The Institute for Certification of Computer Professionals — A Misnomer?

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It probably goes without saying that most practitioners and teachers in the data-processing (computer) field think of themselves as "professionals". The Association for Computing Machinery (ACM) calls itself a "professional society", and the many other computer related associations -- the Computer Society of the IEEE, DPMA, ACPA, and AFIPS, to name a few -- would no doubt take exception to being referred to as anything other than "professional societies." Indeed, one does not have to look far into the brochures and other literature promoting our associations to find that they are amply sprinkled with the words, "profession", "professional", and "professionalism" (DPMA, 1975; AFIPS, n.d.; Ralston, 1973).

Despite the somewhat general assumption that those in the data-processing or computer business are professionals, there has been considerable literature published that would cause one to question this assumption (Wilensky, 1964; Rich, 1965; Canning, 1968; Wall, 1971; Stone, 1972; Skeen, 1974; Finerman, 1975 among others). Most of those who have looked deeply into the concept of professionalism agree that one of the prerequisites of a recognized profession (e.g., medicine, law, public accounting, etc.) is a certification mechanism that separates those who possess certain agreed-upon "professional" credentials from those who do not. The data-processing field does not yet have this certification mechanism. This is so, despite the fact that the Data Processing Management Association (DPMA) began a certification program as far back as 1962, with the initiation of the Certificate in Data Processing (CDP).

For those who have forgotten or never heard about the CDP a few facts about this program might be in order.

The Certificate In Data Processing

The DPMA administered the first tests leading to the CDP in 1962. Since then about 35000 persons have taken the required examinations and, as of January 1, 1978, about 17,000 had been awarded the CDP.

The CDP examination has changed somewhat over the years, but since 1970 it has consisted of 300 multiple-choice questions that are divided equally, sixty questions each, among the following subject areas:

Data Processing Equipment
Computer Programming and Software
Principles of Management
Quantitative Methods

The total test lasts four hours and ten minutes and may be taken at one sitting. If one passes the test and acquires five years of experience (with allowances made for academic credit) in a data processing related job, he presumably (at least in the eyes of the administrators of the CDP) has the credentials of a "professional" in data processing.

In an effort to garner broader backing for the CDP program, after it had not gained what some considered sufficient recognition during its first ten years, the DPMA joined forces with the ACM to form the Certification Foundation in 1972. The administration of the CDP program was put in the hands of this foundation. Other "professional" societies were invited to join and eventually eight societies (including DPMA and ACM) joined in founding the Institute for Certification of Computer Professionals (ICCP) in September, 1973. The ACM and the DPMA, being the largest of the constituent members of the ICCP, bore the brunt of the original capitalization of this new organization. The ICCP still owes the ACM almost $11,500 which was originally proffered in the shape of a loan. Now that the ICCP is self-supporting, however, it is appearing less and less likely that the ACM will ever see the repayment of its $11,500 (Yovitts, 1977).

Practically since its inception the CDP has been beset by criticism that it has not functioned effectively as a professional certification; that it is not recognized by industry and academia as a valid certification; and that it has done little to further the careers of those who have been awarded the CDP. Prior to 1975 this criticism was based mostly on opinion, since there had never been a definitive study which would either prove or disprove the criticisms.

At the time, that the DPMA and the ACM began the initial negotiations (1972) that finally led to the ICCP, this author proposed that a serious study be undertaken to determine exactly how the CDP stood as a professional certification. Once these facts were known, they would provide the basis for either proceeding with the CDP as a viable program, improving it in specific areas, or abandoning it altogether if it appeared hopelessly inadequate. Details on this study are outlined below.

as a certification of professional knowledge and experience appropriate to data processing.

Data Processing Managers' Evaluation of the CDP

Listed below are some of the key questions that were asked of the data processing managers in the 1975 CDP study. As in the case of the CDP questions above, the answers to these provide their own clear evidence of the little regard that data processing managers and supervisors have for the CDP designation.

