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Introduction to Special Issue

The theme for this special issue of JID is "Getting a Job as an Instructional Designer and Succeeding at It." I originally planned to write one of the articles on how to succeed as an instructional designer, but Norm Higgins, the editor of JID, told me it would be better if that article were written by someone who was successful! Therefore, I decided to write an article on how to get a job.

Since my article primarily focuses on getting a job in academia, I thought it would be a good idea to include articles that focus on getting a job in other settings. Therefore, I asked Bob Branson to prepare a paper that describes what it takes to get a job in business and industry. And I asked Mary Ann Lynchard to describe what it takes to get a job in an industry that hires many instructional designers, the defense industry. Although each of the three articles on getting a job focuses on different job settings, I believe many of the points contained in these articles are useful regardless of the setting in which you would like to work.

Getting a job requires one set of skills, succeeding at that job requires a somewhat different set. The article by Kent Gustafson describes what it takes to succeed as a faculty member who teaches in an instructional design program. And, in addition to serving as a reaction to the preceding papers, the paper by Wes Roberts describes some of the skills and attitudes it takes to succeed as an instructional designer in business and industry.

I would like to thank all the authors who contributed their time and energy toward making this special issue possible. I am confident that the advice they have given in their papers will help many individuals in their efforts to obtain and succeed at positions in the field of instructional design.

Robert Gagné has written the final paper in this special issue. Dr. Gagné briefly appraises the other papers that appear in this special issue and then goes on to provide his own unique insights on the role of instructional design and instructional designers in education and training.

Robert A. Reiser
Guest Editor
Special Issue
Getting an Instructional Design Position: Lessons From a Personal History

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The purpose of this paper is to describe some lessons I learned when I was looking for an instructional design position in academia. By describing these lessons I hope to give you information that may help you in your search for a job. To put it in terms that should please those of you who are true zealots:

Given a copy of this article, the reader will:
(a) choose to apply the lessons described herein, and
(b) obtain a desirable instructional design position.

Before I begin to describe the lessons I learned, I would like to describe briefly some of the conditions under which I learned them. First, I learned the lessons back in 1975. As many people are fond of saying, "times were different then" (but not all that different). Second, I learned the lessons when I was a doctoral student about to graduate from the instructional design program at Arizona State University. Third, at the time I learned these lessons, I was looking for a job in higher education in the United States.

The conditions I just described are likely to be different from the conditions you face during your search for a job. However, I believe that most of the lessons I learned will be applicable to your search for an instructional design position, regardless of the circumstances facing you.

Now that I have masterfully handled any concerns you may have had about the external validity of my findings, let me take you back to those thrilling days of yesteryear (1975, to be exact) . . . the lowly graduate student (me) plods along again!

In the 1970s many people were talking about "the light at the end of the tunnel," and in January, 1975, I finally began to see it; I realized that within a few months I would most likely graduate from Arizona State University's doctoral program in instructional design. At that point, I decided I should start looking for a position I could move into upon my graduation. Thus began my job search.

The first source I turned to during my search was the job book that was kept by the faculty members in my doctoral program. As I looked through that job book, I was reminded of a song that was popular back then . . . "Is That All There Is?" Needless to say, the number of academic positions listed in the job book was considerably less than I had expected. Thus, I decided to turn to other sources in order to find out about position openings. This leads me to the first lesson:

Lesson 1: Not every job is listed in a job book. There are many sources that list instructional design job openings. (See Table 1 for a list of some of those sources.)

By looking through some of the sources listed in Table 1, I was able to find several job announcements that were not in my department's job book. As I looked through the announcements that I found, I learned several lessons. One lesson was:

Lesson 2: Most instructional design positions are in business and industry.

Since I was looking for a position in academia, I found this lesson to be a bit disheartening. It was not as disheartening, however, as the next lesson I learned:

Lesson 3: (Also known as "the faculty members' lament")—Most high-paying instructional design positions are in business and industry.

This lesson still holds true today. Many of the graduates of the instructional systems program where I teach begin their careers as designers in business and industry at higher salaries than that of faculty members who have been teaching for ten years!

Another lesson I learned is that I went through the listings of job openings was that many prospective employers were looking for instructional designers with some media production skills. Today, as I peruse the listings of position openings in our field, I notice that skills in the design of computer-assisted instruction are highly desirable. Thus, the next lesson is updated in light of today's emphasis on "high technology":

Lesson 4: Acquire some skills in the design of computer-assisted instruction.

At this point, if you are becoming concerned about the type of position you will be qualified for, let me assure your fears—don't worry, you'll manage. And you can take the last part of the preceding statement quite literally. As was the case when I was looking for a position, many current job announcements call for skills in the management of instructional design projects. Furthermore, many graduates of instructional design programs have indicated that shortly after they obtain a position they are thrust into some type of management role. So, we come to the next lesson:

Lesson 5: Acquire some management skills.

After mulling (and occasionally weeping) over the lessons I was learning, I began to apply for some of the positions I read about. Working away at the old typewriter (this was during the pre-wordprocessing age), I sent off many letters of inquiry. And before I knew it, I received my first reply, which leads me to the next lesson:
Lesson 6: Don't be discouraged if you don't get the first job you apply for.
With this piece of advice in mind, instead of dwelling on the rejection letter I had received, I waited eagerly for the next response. And before I knew it, it came. And with that response, came the next lesson:

Lesson 7: Don't be discouraged if you don't get the second job you apply for.
I could go on listing many similar lessons, but rather than dwelling on misfortune, let's just say I had a long string for bad luck. But, my luck finally changed and it did so when I attended the annual convention of the Association of Educational Communications and Technology (AECT), which was held in Dallas that year.

At the AECT convention, I registered with the job placement service, I gave several paper presentations, and I spoke with faculty from several universities (my professors were foolish enough to introduce me). In other words, in today's parlance, I kept a high profile. And for once in my life, my profile paid off. As a result of my activities at the convention, I was invited to two universities for job interviews; which leads me to the next lesson:

Lesson 8: Become active in professional organizations. (See Table 2 for a listing of some of the organizations in which you may want to become active).

Skills in media production, CAI design, and management are indispensable for the instructional designer.

Although my activities at the convention certainly led to me being invited to two universities for job interviews, I believe there was another contributing factor as well. At the time I attended the convention, several manuscripts I had written for class assignments and projects had been published. Since I was seeking a position in the world of "publish or perish," I assume my publication record did not go unnoticed. Thus, my next lesson:

Lesson 9: Publish, don't cherish.
The dictionary indicates that cherish means "to cling fondly to something." With regard to the papers you have written, I suggest that if you think they are good, instead of clinging to them (or flinging them), you should submit them to a journal for publication.

