ASA explored certification several years ago but decided at that time not to offer a certification program. However, with the recent successful experience of the other statistical associations and some increasing interest from members, ASA is exploring whether an accreditation program would be a useful service to offer its members.

Member interest and attitudes were assessed through focus groups, a question on the ASA member survey, roundtables at the ENAR meetings and the JSM, and an open meeting at the JSM. Focus groups were held in Washington DC, Philadelphia, and Seattle. Input from the focus groups was used to write a survey question for the ASA survey of long time members.

Focus Groups

The focus groups included 14 women and 21 men, with a range of experience and membership in the ASA from 3 months to 37 years. Experience and membership in the ASA were highly parallel, with generally no more than a two-year difference between joining the ASA and becoming a statistician. Recruited for participation in each focus group were a few members with a limited amount of time in ASA membership. Also, there were a small number of practicing statisticians who had degrees in fields other than statistics. The groups asked to participate included a mixture of university, private and government practitioners, with a mixture of those working with more than ten other statisticians and those working alone or in smaller groups.

Results

The focus groups were very informative and provided many ideas which have been previously described in Batcher (2006). Discussion here is limited to the usefulness of accreditation to ASA members. The focus group participants identified a lack of understanding on the part of both researchers in other fields and the general public about the role of statisticians as a barrier to

recognition of the profession and noted the potential benefit of enhancing professional understanding and recognition. They also cited the fact that statisticians often work in teams with people from other disciplines and the statistical contribution is sometimes not recognized. Interestingly, all of the focus groups placed some of the responsibility for the lack of recognition on a lack of “soft skills” among statisticians, referring to a general deficiency of verbal, written, and interpersonal skills. This was expanded by some of the groups to a general inability of statisticians to market themselves and their contributions.

The focus groups noted that accreditation may be most beneficial to younger practitioners, the lone operator, consultant in the private sector, or to those with only the Master's degree. It would also be helpful to those without statistical backgrounds who are hiring and for the general public. They also thought that accreditation may be helpful internationally.

Participants acknowledged the difficulty of recruitment into the field and felt that the effect of an accreditation program on recruitment should be considered. They asked the question, "Will accreditation limit or enhance the field?"

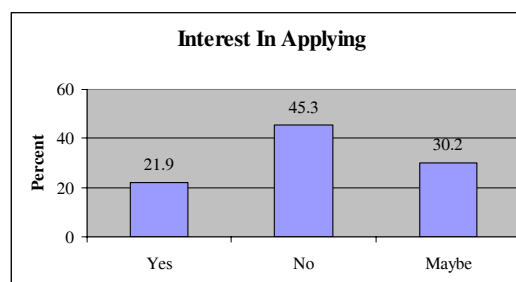
They also expressed concern about the possible creation of a class system between accredited statisticians who are not accredited. A related concern was that some qualified statisticians might not be able to obtain accreditation due to cost or other factors.

Survey Results

The multi-part survey question for the long term members listed components of an accreditation program as identified by the focus groups and asked respondents to choose all that they felt should be included in an accreditation program, as well as providing an option to add any not listed. Experience working in the area of specialization, the authoring of technical reports, and good standing in ASA with no ethical violations were the most criteria most often selected as very important. A more extensive discussion is in Batcher (2006).

The criterion question was followed by a question about the respondents' interest in personally applying for accreditation. As shown in the frequency chart, slightly fewer than half

were not, with about 22 percent interesting in seeking accreditation and 30 percent who might be interested.



The ASA Committee on a Proposed Approach to Individual Accreditation was formed in March 2007 and is charged with the development of a proposed operating structure to include, criteria for granting accreditation, length of accreditation, and application and approval process; identification of possible legal constraints, costs, and other relevant details that will need to be resolved; and coordination with other ASA committees and sections to solicit their views and input.

Following the presentation of a program structure by the committee, the ASA Board will vote on whether to undertake the establishment of an accreditation program.

To facilitate the communication with the membership through committees and sections, the Accreditation Committee developed a list of frequently asked questions about individual accreditation.

Frequently Asked Questions

Why accredit individuals when there is accreditation for academic institutes?

Other professionals that statisticians work with have individual accreditation that goes beyond formal learning from academic institutions to integration of knowledge into specific area(s) of practice. For equivalent professional recognition, statisticians should also have such a mechanism.

What is accreditation for individuals?