Question: Have you found that CDP holders more often possess knowledge and experience appropriate to data processing than do non-CDP holders who work or teach in the data processing field?

Answers:	Frequency	Percentage
Yes	24	10.8%
No	121	54.5%
Undecided	57	25.7%
Have Never Known		
Any CDP Holders	20	9.0%
Usable responses	222	100.0%

Comment: Less than eleven per cent of data processing managers have found that those who have the CDP more often possess knowledge and experience appropriate to data processing than those who don't have the CDP. This finding is particularly damaging to the CDP, since such a certification is expected, above all else, to set apart those who have a high ("professional") level of experience and knowledge in their field.

Question: Must a person have the CDP to be considered for certain positions in your organization?

Answers:	Frequency	Percentage
Yes	2	.9%
No	219	98.6%
Do Not Know	1	.5%
Usable responses	222	100.0%

Comment: In less than 1% of the organizations represented by the managers in this study was the CDP a prerequisite for being employed in certain positions.

Question: How much recognition do you think the CDP has as a certification of professional knowledge and experience appropriate to data processing?

Answers:	Frequency	Percentage
High	8	3.6%
Moderate	61	27.6%
Slight	105	48.0%
None	19	8.6%
Do Not Know	27	12.2%
Usable responses	221	100.0%

Comment: Better than two-thirds of the data processing managers (who all belong to the "professional" society that fathered the CDP) concede that the CDP enjoys either slight or no recognition as a professional certification; or they "do not know" enough to comment one way or the other, which is equally damaging to the image of the CDP.

Conclusions and Recommendations

Since 1973, it appears that the new administrators of the CDP, the ICCP, have done very little to change the underlying weaknesses in the CDP, that were suspected prior to 1973, and then rather conclusively, evidenced in the 1975 CDP study. Long-time proponents of the CDP, such as Kenniston W. Lord, Jr. (CDP) and Alan Taylor (CDP) of Computerworld, however, are still stridently vocal in favor of the CDP, urging everyone to get certified, as if the weight of sheer numbers would substitute for what the CDP lacks in quality.

What should be done to, or for, the CDP? There is considerable evidence to the effect that before a credible certification mechanism can be developed for the data processing field, certain more fundamental steps must be taken. These include the development of specific job descriptions for the many data processing specialties; the development of standards of performance and knowledge for these positions; the development of "approved" academic and training programs that would impart this knowledge; and finally some agreement on what level of knowledge and experience merits the term "professional", what level "para-professional", what level, "technician", etc.

Some lay the blame for the failure of the CDP program on an examination that they consider trivial when compared to examinations required by such organizations as the British Computing Society and the recognized professions such as law and accounting here in the United States. Certainly a more rigorous examination than the current four-hour-and-ten minute, multiple-choice examination would certainly seem to be in order. But it is highly questionable whether the mere improvement in the examination would accomplish much without prior attention to the areas mentioned above.

The ACM, as the largest "professional" society and one of the prime movers in establishment of the ICCP, should take the lead in reassessing the effectiveness of the ICCP organization. It is approaching five years now since the ICCP was chartered to develop the CDP into the professional certification mechanism that many believe is sorely needed by the data processing community. Virtually, nothing has been accomplished during these nearly five years, unless one counts the initiation of yet another certification program, the Certificate In Computer Programming (CCP), which appears to have the same basic weaknesses as the CDP, and which some think is further weakening what is left of the CDP program. Certainly the Institute for Certification of Computer Professionals has not done much toward accomplishing what its proud name suggests. If professionalism is to be achieved in the data processing field, it is past time to cease the certification charade being perpetuated by the ICCP and to start work on developing a solid base for professionalism. The ACM should take the lead in this endeavor, with or without the ICCP.

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The 1975 Study of the CDP

To conduct any study of the CDP, it was necessary to contact many holders of the CDP, and to do this it was necessary to gain the cooperation of the DPMA who had proprietary access to the list of CDP holders.