Where should you submit your papers? Table 3 provides a partial list of periodicals that are publication possibilities. I suggest that you review the types of articles found in those journals and that you submit your paper to the journal for which your manuscript seems best suited.

Since I am a strong believer in practicing what you preach, I would like to point out that I have submitted manuscripts to all of the journals listed in Table 3. Notice, however, that I used the words submitted to, not published in; on occasion my manuscripts have been rejected. Which leads me to the next lesson:

Lesson 10: Don't be dejected if your manuscript is rejected.
Even if your manuscript is rejected, you are likely to get some valuable feedback from those who reviewed it. If the feedback indicates that the manuscript has some redeeming qualities, I suggest that you use the feedback to revise your manuscript. After you do so, submit the revised manuscript to another journal, or perhaps resubmit it to the same journal. If you follow this strategy, it is likely that your manuscript eventually will be published, but don't be surprised if you receive some rejection notices first.

Speaking of rejection, let me get back to my story. When we last left me, I was about to go off to job interviews at two universities. The first of these interviews was at the University of Toledo. (I mention the name of the university only to point out that when I told my wife that I was to be interviewed there, her only reply was "Holy Toledo!")

I remember my interview at Toledo quite clearly. Everyone I met there was very nice and many of them were very interested in me and my work. One faculty member was particularly interested, and eventually our conversa-
tion turned to one of the areas in which I had professed some expertise. "What do you think about Smith's latest paper on that topic?" he asked. I responded by indicating that I had not read Smith's paper. "Well, have you read Jones' outstanding literature review in that area?" he inquired. Again, I had to respond that I had not read the paper he was referring to. The conversation continued to proceed in this fashion and as it did, I became more and more certain that I would not get the job. I was right—I didn't get the job, but I did learn another lesson:

**Lesson 11: Keep up with the literature in your areas of interest.**

How do you keep up with the literature? I suggest you do so by identifying the major journals in the field, as well as other journals that focus upon the topics in which you are most interested. I expect that many of the journals you identify will be those listed in Table 2.

After you have identified the journals you are interested in, try to skim through them on a regular basis. This suggestion does not mean you have to subscribe to all of the journals (get your university library to do that), nor does it mean you have to read each journal cover-to-cover. The suggestion does mean that you should look at the titles of the articles in each issue of each journal and that you should read the abstracts of the articles whose titles interest you. If you are still interested in an article after having read its abstract, I suggest that you make a copy of the article and file it away for future reference (if you are really ambitious, you may even choose to read the article before you file it).

Professional organizations like AECT and AERA as well as journals like *Educational Researcher* and *Training* are an excellent source of job listings.

### Table 2

**Professional Organizations of Potential Interest to Instructional Designers**

- **Association for Educational Communications and Technology (AECT)**
  1126 Sixteenth St. N.W.
  Washington, D.C. 20036

- **American Educational Research Association (AERA)**
  1230 Seventeenth St. N.W.
  Washington, D.C. 20036

- **National Society for Performance and Instruction (NSPI)**
  1126 Sixteenth St. N.W.
  Washington, D.C. 20036

- **American Society for Training and Development (ASTD)**
  600 Maryland Ave. S.W.
  Washington, D.C. 20024

Filing away articles is easy, retrieving articles when you need them is difficult. Therefore, the next lesson is important:

**Lesson 12: Develop a good filing (and retrieval) system for important literature.**

My filing system usually works for me. I file important articles in folders that are designated by topic headings such as "mastery learning research" and "formative evaluation." These folders are arranged alphabetically and, until recently, were strategically placed in piles all around my office. Although I now have the folders in a filing cabinet, piling the folders worked fine. Testimonial to this fact was given by a student who once asked me for some articles on a particular topic. I immediately went to the right pile and pulled out the appropriate folder. The student, who was obviously impressed, complimented me by stating, "I really like your piling system."

I may have good filing (and piling) skills, but in 1975 I was not having any luck in interviewing. I didn't get the job at either of the universities that invited me for interviews. Shortly thereafter I had a job interview at a research and development center, but again I failed to get the job. (This failure was particularly disappointing—I was the only person who was interviewed. I did feel better, however, when I was told that the only reason I was not hired was because there had been an unexpected budget cutback.)

At this point, I decided to talk to my professors at Arizona State to see if they could give me some advice. This decision turned out to be a wise one because instead of advice, my professors gave me a job; they hired me as a faculty member in their department! This occurrence leads me to two lessons:

**Lesson 13: Let you professors know you are looking for a job.**

**Lesson 14: (Prerequisite to Lesson 13.)—Show your professors that you do good work.**

Lesson 13 is important because your professors may be aware of job opportunities that you are not aware of. But Lesson 14 is even more important.
because it is unlikely that your professors will recommend you for a position, or even inform you of some possibilities, if you have failed to show them that you do good work. If, on the other hand, your work is good, your professors are likely to go out of their way to help you attain a good position. Since recommendations from professors often are a critical factor in determining whether a recent graduate obtains a particular job, I suggest that if you are still a student, you should pay careful attention to Lesson 14 (would you expect a professor to say otherwise?).

When my professors hired me as one of their colleagues, it was with the understanding that if another good job opportunity arose, I would pursue it. Thus I would be able to broaden my horizons and share the wisdom I had acquired at Arizona State with faculty members and students at other institutions. Besides, the contract money with which I had been hired wasn’t expected to last forever.

Fortunately, well before Arizona State ran out of the contract money that was being used to pay me, I came across an announcement regarding an instructional design position that was available at Florida State University. Unfortunately, although the position sounded very interesting, the position announcement indicated that applicants were expected to have skills in a number of areas in which I had no experience or training. Nonetheless, I decided to apply for the position. And, sure enough, I got the job! Which brings me to the final lesson, the one I like to call “the formative evaluator’s advice”:

Lesson 15: If the job doesn’t fit, revise it. Apply for jobs that interest you, even if you don’t have the exact qualifications called for.

Why would an employer hire someone who does not have some of the skills the employer is looking for? I was told that in my case the fact that I was strong in some skill areas more than outweighed the fact that I lacked other skills. And, as those who hired me at Florida State expected, I was able to acquire some of those other skills once I obtained the job.

Now, over ten years after I first learned the lessons described in this article, I’m still at Florida State and I’m still learning. I hope that by following the lessons I have described, you will be able to obtain a position that has been as enjoyable as mine has been. Good luck!

