A study was conducted to determine the licensing and certification procedures for major state and national agencies and occupational governing bodies throughout the country. The project focused on two objectives: (1) Compilation of self-study programs leading directly to certification or licensing, and (2) development of general and specific information about licensing and certification procedures for occupations in which vocational competence is determined through examination. The survey was conducted by mail, soliciting information on both independent study courses leading to licensure or certification and the licensure or certification procedures themselves. Information was solicited from state governmental agencies, home study schools, colleges and universities, companies, labor organizations, professional and trade organizations, and other groups and individuals. The most consistent finding was the general inconsistency among both licensing and certification agencies across states in their procedures, policies of reciprocity, and prerequisites. Information collected showed a disarray of licensing and certification procedures and policies that must be seen as impenetrable to those seeking direct ways of demonstrating their occupational competence. Evaluation of the information collected revealed that very few independent study courses lead to recognition of achievement through award of certificate, license, or academic degree. Tentative conclusions derived from the project work are discussed in detail. (TA)
A Survey of Occupational Licensing and Certification Procedures

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Approximately one year ago we undertook a study to determine the licensing and certification procedures for major state and national agencies and occupational governing bodies throughout the country. The project focused on two separate, but related objectives: (1) compilation of self-study programs leading directly to certification or licensing, and (2) development of general and specific information about licensing and certification procedures for those occupations in which vocational competence is determined through examination. This work was sponsored by an educational branch of the U.S. Department of Defense which wanted to use the information to assist people leaving the military move into civilian occupations. In general terms, it was hoped the results of the project would help military personnel capitalize on their military training and experience by being able to demonstrate their competence in occupations through a formal examination process. Another related purpose was to minimize unnecessary duplication of training and education by helping military personnel locate efficient ways of finding civilian recognition of their military training and experience. In short, the project was highly practical, rather than research oriented in its intent. Nevertheless, many of our findings seem to have some general utility and also corroborate other findings and speculations about licensing and certification procedures.

When we began the project, we, along with our sponsoring agency, were cautiously optimistic. We believed that it would be possible to identify some relatively straightforward ways of gaining recognition of demonstrable occupational competence in a number of occupational areas. We held this belief despite our knowledge of the general inconsistencies of licensing and certification procedures throughout the country. Further, we thought we would be able to locate a number of self-study courses that would be easily linked to licensing or certification procedures. As it turned out, our caution was more meritorious than our optimism. Our most consistent finding was the general inconsistency among both licensing and certification agencies across states in their procedures, policies of reciprocity, and prerequisites. The information we collected showed an anomalous disarray of licensing and certification procedures and policies that must surely be seen as impenetrable to those seeking direct ways of demonstrating their occupational competence.

INFORMATION COLLECTION

In our information search, we conducted extensive telephone and mail surveys, literature searches, and computer searches. Over 1,000 potential information sources were contacted by telephone, first-class mail or personal interview. The telephone information search yielded mixed results. In some cases, project personnel were already aware of the existence of an appropriate course or examination procedure, and the phone call was merely a request for more detailed information. Phone calls in such cases were quite effective. But when a call was made to determine the existence of an appropriate program, it often proved less helpful. It was often difficult to obtain a coordinated reply since a long-distance call did not allow the recipient time to check with other departments or search through file materials. Many phone calls were received by secretaries or switchboard operators who were unable to direct calls to someone familiar with the desired information.

Calls to state and municipal government agencies were particularly ineffective, possibly because of the large size of those agencies and the extensive division of responsibility among agency staff. On the other hand, most professional organizations and Federal agencies had specific, well-established programs and were therefore capable of providing adequate complete information with minimal delay and confusion.

The project's mailing program was the most valuable method of collecting information. A form letter was sent to a wide variety of agencies, organizations, and individuals who might have information to contribute. Information on both independent study courses leading to licensure or certification and the licensure or certification procedures themselves was requested.

The mailing list thoroughly covered the broad spectrum of potential information sources. The original mailing list selection procedures are outlined below.

State Governmental Agencies. For each state, approximately six agencies who might have relevant information were selected from the 1974-75 National Directory of State Agencies. Selections typically included Departments of Education, Commerce, Labor, Consumer Affairs, and so forth. Slightly over 300 contacts were made through this procedure.