It is peer recognition that an individual has statistical training/knowledge, experience in applying that expertise, maintains appropriate professional development, practices ethically,

and has good oral and written communication skills. It is not certification or product guarantee. The accrediting body offers networking, interactions, mentoring, remedial advice, and facilitates sound practice.

What are the risks, legal or otherwise, to ASA and its membership?

In a legally well-defined program, risks to the ASA and its membership are expected to be minimal. An individual is responsible for his/her own work. The accrediting body acts only as a facilitator for sound practice. Accreditation is not certification.

Have other Statistical associates instituted accreditation programs. If so, which ones. Which would fit the ASA membership culture and needs?

Chronologically, the following statistical programs were instituted: Royal Statistical Society (RSS) Chartering, Statistical Society of Australia, Inc. (SSAI) Accreditation, American Society for Quality (ASQ) Accreditation, and Statistical Society of Canada (SSC) Accreditation. SSC Accreditation is expected to be the closest model for the ASA as it represents North American practice and it received favorable responses in ASA sponsored focus groups held across the United States in 2005.

What would be the benefits to ASA, its membership, the statistical community and the community in general?

ASA's societal role as supporter and facilitator of sound statistical practice would be enhanced. ASA would be the home for a broader spectrum of statisticians. ASA would be a natural linkage across this broader spectrum. Applied statisticians, sometimes in isolated practice, would have improved resources and recognition. Employers would be encouraged and facilitated in hiring statistical professionals.

What would be the cost of an accreditation program?

After set-up, the accreditation program should be self-sustaining, although extra marginal revenue generated by compulsory ASA memberships and continuing professional education should be considered to enrich both the accreditation and general ASA programs.

Has grandfathering of recognized experts been considered?

Yes, however, it is not favored. We think that there should be recognition of common elements from other accreditation programs, should individuals accredited by those programs apply for ASA Accreditation.

Would accredited individuals need to renew periodically?

Filing of annual maintenance of accredited practice details (practice areas, professional development, mentoring, and willingness to mentor) with the accreditation body would substitute for renewal.

Would accredited individuals be tied to mentoring, one way or the other?

Mentoring should be compulsory for all new practitioners. The choice of a mentor would be theirs as mentoring involves development of a relationship; as required, matching would be facilitated. Mentoring should be optional for the mentor, although it is expected that many will want to participate. There would be annual declaration of willingness to mentor.

Have other ASA committees weighed in on this issue?

Input is being sought from ASA committees and sections.

In what way would accreditation unify ASA membership and statisticians at large?

We expect accreditation would increase networking between current ASA members and non-members and encourage membership.

Would an accreditation program increase ASA membership?

A robust accreditation program with new professional services would be attractive to many current non-members.

What were the major issues identified by the focus group studies?

- Accreditation needs to be meaningful
- It should have a variety of paths to achieve it to account for the diversity of statisticians
- It should be a tiered program
- It needs to be affordable
- It should include re-certification and evidence of professional development

Would accreditation bring clarity and definition to the statistical profession?

The full range of exciting careers held by statisticians should raise the societal profile of Statistics.

How can a documented ethics statement improve the behavior of individual statisticians?

Frequently, statisticians require guidance about appropriate conduct, or external validation for their actions, particularly if they are working in isolation from other statisticians. An ethics statement will provide this.

Would accreditation of individuals create different classes of statisticians?

Accreditation is expected to be most useful for applied practicing statisticians, and academics with an interest in applied work. It is not mandatory. An accreditation program with new professional services would be attractive to many current non-members.

If my degree is not in statistics, can I still become accredited?

Certainly, if you can demonstrate the acquisition of equivalent knowledge.

Why should exams not be required?

An exam would be reduced to basic principles since each applied area of statistics is very different. Qualification through evidence of sound integration of methodology to practice may be sufficient to demonstrate knowledge.

How would those with an education from outside of the U.S. be assessed?

U.S. academic institutions are frequently required to assess the equivalency of international degrees. World Education Services (WES) provides such an assessment of equivalency of international degrees to those from Canada for the SSC Accreditation Program and also provides such assessments for U.S. institutions. At this point, the best mechanism for equivalency has not been determined but solutions exist.

References

Batcher, Mary K. (2006), "Professional Accreditation for Statisticians" 2006 JSM Proceedings, Social Statistics Section [CD-ROM], Alexandria, VA: American Statistical Association.

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