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### Table 3
Partial List of Periodicals for Perusal and Publication Possibilities

Periodicals Dealing Primarily with Instructional Technology:
- Journal of Instructional Development (JID)
- Educational Communications and Technology (ECTJ)
- Educational Technology
- Instructional Science
- Journal of Educational Technology Systems
- Journal of Computer-Based Instruction
- Performance and Instruction
- Programmed Learning and Educational Technology

Other Periodicals of Potential Interest to Instructional Designers:
- Educational Researcher
- Journal of Educational Psychology
- Review of Educational Research (RES)

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A good student gets the job. Show your professors that you do good work. They can recommend you for a position.
Finding Your First Instructional Systems Position in Business and Industry

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During the past fifteen years or so, I have counseled numerous students on career options in business and industry. Most of them seek my help because they are aware that I had a career in business before returning to academia. Both the faculty and the students have become aware that there has been a major shift in job opportunities during that period. Our graduates formerly went to academic positions, now they go predominantly to business and industry. We have modified the instructional systems curriculum at Florida State University to take advantage of these changes in the marketplace (Boutwell, 1977; Redfield & Dick, 1984; Reiser, Driscoll, & Briggs, 1984).

In this paper, I will set forth what I believe to be important personal and professional considerations for instructional systems graduates as they define, seek, and follow a career in business and industry.

What Do You Want to Be When You Grow Up?

When Peter Drucker, the dean of American management consultants and eminent author, asked himself that question, he was past his fifty-fifth birthday. So don't panic if you have yet to develop a quick and crisp answer to the question. The profession of instructional systems development (ISD) is new and not well differentiated either in academic programs or in the job market. We must survive that identity crisis whether we call ourselves "instructional designers" (a term that grossly understates the implications of "systems" thinking), "instructional psychologists," which is worse, or "systems analysts," a term that has been effectively pre-empted by data processing managers. Because there is no good simple term (e.g. civil engineer) that everyone understands, I have chosen "instructional systems development specialists" and "instructional systems development professionals," where specialists are recent graduates and professionals are journeymen.

Is all right with the world? No? Do you want to help? How can you best help pull on the rope that improves the human condition? Do you aspire to provide primary service? That is, do you want to serve clients directly as trainers, teachers, counselors, and salespeople do? Do you wish to focus on individual problems, or would you prefer to provide secondary service, in the hope that you could improve services provided to all?

Maybe you would rather design programs to train teachers, trainers, and salespeople. This is a key decision for you to make. I have heard many students say that they just wanted to "help people," while others claim they want to make money. It is the behavior you deliver to the marketplace that will decide which of these overlapping options you will emphasize. Robert Half (1982) has an excellent book on finding jobs and managing your career.

Can you best serve your interests and those of the world at large by creating and investing capital (i.e., making money), thereby helping yourself and providing jobs for others? Remember that in any job, there are two kinds of income: monetary and psychological. While they are not mutually exclusive, some jobs provide more of one than the other. Those of us who pursue academic careers know that our cash compensation will never be equal to jobs of comparable worth in business and industry. We stay, either because we cannot find real work, or because we prefer the academic environment. Trying to decide these questions for yourself is probably worth a personal struggle through conversations with your role models, heroes/heroines, mentors, and significant others. I believe that creating capital, investing it, providing jobs for others, and offering a useful service to the world is worthy of our time and consideration. On the other hand, if you opt to help people, your responsibility is to provide competent primary care to pupils or to the needy. Anything less than that is not professionally commendable, no matter how lofty your aims, and worthy your motives.

Regardless of how you describe the situation, in terms of locus of control, field dependent-independent, or other terminology, you are responsible for your own life. That means clearly that you must accept the responsibility for your own self-actualization. Those who form short- and long-term goals are more likely to reach them than those who do not. Try to make a career plan of your own that will make it possible to reach your goals. Do not leave that necessity of life to your employer or professional society. It is your responsibility to make your daily life worth living. I can think of no greater personal agony than to hate to go to work in the morning, or, to hate to go home at night. When you find yourself in either situation, take action to modify it since each will affect the other.

Many recent graduates have immediate goals of working in a warm climate, or near a large city, or in the South, or in a specific industry. When they start their families, or as their children mature, they may be much more concerned with financial security. Later, they may be much more interested in jobs that provide greater independence, entrepreneurial opportunity, or challenge. Keep these changing life demands in mind as you make your career plan.

Many of the people and organizations that you will be able to help most as an instructional systems professional will not be thankful for your contribution. If
you require constant approval, positive feedback, and expressed appreciation from others, consider those needs seriously when you choose a job. Many jobs will not provide constant positive feedback. I believe that you must develop an inner sense of competent performance and be a critical judge of your own accomplishments. Then, you can put yourself on the back for good work and kick yourself elsewhere for substandard performance. It is not your employer’s responsibility to provide a warm, responsive, and supportive environment. Even though some will try, few will succeed (Feldman, 1986).

Where Do You Want To Be?
“Where” means both the type of organization and the geography. There have been numerous jobs available in Chicago, the Washington, D.C. area, Newport News, Orlando, Los Angeles, San Diego, San Antonio, and other interesting places. If you prefer work with third world countries, you may find a position on a project in Botswana, Nepal, or Peru. Make a critical assessment of your own true preferences and decide how much location and organizational type mean to you. If you are seeking the best available position, you will make one kind of decision. If you are location bound you may trade location off against position quality; but note that many employers will reject you if you are too concerned with location. You cannot imagine how many people take degrees in instructional systems, settle down right here in Tallahassee, Florida and then suffer profound disappointment because few jobs in the profession are available here.

Many of the more exciting jobs available are physically demanding. If you design military training systems, are you really willing to go to the swamp for the operational tests? All students in Florida are willing to go to the swamp, but what if the system was for arctic engagements and the tests were being conducted in Alaska? They have offered you the position at more money than you could have hoped for. Are you now really willing to go to the Moab, Utah plant for ninety days temporary duty to do the job analysis for your training program? Some of the more exciting and interesting jobs will require extensive travel and good physical conditioning. Also, most of those employers will not have met their equal opportunity goals, so the potential for women and minorities is great. They pay well.

When you have reached some kind of closure on the decisions affecting your life and preferences, you will be able to prepare your resume to reflect these choices and send it to targeted employers. Read position announcements, ask your professors and colleagues, and use the library to identify those organizations you seek to join. Call or write graduates of your institution to get leads. Attend local and national meetings of professional societies if you can. If you cannot, ask others to provide you with any information they have about available positions.