Other Governmental Agencies. Several municipal and federal agencies were contacted. In a few cases the intent was to gather general information, but more often it was to obtain information about specific known procedures. It was for this latter purpose that the licensing divisions of the Federal Aviation Administration, Federal Communications Commission and the United States Coast Guard were contacted. Fewer than ten agencies were contacted within this group.
Home Study Schools. All member schools of the National Home Study Council were contacted. (Letters were not sent to schools listed as subsidiaries or divisions, but in all cases the parent organization was contacted.) Other correspondence schools listed in Lovejoy's Career and Vocational School Guide were also contacted. In all, 100 schools received the information request. Although the usefulness of the training of these proprietary schools is frequently questioned, we decided to examine the information provided by them during the initial data collection phase. A subsequent decision was made by our sponsoring agency to not include information about proprietary school programs in any of the project's products.

Colleges and Universities. All of the approximately 75 member schools of the National University Extension Association (NUEA) received the information solicitation.

Companies. A request for information was sent to each of the 100 largest United States industrial corporations specified in the appropriate 1975 Fortune Magazine Double 500 listing.

Labor Organizations. Through examination of the 1974 National Trade and Professional Association's Yearbook, the names of approximately 70 labor unions were obtained; organizations which were, from name, presumed to be labor unions were selected from a listing of groups reporting annual budgets of over $1,000,000.

Professional and Trade Organizations. This category originally contained 70 organizations which were selected because they seemed potential sources of relevant information. The selection was made on the basis of information from the Occupational Outlook Handbook and Lovejoy's Career and Vocational School Guide as well as prior knowledge of the project staff.

Other Groups and Individuals. The solicitation letter was also mailed to a small number of potential contributors who did not fall into one of the groups listed above. Names of such organizations and individuals were often suggested during the course of phone calls or were listed in relevant references and materials. These contacts included professional educators knowledgeable in the vocational licensing field and a small number of centers for vocational education or research.

The form letter used to solicit information asked that the recipient provide project staff with names of additional contacts who might provide relevant information. Many did so, providing over 100 additional information sources. It was the policy of project staff to follow up on all suggested contacts—occasionally by phone, but more frequently through the same solicitation letter. State agencies most often provided followup contacts; when the original agency was an inappropriate source of information, their response usually contained the suggestion of a more probable source. Frequently the state agency itself forwarded the letter to a different government department.
A few individuals and universities and several professional organizations provided suggestions for additional information sources. Responses from state governmental agencies and from professional and trade organizations were generally supportive of the project objectives; therefore, such organizations often attempted to provide sources of information when they themselves were unable to help.

Table 1 summarizes the scope and success of the information solicitation phase in each of the classifications described above. In general, information provided by state governments was wide ranging, but seldom detailed enough to be of significant value. There were exceptions, however, as some states had previously compiled single sources of complete information on licensed occupations within the state.

Most information provided by colleges and universities took the form of printed extension service catalogs and bulletins; this information was detailed, but not particularly applicable. Their response rate was moderate. Few companies or labor organizations responded, and those which did provided no important information. Response from home study schools was also very low.

The few non-state government agencies contacted responded well to specific information requests. Professional and trade organizations were usually able to either provide useful information and appropriate information sources, or state that the information requested did not exist. Their response rate was fairly high, and the detailed booklets, pamphlets and brochures provided by those organizations were instrumental in providing both occupational and examination information.

Evaluation of the Information Collected

The results of the information search permit some tentative observations concerning licensing and certification procedures and related independent study courses. Numerous independent study courses, covering a wide range of subject areas, are available. Proprietary schools, colleges, universities, junior and community colleges, and various professional and trade organizations all offer self-study, correspondence coursework. Courses range from elementary through post-graduate levels, and cover everything from highly practical skills like welding to theoretical science and math. Project staff readily identified several thousand such courses.

