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ABSTRACT

The importance of research training for the undergraduate psychology major is examined. Undergraduate research projects should provide experience in generating a design, implementing the project, writing the report, and presenting it to others. Research training courses should be tailored to fit both the individual student's needs and abilities and the faculty's own personal interests and needs. The development of undergraduate research conferences, which involve research-oriented faculty and students from a variety of institutions, is considered. Such conferences have increasingly involved very bright and outstanding undergraduates. The need to attract highly qualified high school students who have potential for scientific and research endeavors is noted. The integration of novice researchers into the larger field of psychology as a basic and applied science is shown to be promoted by the use of multi-level systems to teach research methods, such as those proposed by Carsrud and Christensen (1980), intra-departmental colloquia, undergraduate research conferences, and special sessions at regional meetings. It is concluded that undergraduates should be involved in the formation of ideas and research designs and should take part in field studies and evaluations of applied programs in industry and human service settings. A bibliography is included. (SW)

Undergraduate research in psychology: Its past and its future

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Undergraduate research in psychology: Its past and its future

Before attempting to address the issue of undergraduate research in psychology, I think that it is important to ask two questions concerning the assumptions we make about such research. First, why is research, and/or the research experience by undergraduates important? Second, what do we as college faculty want our students at this educational level to gain from such activities? I personally contend that the answers to these questions very much influence our approaches to teaching and our expectations about student performance in these activities.

If we assume that students should only gain a general knowledge of methodology from a research experience, the expectations for student performance will be vastly different from assuming that students should be junior colleagues and creative scientists in their own right. Similarily, students have their own assumptions and expectations, which often range from "just passing the course" to producing a major journal publication which will assure them graduate admission to Yale, Harvard, Texas, or Berkeley. As we all know, expectations and reality can often be quite discrepant. The usual research experience is neither as bad as cynical faculty would have us believe, nor as wish fulfilling as many students would hope.

I would like now to make clear my own assumptions about the importance of undergraduate research. In 1973 Wilbert J. McKeachie chaired a symposium on undergraduate research

conferences (McKeachie, Note 3) at the APA meeting in Montreal. The title of my presentation in that symposium still conveys my initial assumption: "Good research is not nested under Ph.D.'s" (Carsrud, Sibley, & Arthur, Note 1; Carsrud, 1975). This title, reflects the assumption that neither the quality, originality, nor applicability of research are the sole province of doctoral degree holders.

However, after eight years of teaching a variety of undergraduate students, I have a companion assumption that modifies the original one to some extent. That is, not all undergraduate majors can do original research. Yet, an attempt must be made to assure the best students are given every opportunity to experience the entire research process. All students should have the opportunity to gain at least some insight into, and appreciation of, the methodology and skills involved in contemporary psychological research, both as practiced in the laboratory and in the field. Gant, Dillon, & Malott (1980) and Carsrud & Christensen (1980) have presented successful, systematic approaches to encourage and supervise undergraduate research. These systems assure that students have experience with the various stages and activities associated with research projects which McKeachie & Milholland (1961) have previously delineated. These are: 1) generating a design, 2) implementing the project, 3) writing the report, and 4) presenting it to others.

However, the use of any single course, or approach, to

foster research at the undergraduate level will often be ineffective and typically will under utilize the various talents available. Approaches to teaching undergraduate research must be exciting to both faculty and students. They also must help to attract and hold majors as Benjamin, Fawl, & Klein (1977) have noted. This is especially true when there is a decline in enrollment in academic institutions and a lack of obviously related employment opportunities for psychology graduates, both at the baccalaureate and doctoral levels. We must be willing to tailor our research training courses to fit both the individual student's needs and abilities and the faculty's own personal interests and needs. This approach has typically involved either: 1) increasing the number and type of courses; 2), restructuring of current offerings; or 3) relying on the increasing use of independent study courses. In addition, there has been much concern about the role of research related courses in the training of undergraduates who do not go on to graduate school (Woods, 1979; Caffrey, Berger, Spurgeon, Marx, & Senn, 1977; Korn & Nodine, 1975; Turner, 1974). However, little attention has been paid to the role of undergraduate research in contributing to main-stream psychology, or how to train and encourage our brightest students to continue to stay in the field and contribute to the scientific development of the field's applied and basic aspects.