What About Internships?
During the past five years, our students have had a variety of highly rewarding internships. Even if they do not seek or receive a permanent employment offer, they find that the experience of working with a journeyman instructional systems professional is valuable. When you go to interview for an internship, try to find out whether the organization really has other professionals that you can work with. I consider the absence of professionally trained journeymen to be a large red flag. We have found that many organizations want to have our students intern with former school teachers and within-plant specialists who have had no formal training in the field. Beware of these. We do not send physicians or nurses to intern where there are no trained professionals to supervise their development.

In any job there are two kinds of income: monetary and psychological.

Of the organization. For example, if you work for a bank designing and producing training programs, that is a hard money position at the bank. If you work for a “Beltway Bandit” (a term used to describe the numerous contract research and service firms lining Interstate 495 that circles Washington, D.C.) on a contract to produce a systematic tactical training system for the infantry squad, that is a soft money position. Soft
money positions are usually dependent on single contracts; however, established contractors do retain a cadre of professionals between contracts. The advantage of hard money is that it is more stable and dependable. The typical advantage of soft money is that people are paid more for the same kind of work because of the risk of interrupted employment.

Employees of the federal government, state governments, and other similar agencies usually have the greatest employment stability. They are typically paid an annual salary that is divided up into equal time intervals, usually weekly, biweekly, or monthly. Many businesses pay in exactly the same way the governments do. Some businesses will pay a regular salary, plus some kind of bonus or profit sharing addition, depending on how successful the year was.

Many instructional systems professionals are self-employed and receive a fee for their services. Typically, they will establish an hourly rate that they charge clients to provide service. These fees are billed weekly, monthly, or at some other acceptable interval. One advantage of this arrangement is that your income security increases as your client base expands; no single organization can put you out of work. You can charge as much as you can reasonably negotiate with the client.

Other professionals receive lump-sum payment for jobs completed. These people usually submit bids on announced competitive procurements where the award will go to the bidder having the most favorable proposal on technical, cost, or other grounds. Most such contracts allow for progress billings so that all the financing of the work does not have to be provided by the consultant. The advantage to the consultant is that there is the opportunity to make profits in addition to the normal salary or hourly rate. Remember, though, the right to make profit is equalled by the right to sustain loss. Such is the beauty and risk of the capitalist economy.

### How Much Will You Be Paid?

That is up to you to negotiate. Compensation packages in business and industry are negotiable. Negotiation is a learnable skill and may be the most important skill you will ever acquire. To illustrate that prices and conditions of work are negotiable, I want to tell of an experience that I had years ago. After a Saturday meeting, my business partner, a man of considerable personal wealth, invited me to lunch at a downtown restaurant.

We stopped first at the most fashionable jewelry store in town to buy his wife's birthday present. He saw a stunning diamond ring in the showcase and asked to see it. The price tag: $9200. He admired the ring, and, as he handed it back, he said, "Right now, I will offer you $6000 in cash." The owner said, in so many words, "How would you like it wrapped?" That was my first experience in learning just how much of what goes on in any business transaction is negotiable.

In the matter of salary negotiation, you have two choices: take the first offer, or, ask for more. In Table 1 are alternative incomes and total compensation based on assumptions of salary increases of five and ten percent respectively over a period of five years. Two salary assumptions are used: $30,000 and $35,000. To make the example vivid, we assume that $30,000 is the salary offered and $35,000 is the salary finally negotiated. We also assumed that you have a choice between two companies, one that has a history of five percent annual increases, and the second having ten percent increases annually. Keep in mind that you should evaluate the total compensation package, not just the salary. There are really large differences among companies in benefits packages, including retirement, health insurance, family allowances, and many others.

You can see how much money is gained in only five years by negotiating a 17% increase between the offer and the finally accepted salary. For $30,526, would you be willing to ask for more money? If not, at least take the advantage of selecting the company that has a history of ten percent increases rather than five percent. In that case, you earn an additional $17,384, and you avoid the embarrassment of negotiating. Negotiations can also be conducted with government agencies, states, and other organizations offering "fixed" salary schedules. If you are not willing to do business on their terms, you may not do well in business and industry and your children may go without shoes.

Since we all have initial difficulty actually talking about money, there are some standard procedures that you can follow to get yourself started. The important issue is not just whether to talk about the price, but when. It is both logically and empirically true that timing of negotiations is an important contributor to success. Suppose that you have a job in mind and they have asked you in for an interview. You think you want the job. You do not have any other offers.

Bracket the position first. Most organizations of any size will have salary ranges for all positions. If the position is a "Grade 32," the salary might range from $19,000 to $26,000,
depending on qualifications and experience. Here, "qualifications and experience" means your ability to negotiate. Ordinarily, it will take a lot of effort on the part of your employer to pay you more than the midpoint of the range. Create the need for them to make that effort. Give them all the information about yourself that you can so that they can better present your case to the personnel department. Provide them with a way to say, "yes." Incidentally, some employers will say that if they pay you too much this year, you will not be in a position to get as large a raise next year. Take the money this year. Any time you can have next year's raise this year, you will earn more money.

When you go to an interview, do not ever ask about salary or even think about it once before you and your prospective boss or employer can hear the thundering beats of your mutual good vibrations. This is a courtship. There is a time and place for commercial intimacy, but never before you find that you cannot live without each other.

If your suitor starts to talk about money, try gently to change the subject to the more substantive issues. Do not tell them how much you expect to receive. Avoid answering questions about your "minimum salary requirements" until it becomes rude not to do so. Tell them that it will be possible to negotiate fair compensation if the two of you are destined for greatness. The time to discuss compensation is when they have decided that they must have your services.

One of our graduates had been promoted to a responsible position in a Fortune 25 corporation. At a professional meeting, another of our graduates, badly in need of work, was discussing the possibility of joining the firm. The first question he asked was, "How much will you pay me to work for you?" Suddenly, there was no position available, even on the "old boy network."

If they want you to move to East Dubuque, make them pay for it. They should not only pay for the move, they must also recognize that it is a hardship post and be willing to make it up to you in other ways. Maybe they can pay for memberships in professional societies that meet in Bermuda, New Orleans, or Phoenix.

Try to find out what is negotiable and get it on the table with everything else. Each of the following issues has been successfully negotiated by some of my students.

Payroll date earlier than reporting date. It is possible in many organizations for you to be put on the payroll before you actually report for work. One recent graduate was on the payroll a month before reporting. This will enable you to clear up your delinquent library and parking fines, get copies of your transcripts, and pay your graduation fees with a smile. If you do win this one, make a small contribution to your school's development fund. It is only fair.