Yet very few of these courses lead to recognition of achievement, through award of certificate, license, or academic degree. Most individual courses are apparently intended to increase knowledge or skill in one restricted area; seldom are they coordinated to form a total "program." A few programs offer "preparation courses" for real estate, accounting, engineering, or other professional examinations. In addition, the American Watchmaker's Institute has a self-study course and related certification test in watchmaking and a few
Table 1

MAILING LIST CONSTRUCTION AND RESPONSE

<table>
<thead>
<tr>
<th>Classification</th>
<th>Original* Contacts</th>
<th>Subsequent* Contacts</th>
<th>Total* Contacts</th>
<th>Total*# Responses</th>
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</thead>
<tbody>
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<td>75</td>
<td>375</td>
<td>175</td>
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<td>Other Governmental Agencies</td>
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<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
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<td>0</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>Colleges and Universities</td>
<td>75</td>
<td>5</td>
<td>80</td>
<td>25</td>
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<tr>
<td>Companies</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>Labor Organizations</td>
<td>70</td>
<td>0</td>
<td>70</td>
<td>5</td>
</tr>
<tr>
<td>Professional and Trade Organizations</td>
<td>70</td>
<td>30</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Other Groups and Individuals</td>
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<td>5</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>730</td>
<td>115</td>
<td>845</td>
<td>275</td>
</tr>
</tbody>
</table>

* All figures are approximated slightly.

# This category tabulates all written responses received, including materials, information, suggestions for additional contacts, and statements that information was not available.
proprietary schools have curricula which lead to various licenses—notably Federal Communications Commission permits. Yet it would probably be correct to state, if our sampling is representative, that not one of a hundred independent study courses is directly related to a licensing or certification examination.

Colleges and universities provided a large part of the independent study information. Even so, their response rate was not as great as anticipated. Even more surprising was the very small response received from home study schools. Of more than a hundred schools contacted only five responded. Clearly home study schools have materials available for dissemination. Therefore, project staff concluded that either the schools offered no courses appropriate to inclusion in the survey, or perhaps the compilation procedures, the sponsoring body, or some other aspect of the project made program evaluation unattractive to the majority of these organizations.

Project staff were considerably more successful in compiling examination information. Although state governmental agencies were seldom able to provide information about tests with nationwide applicability, these agencies were often able to supply fairly detailed information on requirements for a few occupations within a particular state (e.g., plumbers in Washington, elevator inspectors in Maine). Though they were usually unable to generalize licensing requirements to other states, the large volume of responses often made it possible for project staff to make required generalizations themselves. As previously mentioned, among the most helpful contributions were the compilations received from twelve states—Arizona, Arkansas, California, Georgia, Iowa, Louisiana, Nevada, New York, Ohio, Oregon, Tennessee, and Vermont. These documents were very valuable in developing survey entries on the licensed occupations.

Companies and labor unions provided almost no input to the compilation; the few that did respond offered no relevant information. However, various supplemental readings and interviews suggested that most company programs were actually not appropriate for the survey in any event, since they were not available nationwide, nor were they available to people outside the employ of a specific company. Labor unions could have provided much information regarding how union membership and journeyman status constitute a type of certification—a concept which affects several million workers in union-oriented trades. However, such information was outside the focus of the compilation.

Most useful information came from the various professional organizations, who provided all certification and a substantial amount of licensing information used in the compilation.
TENTATIVE CONCLUSIONS DERIVED FROM THE PROJECT WORK

1. With only a few exceptions, independent study courses do not seem to allow completion of a comprehensive program of study without a significant amount of additional non-independent training, either in the form of supervised job experience or institutionally-based educational coursework. It is generally impossible to obtain licensure or certification solely, or even primarily, through the completion of self-study courses. Most independent study programs, even those which result in degrees or educational certificates, do not relate directly to any type of licensing or occupational certification program. Any attempts to compile listings of these "directly-related" courses will be limited, as was our effort, by the apparent small number of existing programs. With the exception of several proprietary school courses, project staff are aware of only one, totally appropriate program, the University of North Carolina's correspondence course in dental assisting. This non-credit course is approved preparation for the American Dental Assistants Association certification test. A few other programs are somewhat appropriate for consideration in this category.

2. Considering the vast number of occupations, only a small number have any type of competency-based examination procedure which clearly evaluates a person's ability to satisfy occupational responsibilities. Over 2,000 occupations have licensing or certification procedures of some sort, but only a fraction of these involve demonstration of the applicant's competency through examination.