The DPMA finally agreed to cooperate in a study of the CDP program, but this agreement did not come easily. Negotiations began in 1972 and it was not until February, 1974 that a survey of CDP holders was ready to be implemented. At that time, however, the administration of the CDP was turned over to the ICCP, and a renewed approval to use the CDP list had to be obtained from the ICCP. This approval was finally forthcoming in August, 1974 and questionnaires were sent to 513 CDP holders in March, 1975.

About thirty per cent of the CDP questionnaires were returned as "non-deliverable" because of out-of-date addresses or other defects in the addresses. Among those that were delivered in the first mailing, a response rate of 65.8 per cent was achieved. The ICCP, in their approval of the study, had stipulated "no follow-up mailing"; however, a very limited follow-up to thirty CDP holders was negotiated. Returns from these raised the CDP response rate from the questionnaires that were delivered to 71.6 percent.

In addition to the CDP holders, a corollary survey was made of those who might hire CDP holders -- i.e., data processing managers and supervisors. Despite the hazards of bias involved, the DPMA membership list was used to develop the frame for the manager survey. Questionnaires were sent to 250 data processing managers and supervisors and a response rate of 92.2% was achieved. This high response rate was due to the exhaustive follow-up steps that were possible in the manager phase of the CDP study.

The 1975 study of the CDP showed quite conclusively that:

1) the CDP had been a failure as a professional certification for the data-processing field;

2) the fact that a person has the CDP bears practically no weight with data processing managers who might be hiring data processing people;

3) the great majority of CDP holders have found that the CDP has contributed only slightly or not at all to any success they might have achieved in a data processing career.

The conclusions above are based on answers to the questionnaires that were sent to the CDP holders and data processing managers. These questionnaires were developed according to accepted research techniques and the answers were validated by standard statistical tests. There is not room in this paper to elaborate further on the methodology employed in this study, but more detailed information may be found in the references (Longhill, 1976).

In the following sections of this paper are listed some of the key questions, with their answers that were asked of the CDP holders and the data processing managers.

CDP Holders' Evaluation of the CDP

Listed below are answers to specific questions that were asked of the CDP holders in the 1975 CDP study. These answers provide self-explanatory evidence of what the CDP holders think about the CDP.

Question: How many times have you been admitted to an educational or training program for which one of the entry prerequisites was the CDP?

Answers:	Frequency	Percentage
None	251	98.0%
One Time	4	1.6%
Two Times	1	.4%
Usable responses	256	100.0%

Comment: Ninety-eight per cent of CDP holders have never encountered the situation where their holding of the CDP was one of the keys that let them into educational or training programs.

Question: How many times have you been accepted for a position where one of the prerequisite qualifications was that you possessed the CDP?

Answers:	Frequency	Percentage
None	245	95.7%
One Time	7	2.7%
Two Times	3	1.2%
Five or More Times	1	.4%
Usable responses	256	100.0%

Comment: Better than ninety-five per cent of those who have been awarded the CDP have never encountered a situation where they obtained a position that they desired where the CDP was one of the requirements for the position and they were fortunate enough to have the CDP designation.

Question: To what extent do you think that having the CDP has contributed to your success in the data processing field?

Answers:	Frequency	Percentage
Highly	9	3.5%
Moderately	29	11.4%
Slightly	82	32.2%
Not At All	126	49.4%
Not In Data Processing	9	3.5%
Usable responses	255	100.0%

Comment: Virtually fifty per cent of the CDP holders give the CDP no credit whatsoever for any success they have achieved in their data processing career. Almost another third give the CDP only slight credit for their success.

Question: How much recognition do you think the CDP has as a certification of professional knowledge and experience appropriate to data processing?

Answers:	Frequency	Percentage
High	9	3.5%
Moderate	69	27.1%
Slight	153	60.0%
None	14	5.5%
Do Not Know	10	3.9%
Usable responses	255	100.0%

Comment: Almost two-thirds of the CDP holders think that the CDP enjoys slight or no recognition

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