Negotiation is a learnable skill and may be the most important skill you will ever acquire.

Moving expense. Everyone knows that "moving expenses are paid." Do you know what moving expenses are? They will tell you about some of these and others they will not. How about travel to the company location for you and your significant other? They may not require it to be your spouse. Remember airport parking, baby sitting fees, and those little incidentals. Ask for a copy of their moving expense policy manual or handbook so that you can find out for yourself.

The big issues include how long they will pay for temporary housing at the location before you find suitable quarters. Some are very generous with these relocation fees. Some will actually buy your house, if you own one, and allow you time to find a place at your new site. Some will move your car. Some will move your boat. I own a box of eight-penny nails that has lived in New Mexico, California, Michigan, and Florida. On a cost basis, it may be the most valuable piece of property I own. Make sure you know how many pounds of personal effects they will move.

Vacation and compensatory time. There have been recent changes in the wages and hours laws that will affect those of you who work for state and local public institutions. While you may be in an exempt category, there still may be compensatory time off. The new law requires compensatory time to be awarded at one and one-half times the time actually worked. Private business and industry will expect you to work more hours, but they will pay you more for it.

Suppose you find that you have two job offers of approximately equal appeal. One company gives ten days at Christmas to everyone and does not charge leave accounts for it. The other company allows only two days off. You
can be inconvenient, particularly during vacation and holiday times.

Placement assistance. If you have a spouse, you may well find that the placement assistance given by your company to your spouse is a valuable part of the total package. Modern corporations are aware of the necessity of the two-income, two-career family. They will often place your spouse or assist your spouse in finding work in a nearby organization. Personnel professionals are very social creatures and belong to lots of local groups. They know what the other companies are doing and can often help, even if the company does not have an official policy.

The Ball Is In Your Court

Do not place the burden of your financial success and life satisfaction on your employer; it is your responsibility. You take care of yourself, just as Mr. Henry Ford take care of The Ford Motor Company, Mr. Iacocca will take care of himself and of Chrysler. If the significance of these remarks is not clear to you, you haven’t read the book. If you are seeking employment in business, you must read business lore books. Read Iacocca: An Autobiography (1984). Peters and Waterman’s In Search of Excellence is a very popular book in corporate circles. Read it, too.

Read the current issue of The Wall Street Journal on the way to the interview. Be able to mention an article in Business Week or Nation’s Business.

In negotiations for total compensation (salary, benefits, bonuses, and other perks), it is your responsibility to obtain the maximum before you start. If the curves in Table 1 do not make that clear to you, remember that non-standard raises for individuals are highly visible and difficult to defend, even in corporations. In your negotiations, your strategy should be to find that point on the compensation curve where your employer will not go one dollar more. Do not take one dollar less. Business, after all, is business.

When you have accepted the position, do not ever complain about your compensation. In the first place, it calls attention to the fact that you have let yourself be taken advantage of. Look in the mirror and remind yourself that you are good and that you deserve every cent of your pay. When you complain, the reflection is on you, not on the employer. If you are dissatisfied, find work elsewhere, or talk to the people who can do something about it. The “no complaint” rule applies to friends as well as business associates.

In that same vein, do not complain about your boss, your company, or your working conditions. It reflects only on you, not on the company. If you cannot make a position for yourself that you like, seek help, or find another position. Discuss your grievances first with the people who can do something about them. That is the only professionally acceptable response.

Interviews and Site Visits

The time has come. You have been invited to visit the location of the prospective employer. You are going into another culture. They speak a different language. For the most part, they will not like educationese. Avoid phrases like, “We formatively evaluated the first draft.” When you’re out of class, it is all right to say, “We tried out the materials on trainees.” In other words, when in Rome . . .

Probably the most important single concept about business that you need to master is that the fundamental objective of any enterprise is to make a profit. It is not the purpose of General Motors to make cars, they are in business to make money. When you join them, you are not there to develop training programs, you are there to help them make money. If that is not a worthy objective to you, reconsider the options mentioned during the earlier parts of this paper.

Given a choice between a high salary this year and a lower raise next year, take the money this year. Any time you can have next year’s money this year, you will earn more money.

Appearance. Regardless of whether you are considered attractive by yourself or your peers, you must learn to present yourself to your best advantage. You must learn to dress within the acceptable codes of the organization in a way that flatters you the most. Do not go to an interview in brightly col-
than to be taken to a nice business lunch and have the host unable to decipher the menu or recognize the layout of the cover. Do not present your host with a $45 nightclub tab either, unless you were explicitly invited to do so.

Smoking. In the aviation field and in many military occupations, there are numerous rules like, “Do not stand within fifty feet of the jet blast.” Remember that people paid with their lives to get that rule established. The rules I am presenting here are based on casualties of another kind. If you must violate them, understand the element of risk involved. There is no known business advantage to people who smoke in the presence of nonsmokers; you cannot afford anyone but not smoking. Some companies have rigid rules about smoking in the office or in the presence of clients or customers. No matter how tolerant your company’s policy may be, smoking cannot advance your career.

Personal confidence. Do not invite attention to your shortcomings. If you do not know how to conduct yourself in an interview, get in front of the videotape recorder with others and watch yourself. If you are incoherent, talking too softly, failing to make eye contact, slouching in your chair, the tape will show it to you. The professional bearing you must acquire is learnable. Practice until you have it down pat. The payoff will be handsome. Learn how to shake hands, look others in the eye, and talk in a firm voice.

If your employer asks you if you know about some obscure computer authoring language and you know nothing about it, remember to phrase your answer positively by saying something you do know. This is not being evasive, it is providing information to the person who is asking. Maybe something like this: Employer: “Have you used SANSKRIT?”
You: “SANSKRIT?”
Employer: “Yes, SANSKRIT, the new authoring language for the Edsel.”
You: “I spent most of my time learning TUTOR, but I would like to learn more about SANSKRIT.”

In that exchange, you have told the employer that you have learned another language and that you would look forward to learning a new one. That answer was much better than, “Gee, no, I don’t think so.”

Take a nice folder or notebook to the interview. Something with a permanent look. Do not carry both a shoulder bag or briefcase and a purse to the interviews. Take notes on specific statements they make about the job you will have. Try to obtain written job descriptions, copies of departmental plans and organization charts, and get some sense of their hopes and dreams for taking over the corporation. Where and how will you fit in? Who are your clients? You will probably be interviewed by several people. Try to remember their names and give each of them your full attention, regardless of how unimportant you think they are. By the time they get around to making you an offer, your original host may have been promoted. If any questions were unresolved when you left, follow up with a letter setting forth your understanding about what was said or agreed to.