Before continuing as to what we should be doing to better train our brighter undergraduates as researchers, it is

appropriate to briefly review the historical role of the undergraduate in research when he, or she is the experimenter and not the subject. In order to provide a historical perspective one could study the productivity of undergraduate students associated with historical figures in psychology. Elizabeth S. Goodman (Note 2) has recently taken this approach in her study of the students of Margaret F. Washburn (an early president of APA) at Vassar College during the early decades of this century. Goodman found that Washburn and 119 of her undergraduates published research in leading journals during this period. Her students were certainly more than just unrewarded "slave labor" as is often the case today.

Another approach is to examine the genesis of research ideas in an undergraduate and how it later influenced a given career area. A noteworthy example is provided by Division 2's current president James V. McConnell, whose undergraduate interest in learning in planaria led to the Worm Runners Digest and his research in behavior change. Early experiences have played a role in all of our professional careers.

However, I prefer to focus on the development of the undergraduate research conference. I have chosen this particular phenomena not only because of my personal involvement with it (Carsrud, 1978a, 1978b, 1978c), but because it focuses on the end product of the research experience, across several universities. Such conferences have increasingly involved the better undergraduate majors in those institutions participating.

From the earliest known conference held 38 years ago at Mount Holyoke College in Massachusetts, there has been an increasing number of such meetings. For example, 1970 there were only four conferences, while in 1979 there were over 25, including several newly formed sessions at most of the regional psychological association meetings. In addition, there is the National Psi Chi sponsored J. P. Guilford Research Awards for outstanding undergraduates. Although most of these research conferences are located in the northeastern portion of the United States, they also occur regularly at institutions in North Carolina, Oklahoma, and California.

Student involvement has also increased, for example, in 1979 over 1000 undergraduates, representing 150 institutions, presenting original research at these meetings. Most of these projects were reviewed by independent faculty panels prior to acceptance and presentation. The chief advantage of these research conferences over an intra-departmental colloquia series, (Ware and Matthews, 1980), is that conferences involve research oriented faculty and students from a variety of institutions. In addition, the participants usually are the brightest and most achievement oriented students in each of their respective departments (Carsrud, et al., Note 1).

The short-term future of such meetings seems good, although increasing numbers of undergraduates are submitting and having papers accepted for presentation at both regional and national psychological association conventions. Personally, I have

serious reservations about catagorizing researchers into "undergraduates" and "others". This distinction often implies that undergraduates are second class researchers, when in fact they may be better than some Ph.D.'s.

My prediction for the future of undergraduate research, in general, is a wish for its greater integration into our science as a whole, and not its development as a seperate "species." If the work of our better undergraduate researchers is not to be catagorized as useless, trivial, redundant, etc., faculty must first attempt to attract the best available high school graduates. In this regrad, the wider use of high school oriented psychology fairs orgainized by college departments (Benjamin, et al. 1977; Perloff & Perloff, 1977) may be useful. This is especially useful if we wish to obtain the more scientific and research oriented students.

Next, the use of multi-level systems to teach research methods, such as those proposed by Carsrud & Christensen (1980), may be useful in encouraging the best students to continue their learning experience in psycholgy. Built-in systems (letters of recommendation, etc.), such as those proposed by Gant, et al. (1980) and Yoder (1979) not only keep students involved, but can provide external reinforcement for the more mastery oriented students. In addition, intra-departmental colloquia, such as those reported by Ware & Matthews (1980) can provide not only reinforcement, but serve as stimuli for additional research efforts. Undergraduate research conferences, and special

sessions at regional meetings are only the next step in the process to the intergration of these novice researchers into the larger field of psychology as a basic and applied science.

