

An Overture

Keep Your Options Open

A career is more than an occupation you pursue until you are rescued by retirement. To make the most of your career, you must be prepared to take advantage of new opportunities as they arise. I believe this statement is as true for all the teachers, counselors, and other adults who read it as it is for young people making their first tentative career choices. Therefore, I want to share with you my ideas about how to be prepared for new opportunities—how to keep your options open.

Even if it were not a waste of the diversity of an individual's talents to be locked into one occupation, finding an occupation that will not become obsolete before the end of a person's productive work years will be increasingly difficult. To meet this challenge you will need the flexibility to shift occupations as you progress through your career. As career changes become more frequent, what you do to earn a living will become less important in defining who you are. Former occupations, future aspirations, hobbies, community activities, recreational pursuits, and personal qualities will all play a greater part in defining who you are. Begin now to think of your employment as a reflection of who you are rather than letting your employment dictate who you must be.

Who are you? What kind of person do you want to become? Making a list of the qualities you are proud to say describe you now and another list of the qualities you are working to acquire will help to answer these questions. The act of making the lists will cause you to consider many options.

What do you like to do? Answers to this question can be compared with the tasks involved in particular occupations to judge how well you might like the work. Recognize, however, that your answers are necessarily limited to things you have tried and that you will always have opportunities to try new things. You may come to enjoy doing things you have not yet considered. For example, becoming a journal editor had never been an explicit career goal of mine, although I have for some time enjoyed writing and working with manuscripts. The opportunity to serve as editor of this journal was indeed fortunate for it has led to some of the most rewarding experiences of my entire career. Being willing to try something new creates options.

Thinking of any occupation as a tentative career choice rather than a lifetime commitment also creates options. Start your tentative career wherever an opportunity arises for there is dignity in any job well done and self-respect in having a means of support.

As you pursue a first tentative career, develop a broad mental picture of what you might want to do and become. Look for relationships between your current abilities and your future goals. Consider education as a means of providing options. As a minimum, you will need enough education to prepare you to earn a living doing something you like to do. (It has been said that the best career is one that pays you for doing something you would do in your spare time.) As a maximum, you will pursue education, formally or informally, throughout your life to change careers, to develop a new avocation, or for the sheer joy of learning.

About the Careers Issues

What was originally intended to be one issue of *ABT* has blossomed into a two-part publication through the special efforts of many individuals. The NABT Board of Directors and the Publications Advisory Committee contributed initial ideas and impetus to the undertaking. Assistance in soliciting manuscripts was provided by Davy Atelsek, George Dawson, James Ebert, Suzanne Howard, Glen Peterson, Jerry Resnick, Frank Sis, Howard Stein, Peter Volpe, Thomas Wilson, and Sylvan Wittwer. All of the articles that appear here were written especially for *ABT* and their authors took time from many other important commitments to tailor their work to the interests and needs of biology students and their teachers and counselors. Editorial staff members here willingly accepted the extra responsibilities imposed by the problems of integrating the contents of two issues. I take this opportunity to thank all of those involved for their contributions and their dedication to the tasks.

(Concluded on p. 151)

four-year colleges without a doctor's degree, but they are usually at a disadvantage in matters of promotion and pay.

At the four-year colleges, the instructor's research experience is often helpful in involving students in individual investigation; thus, it is important to specialize in an area that need not be abandoned in moving from the university to a college. It seems such a waste when individuals trained to do research in some narrow field use this valuable experience only as the means of acquiring teaching credentials, not as the basis of a life-long involvement in scholarship. The teacher at a four-year college, like the teacher at a two-year college, should love to teach and should be prepared to do an outstanding job of it.

Preparation

Any graduate program to prepare college biology teachers is seriously lacking if it only provides knowledge of biology and the research techniques of biology. The candidate should have opportunity to develop competence in teaching through some consciously planned combination of experience in teaching and appropriate study of teaching. This is not to call for a long series of courses "covering" all of the subject of pedagogy; instead, candidates should participate in carefully designed instruction relevant to the issues at hand.

An experience as an intern teaching in the appropriate type of institution would be an invaluable component of a program for the preparation of college teachers. This is particularly true for those who will teach at two-year and four-year colleges, for they must take their graduate work at universities where knowledge of such undergraduate institutions is often minimal.

The researcher-teacher at a university concentrates more on research than on perfecting teaching techniques, but it seems only fair to the students that those who are called upon to teach—at any institution—should do it well.

Flexibility

Not all students reach the goals they set. Biology majors these days would be wise to establish fall-back positions and to give serious thought to careers they might find satisfying if opportunities in the area of first choice are unavailable. Some may increase their chances for employment by supplementing their biology with some courses in business or other discipline. Others may want to consider alternative careers in recreation, administration, sales, or any of a number of careers combining biology and other fields of endeavor.

A well-planned campaign started early is essential to securing a position. It is surprising how often this is neglected. Consider the young man who started out from his university in the West the Christmas vacation of the year he was to receive his Ph.D. degree. He packed his little family into their car and used their savings for a tour of

the East Coast colleges, arriving unannounced at vacation time. It is small wonder that he did not receive one serious offer. Consider how many applications arrive at colleges addressed to "Dear Department Chairman" with no indication that the letter is addressed to a real person at a real institution. The letters that receive the most attention show some familiarity with the college's program and characteristics, and they state how the candidate expects to contribute to the program.

A graduate student beginning a campaign for a suitable position might find it profitable to call on a department chairman at the appropriate type of institution. A department chairman who is a good teacher will likely be pleased to help a promising young person succeed. Department Chairmen can share exemplary letters and approaches that have been effective; they sometimes know about opportunities that are available at other institutions. Such an approach is most effective if it is begun early enough so that the student's academic preparation can be modified if necessary.

The advice given here is intended to be realistic. It may well discourage some students from becoming college teachers, but, then, college teaching is not for everyone. Let us hope that others will be encouraged to become the excellent teachers that we so desperately need. There is no shortage of college biology teachers, but there will always be a shortage of excellent college biology teachers. That is the only kind we need.

Open Options

...from p. 145

From the inception of the idea of publishing articles about careers, our purposes have been, first, to provide breadth of coverage of the variety of career possibilities in the life sciences including some new and unusual kinds of careers; second, to offer some food for thought about the many considerations that should go into career decisions; and finally, to allow our readers to see the numerous ways of doing biology from the perspectives of those who do it. I believe we have achieved our purposes. It is a pleasure to commend these issues to the students, teachers, and counselors who will use them. May they help you to keep your options open.

Joan G. Creager, *editor*

Teacher

The best raise fundamental questions without answering them.
Anon.

One who frees his students from extreme modernity.
Anon.