Find out for sure where the location will be. They really may want you to work in Moab or East Dubuque. They may want you to travel a lot. Listen to what they say. Write it down. It will help you avoid surprises. You may be outside wearing a hardhat this winter. All the world’s important work simply cannot be done in San Francisco. If they say that you will travel “about one-third time,” that means that on the average, you will spend one week in three on the road. Consider your significant other and children when you say “yes” or “no.”

Some companies hire instructional systems graduates to be fashionable. If they really don’t know what they want you to do, and you like the place, don’t insist on constant feedback, make a place for yourself.

Read inspirational books and articles on job search, but don’t be overimpressed with What Color is your Parachute? (Bolles, 1980). Balance advice with reason, preference and even limited experience. You will make mistakes. When you do, recognize them, fix them if you can, try to get reassigned, and if all else fails, abandon ship, preferably in a golden parachute. Try to learn from success and from failure.

Retain this document for your records. Review it from time to time. Add your own experience to it. I would appreciate receiving any additions you wish to make or any challenges to the eternal wisdom expressed here.

Yes, you knew it was coming: Write when you find work.

References

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Succeeding as a Faculty Member in an Instructional Design Program

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Abstract. This article first defines criteria one might apply in judging success as a faculty member. The criteria are then examined in detail, typical activities described and their relative importance judged. The article concludes with a summary of suggestions for how to be successful.

Being a faculty member in an academic program that prepares instructional designers can be one of the most stimulating and rewarding opportunities in the world. Personally, other than being an astronaut, I can think of no other role I would prefer. But what does it take to be a success as a faculty member? Well, as the saying goes, “It all depends.” It depends on you and on the institution in which you work. Success can be defined both internally and externally. What makes you happy and gives you a sense of personal and professional worth and satisfaction? And what does your institution reward you for doing? Several definitions of success are offered below. Your challenge is to decide which ones will contribute to your internal and external success.

What is Success?

Success can be defined using a variety of criteria depending on the individual and the environment. Thus, you may or may not agree with the analysis and conclusion presented in this article. Your success will depend on your personal goals and values and the college setting you have in mind. Also, the relative importance of each criterion may vary widely over your career. This article assumes the setting is a major academic institution and that you seek to be a high performer. Some degree of balance among several, but not necessarily all of the criteria, is essential to any definition of success. Success is defined here only in terms of the individual, but individual success is linked to program success, a topic that is beyond the scope of this article. The criteria to be considered here are: promotion, tenure, salary, professional recognition, consulting, and “perks.” Each of these criteria is discussed below.

Promotion and Tenure

Promotion and accompanying tenure are probably the sine qua non of success as a faculty member. Failure to achieve them results in non-renewal of appointment, which, by any definition, is not success. As will be discussed later, scholarly productivity is the key to promotion and tenure in most major institutions today. Promotion and tenure are much more difficult to achieve today than in the sixties when higher education was in a boom economy and faculty were in great demand. In those days even a mention of moving to another institution often resulted in promotion and tenure. Today the situation is much more competitive and instructional design faculty must compete with their colleagues in other disciplines for the few available tenure positions that open.

Salary

Salary tends to be a relative criterion since almost no faculty member enjoys a salary comparable to colleagues in commercial settings. In fact, it is common for new graduates in instructional design to take positions in industry at salaries higher than all but the senior faculty in the program from which they just graduated. Within the university small differences in salary may result from being an exceptionally high or low performer. Faculty tend to place great weight on even these small differences in salary as indicators of their success. Depending on your institution, scholarly productivity and teaching in that order of importance are usually the basis for determining salary increases.

Professional Recognition

Professional recognition by peers may also represent success. Election to office, invitations to serve on visitation teams and citations of one’s works are some of the indicators of having achieved professional recognition. Achieving professional recognition usually requires becoming active in professional organizations including serving on committees, volunteering for task force assignments and making presentations. An active publication effort will also aid your professional recognition.

Control of Environment

Control of one’s environment is a little less easy to define. No one has complete control of the environment, but the ability to select courses to teach, select advisees and choose R & D activities in which to participate are all indicators of the degree to which a faculty member controls the environment. Becoming the resident expert in one or more specific areas (e.g., evaluation or videodisc design), will help you become identified with selected courses and may provide opportunities to be invited to work with senior faculty on their R & D projects. Obtaining your own external funding is probably the best way to control your environment, but this usually takes considerable time and effort to achieve.

Consulting

Consulting may also rank highly as a measure of success. The amount, location, type of consultation, fee, and client all affect how a faculty is perceived by colleagues and administrators. Highly successful faculty are often considered to be those who make a lot of money consulting on innovative projects and consulting only with Fortune 500 companies. Consulting opportunities arise as a result of visibility and expertise in selected areas. Active participation in professional associations is one of the best ways to generate consulting opportunities.
Perks

The final measure of success to be considered is perks. These vary among institutions but may include ample travel funds, secretarial support, phone use and equipment. Carpeting in one's office may also be considered a perk. Some perks such as equipment may affect professional performance while others, such as an office with a window, serve mostly to communicate to co-workers that one has succeeded. Since the number of institutionally provided perks is usually small, you are competing directly with your colleagues for them. Young faculty are best advised to avoid this internal competition and seek outside funding to acquire travel, equipment and supplies funds, which are the most important perks for achieving future success.

Typical Faculty Activities

We now turn to the typical activities of a university faculty member and how they are related to these criteria of success. First, the three universal functions of faculty—teaching, scholarly activity and service—are examined. Then, two activities that often place unique burdens on instructional technology faculty—organizational support and developmental projects—are considered.

Teaching

There are few activities that can compare with teaching in providing strong positive psychological reinforcement. Watching students learn and grow and realizing you are contributing to their development helps explain why many good faculty stay in universities rather than heed the call of larger salaries in business and industry. Of course, the psychological reward is largest when one is teaching students with whom one feels an affinity. These may be undergraduates, graduate majors or non-majors depending on one's preference. Being in a position to select what courses and which students to teach adds greatly to one's sense of success. Advising is another activity that can provide a sense of success. Working with bright, motivated advisees can be both intellectually stimulating and psychologically rewarding. Being a good teacher may have the additional benefit of building a core of devoted alumni who seek you out as a consultant as they move into influential positions in their organizations.