However, certain precautions must be practiced. Outstanding undergraduate researchers cannot solely be used as mindless assistants in faculty studies. They must become involved in the total research process, including the formation of ideas and designs to test them. This should not be a burden to faculty if the better trained students are involved. Students who contribute significantly to a project should be rewarded in the same manner as graduate students and fellow faculty. The reinforcement for faculty may well include increased numbers of publications as well as the admiration of students involved. What better role model can we serve as faculty? Another precaution is that we must focus our research training programs on methodological tools useful in both applied and laboratory settings. That is, we should encourage students to become involved in field studies and evaluations of applied programs in industry and human service settings. Such experiences will broaden not only their research knowledge, but also their job opportunities in the future. In summary, the future seems bright for undergraduate research as long as it does not become detached from its goal of improving the quality of the students who continue their work in psychology.

Reference Notes

1. Carsrud, A. L., Sibley, D.B., & Arthur, B.L. "Good research is not nested under Ph.D.'s: The University of New Hampshire psychological conference as an educational experience," in W.J. McKeachie's symposium: The Undergraduate Psychology Conference as an Educational Tool. American Psychological Association, Montreal, Canada, August, 1973.
2. Goodman, E.S. "Student collaborators of Margaret Floy Washburn," in B. Harris' symposium: "Teaching and training in psychology at women's colleges: Vassar as a historical case study." Eastern Psychological Association, Hartford, Conn. April, 1980.
3. McKeachie, W.J. (Ch.) Symposium: "The Undergraduate Psychology Conference as an Educational Tool." American Psychological Association, Montreal, Canada, August, 1973.

References

Benjamin,L.T., Jr., Fawl, C.L., & Klein, M. The fair-Experimental psychology for high school students. American Psychologist, 1977,32,1097-1098.

Caffrey, B., Berger, L., Spurgeon, C., Marx, D., & Senn, D. Integrating professional programs in a traditional undergraduate program. Teaching of Psychology, 1977, 4, 7-13.

Carsrud, A.L. Undergraduate psychology conferences: Is good research nested under Ph.D.'s. Teaching of Psychology, 1975, 2, 111-114.

Carsrud, A.L. Beyond the psychology fair. American Psychologist, 1978a, 33, 9, 862.

Carsrud, A.L. Undergraduate research: Are we willing to support it? Teaching of Psychology, 1978b, 5, 1, 37-38.

Carsrud, A.L. 1979 Calendar of undergraduate psychology conferences: Guidelines for organization and management. Teaching of Psychology, 1978c, 5, 2, 107-108.

Carsrud, A.L. & Christensen L.B. Undergraduate training in psychological research. Texas Psychologist, 1980, 32 3, 3-5.

Gant, G. D., Dillon, M.J., & Malott, R.W. A behavioral system for supervising undergraduate research. Teaching of Psychology, 1980, 7, 2, 89-92.

Korn, J. H., & Nodine, B.F. Facts and questions concerning career

training of the psychology major. Teaching of Psychology, 1975, 2, 117-119.

McKeachie, W.J. & Milholland, J.E. Undergraduate curricula in psychology, Chicago: Scott, Foresman, 1961.

Perloff, R. ,& Perloff, L.S. The fair-An opportunity for depicting psychology and for conducting behavioral research. American Psychologist, 1977, 32, 220-229.

Turner, R.H. What happens to the liberal arts BA in psychology who doesn't go to graduate school? Teaching Psychology Newsletter, 1974, (Feb.), 3-4.

Ware, M.E. & Matthews, J.R. Stimulating career exploration and research among undergraduates: A colloquia series. Teaching of Psychology, 1980, 7, 1, 36-38.

Woods, P.J. (Ed.)The Psychology Major. Washington, D.C.: American Psychological Association, 1979.

Yoder, J. Teaching students to do research.Teaching of Psychology, 1979, 6, 85-88.