3. In some occupations (notably the building and industrial trades) and on some job sites, labor unions have, in a variety of ways, greatly influenced job entry requirements. This employment-limiting process is similar in effect to licensing or certification procedures. Various readings and interviews indicate that unions are strongly in favor of maintaining current processes rather than encouraging increased criteria-related competency testing as a measure of a worker's skills.

4. The information collected indicates that most states sanction educational institutions as de facto licensing agencies; graduation from a training institution accredited in a given field often satisfies a large portion of the licensing requirements. As an obvious example, no amount of experience or successful examination performance will allow one to become a physician without graduation from an approved medical school. This procedure affects many occupations, from law and dentistry to barbering and dry cleaning.

5. Ability to gain employment or advancement in a field can rarely be predicted solely on the basis of satisfying certification or licensing qualifications. Credentialing usually varies in importance, depending on an individual employer, geographic location, job market, and so on.
Only a very limited amount of research seems to have been done in the area of occupational licensing and certification. Of particular concern is the complex issue of how closely certification or licensing relates to actual job competency and what benefits are derived from the existence of these processes.

Many states have not centralized or even identified occupational licensing information in a manner which would make it relatively easy to obtain answers to general or specific licensing questions. Only a few states have centralized their licensing responsibilities; it is far more common to find anywhere from ten to fifty separate departments and boards each maintaining responsibility for one, or several related, occupations. The project staff often had difficulty locating an appropriate information source within the state government; it is likely that this situation would create difficulty or inconvenience for those seeking assistance with routine licensing problems.

The certification procedure often seems to be primarily an attempt by current members of an occupation to increase the professionalism and status of their field. Certification procedures are, in almost all cases, initiated from within an occupation rather than by any outside legislation or group action. Certifying agencies occasionally mentioned the need to bring increased recognition to successful practitioners of an occupation and/or to maintain high standards of competency within the field.

Certification is most predominant in the allied health occupations. It is hypothesized that this is partly due to the importance and highly technical nature of the work performed (which makes both "recognition" and "maintenance of standards" viable rationales), combined with the obvious need to protect the public welfare. Certification is a significant part of many health fields; salary, advancement potential, and even ability to obtain work in the first place are, because of employer acceptance of the certification concept, often dependent on successful completion of the credentialing process.

State licensing requirements vary so greatly that one must question the validity of the criteria on which they are based. For example, 1,003 hours of classroom instruction are required for a cosmetology license in Texas, while 1,800 hours are required in Arizona. Does this imply that the cosmetologists in Arizona are considerably better qualified, or that the training in Texas is significantly more effective? More likely it suggests that the requirements themselves are somewhat arbitrary, that they are not the result of a systematic pairing of the skills with the curriculum. Information collected for the survey revealed a multitude of such discrepancies; in only a few licensed occupations was there substantial uniformity among state licensing requirements.
Information collected suggests that licensing and certification tests may not generally be constructed under the same rigid criteria which would be used for educational tests of equivalent importance. In all the test descriptions examined, project staff found no mention of validity or reliability checks. Test administration procedures were often not standardized. Perhaps most significant was the fact that testing in many occupations was norm-referenced in which a candidate must obtain a percentile score which exceeds a specified "passing" score before being granted the credentials. These cutoffs frequently seemed unrelated to any competency-based criterion and appeared extremely arbitrary. Several national occupational certification examinations have been developed under rigorous criteria that help ensure their appropriateness and value. Yet many others, particularly state licensing examinations, do not necessarily succeed in determining the true competence of the candidate. They are seldom rigorous, constructed tests with a strong correlation to a proven set of essential abilities. Many appear to have been established solely from the opinions of members of the occupation regarding how much a person should know about what topics. Such persons hold informed opinions, to be sure, but tests constructed without empirical justification for their content may be considered a significant weakness in the overall credentialing process.

This is not meant to imply that these tests are necessarily inappropriate—our project did not address that question. Nor is it meant to suggest that the test developers were not qualified. The implication is simply that few licensing or certification agencies can empirically demonstrate that their credentialing tests do indeed differentiate between individuals on the basis of occupational competency. If licensing and certification tests are to have any rational meaning, the demonstration of such a relationship must be an immediate and high priority.
REFERENCES