But how well must a faculty member teach and advise to be a success? The answer to this question depends on one's criteria. Unfortunately, all too often in terms of promotion, tenure, and salary, one can be mediocre in the classroom and still advance rapidly given other strengths. Being an outstanding teacher can provide great internal satisfaction. But average and even mediocre teachers receive about as many rewards from the university. The sad truth is that, short of being a total disaster in the classroom, almost any level of performance that satisfies the faculty member is defined as success in most institutions.

Fortunately, being a good teacher is not extremely difficult. Using your skills as an instructional designer to plan your own courses puts you at a distinct advantage. Caring for your students and keeping your courses up to date are also important. And lastly, being available to your advisees and being informed on current academic requirements and how to meet them will gain their lasting adoration (and high student evaluations).

Scholarly Activity

In contrast to teaching, scholarly activity is the premier criterion for measuring and rewarding performance in most major institutions. The quantity and quality of research, writing, and presentations at conferences are fundamental to success as a faculty member. New faculty must establish an active and productive agenda for publication. Publication in refereed journals and authorship of books are the two most valued outlets. Non-refereed national journals and book chapters are next in value, with state level journals, presentations at conferences, monographs and other publications being least valued.

The key to survival for young faculty members is to get into print at all three levels to build up their bibliographies. But remember, refereed publications are the "coin of the realm" in higher education. Once you have achieved status as a full professor with tenure, you may concentrate on the more valued forms of publication and be less concerned about quantity.

Funded Research

Funded research is another valued activity at most universities. Interestingly, merely obtaining funds is often used as a measure of one's scholarly performance. Grants and contracts from prestigious agencies such as NSF, Carnegie, etc. are valued more highly than those from state agencies. Furthermore, research projects rate higher than development or service contracts. However, for faculty who want to get ahead, they all count. Obtaining research or development funding requires building a solid set of ideas and then searching out potential funding sources. Matching one's ideas to the goals and priorities of the funding agency must be carefully done before spending time preparing a proposal. Proposal writing is an important skill that can be developed by working closely with successful senior faculty and by reviewing successful and unsuccessful proposals. The other key to success in obtaining funding is persistence. Most proposals are not initially funded, but through continued revision and improvement and resubmission to the same or other agencies, your chances can be greatly improved.

Service

Service activities of faculty typically include serving on committees, working in professional organizations, non-fee consulting with schools and other agencies, engaging in organizational support and participating in development projects. Committee work is the bane of existence for most faculty, but all of us face the prospect of serving on one or more committees every year. Examples are program development, promotion and tenure, search, and grievance com-

New faculty must establish an active and productive agenda for publication. It is a key to survival for young faculty members.
mittees. The best advice I can give is to seek membership on university-wide committees, but keep careful control over other assignments to avoid wasting a lot of valuable time. Exceptions should be made for prestigious assignments such as Dean search or research proposal review committees. Faculty governance committees at most institutions are largely ceremonial. They should be avoided like the plague unless you are up for promotion or need to make contacts with senior faculty in other departments.

Much of what has been said about committee work also applies to participating in professional organizations. Unless the activity brings visibility and is viewed by others as significant and valuable (such as holding an elected office), a little goes a long way. Similarly, non-fee consulting should be carefully controlled. While the value to the recipient may be great and your sense of satisfaction high, the recognition and reward from the university are usually low. Moderation, not abstention, is the watchword.

Organizational Support and Development Projects

Organizational support and participation in development projects are two areas in which there are unique demands on faculty in instructional design and technology. Demands on time arise because of the expertise instructional design faculty possess in analysis, design, production, evaluation and organizational change. ID faculty also have an action orientation and are used to working under short time lines and as part of a team. These skills are in short supply on most college campuses. Hence, extra demands often fall on ID faculty. Failure to recognize these unique conditions can be hazardous to your professional health.

Organizational support activities such as helping to establish a technology services center or conducting a needs assessment for a new degree program in another program area are often of great interest to college administrators. In seeking guidance and assistance they frequently turn to instructional technologists who are seen as having appropriate expertise. Faculty in other departments may also seek out technology faculty for advice and assistance in planning projects, selecting equipment and materials, producing instructional materials, designing facilities or designing project evaluations. While it may be gratifying to be sought out for your expertise, these requests can become a bottomless pit, consuming vast amounts of time and producing little reward. Probably the best way to avoid this problem is to schedule less of your time in the office and more in the library or working at home.

Development projects within one’s department, or even directed by you, can create the same dilemma as requests for organizational support. Managing one development project is an excellent professional experience. Managing a second and third project rapidly decreases their value as a learning experience. To avoid the trap of becoming very busily engaged in routine production and management tasks, the type and amount of your participation in development projects must be carefully monitored. Here are some suggestions. Pick projects that have high potential for publication and hence visibility. Avoid large, long term projects unless the payoff is very high and select projects whose scope is within your immediate area of interest. Consider the location and how much time and logistical complexity remote sites add to the project. Avoid the appearance of conflict of interest between private consulting and university related projects and consider the potential for student involvement as interns or employees. And finally, seek funds to hire a “go-fer” or project assistant to handle much of the routine associated with projects.

In summarizing the areas of organizational support and participating in development projects, it is best to use caution. Certainly the experience gained and contacts made can be invaluable. The key to success is judicious selection of activities in which to participate. Projects add to the vitality and excitement of an instructional technology department. They provide a source of financial support for students and credibility for the faculty. They also provide a proving ground for new R & D efforts and can keep faculty on the cutting edge. Unfortunately, they can also burn out faculty, trap them into a cycle of repetitive activity and grind them down with mindless detail. Striking a balance among these conflicting conditions is essential to long term success.

Conclusions

The following statements summarize my advice on how to be a success.

1. Balance competing demands. No single criterion of success can provide

you with both psychological and financial satisfaction.

2. Guard time for scholarly activity. Young faculty should work on articles and presentations first and then move to books.

3. Do a credible job of teaching and advising. Your self respect and the reputation you build with students and alumni provide ample reward even if your institution does not.

4. Select development projects for their research and publication potential. Don’t do a lot of projects from which you will not learn or publish (or both).


6. Consult for growth and profit. Seek consulting opportunities that provide for your professional growth and contracts.

7. Limit service activity. Some is necessary, but a little goes a long way.

8. Limit organizational support activities. See number seven above.

9. Go for the perks. Go especially for perks that will improve your productivity or visibility nationally (computers, travel, telephone, etc.). Don’t go after perks for show. They may make you a target for some of your colleagues.

I would like to add one final editorial thought. I hope this article has not convinced you to avoid a faculty position in higher education. Higher education is imperfect, but so is everybody’s world of work. There are many happy, successful and relatively prosperous faculty in ID programs at major universities. Each is quite different in temperament, interest and activities. Yet all are highly successful by the criteria described above. I encourage you to become a faculty member (or stay in the profession if already there). These are exciting and challenging times and we need all the good minds we can get.

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Getting an Instructional Design Position in the Defense Industry

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Many instructional design positions can now be found in the defense industry. These include Department of Defense (DOD) civil service positions, and positions in companies which provide training services to DOD. Thirty years ago the majority of persons in military training were military personnel, retired military personnel, and civil servants in DOD organizations. However, as technology became more complex, military training began to require more in terms of planning and development than could be provided by personnel not skilled in the theory and practice of learning. Thus was born the requirement in the defense industry for persons trained in instructional design and development.

Obtaining an instructional design position in the defense industry has become highly desirable because this arena offers some of the highest salaries in the field, many opportunities for advancement, and opportunities for growing into related areas. Obtaining a position in this area, however, requires some special effort on your part. In this paper, I will cover some standard rules of thumb that apply to all job hunting, as well as some guidelines that apply directly to jobs in the defense industry.

Job hunting involves pre-interview preparation and post-interview follow-up. It requires feeling comfortable and confident during the interview in order to present your best self to the interviewer. In addition, it involves knowing as much as possible about the position and the agency. The suggestions that follow are organized around this framework.

Pre-interview

Before you begin job hunting, take some time to survey the types of positions available in the field of instructional design, and select those in which you have interest. This information is available in the job listings in your department or university job placement office, in trade journals and from graduates of your department. In addition, the defense industry often has listings of companies that may have training positions, which can be obtained from job incumbents. Once you have surveyed the area and identified the companies and/or agencies for which you might like to work, prepare a resume and cover letter and send it to them. If you are interested in civil service, you must complete an SF (standard form) 171, and follow the current procedures for civil service job application.

The Cover Letter

The purpose of the cover letter is to form a bridge between your resume and the job description. The cover letter should be written point by point to match the job description. If the description you have is scant, try to obtain more information by calling the employer. It is not necessary to talk to the employer himself. Instead, talking to the secretary may be more fruitful. Or, you may talk to the personnel office, which usually has a good job description. An employee or another person in the industry may be able to supply some insights into the job. In any case, organize your letter around the job description and briefly summarize your experience and education relating to each point. This shows that you understand the job requirements and that you have the background and experience to perform this job. After reading the letter the employer has an "advance organizer" for reading your resume. As the employer reads the resume, he will concentrate on those areas primarily applicable to the job opening, as you have outlined. In other words, you are directing his review of your resume.

The Resume

The resume for a position in the defense industry should be tailored to that industry. You want to emphasize any experience in military training. Experience in the military or in areas considered subject matter in the defense industry should also be emphasized. Less relevant experience should be noted, but not detailed. A resume for the defense industry should be concise—two to four pages. Tailoring a resume is time-consuming, but it is necessary to communicate your appropriate experience to the employer. If you have a lot of experience, it may be difficult to restrict it to four pages, but a longer resume, or a vita, will probably not be read, and valuable experience will be overlooked. If you are applying for a civil service position, the job description will list four to six points of required experience. You must respond to these points specifically, outlining your experience. These pages should be attached to the SF 171 where it says to add Supplemental Pages. Usually, no one will tell you to do this.

The Phone Call

After the employer has reviewed your letter and resume, one of three things will occur—nothing, a no-thank-you letter, or an invitation for an interview. Usually the invitation will come as a
phone call. Be prepared for it. You have sent out applications; expect that someone will invite you for an interview. This means, when you receive the phone call, be professional—be prepared to say yes or no to the interview time offered, or to suggest an alternate time. It is best to take the time offered, if possible. Do not stumble around, or offer explanations as to why that time is not good. Say, “Yes, I can make it,” or “That would be difficult for me, do you have another time available?” Realize that the employer is trying to schedule all of the interviewees, and that several interviewers may be involved in the process. The employer will usually realize that your time is also important, and will try to accommodate your schedule. Also, ask how long the interview will be, if this information is not provided. Some interviews take one or two hours; some take a day. Try to leave extra time after the interview in case it runs late. Although most organizations will try to be timely, anything can happen. You should not be the one to end the interview, especially if it’s going well. The interviewer should end the interview.

Make a list of questions you want to ask about the job and the company. Put them in your notebook. Intelligent questions about the company are as important as intelligent answers.

Preparation

Before you go to the interview, prepare yourself. Know yourself—your strengths and weaknesses and your background. Review yourself in light of the job for which you are applying. When the interviewer says “Have you ever done front-end analysis?”, be able to respond with a positive answer if you have, and be able to describe the situations in which you performed this skill. Also be able to cite where you did this and for how long you did this. If you haven’t performed a certain skill, say so. If you have had courses in the area, respond with, “I have education in front-end analysis, but I have not as yet applied this skill.” What you have said here is that you have the skill; you have just not had the opportunity to use it. Be prepared to respond in a confident manner if the interviewer asks for a reference. Offer a name or a list of references if you haven’t already provided one. Remember, you can take notes to the interview. It’s all right to carry a small pad both as a reference and for taking notes during the interview.

Next, know the job area and what the company does. Do not go into an interview not knowing why you are there. Do some research. Again, calling the company’s personnel department or the employer’s secretary is best. Sometimes you can find data in trade journals or from local business organizations. It’s always nice to tell an interviewer that you noticed that the company just won a big contract or an award. But its nicer to know why you are there. If your background is in education and you are applying for a job with the defense industry, talk to someone who has a similar job (check graduates in the defense industry) and find out what these jobs require. Many companies want the employee to have subject matter expertise. Be able to cite your experience in subject matter areas or areas which are similar or related. Some companies want their training developers to be instructors also.

Questions

Make a list of questions you want to ask about the job and the company. Put them in your notebook. Intelligent questions about the company are as important as intelligent answers. The interviewer will expect these questions and will usually ask you what you want to know. Not having questions indicates that you are just trying to get any job, and have not really considered working in the defense industry.

Additional Materials

Bring a few examples of your work in case you are asked. Carry them in an attache case, not in your hand. Give the interviewer only the one(s) requested. If none are requested, take them home.

The Interview

A first impression is irrevocable. Be prompt, look good, and be professional. Get to the interview location early so that you have time to find the rest room and check your appearance. Go into the office and tell the secretary who you are and why you are there—“I am Bob Smith and I have a two-thirty appointment with George Taylor.” If you have spoken to the secretary earlier and know her name, use it. Secretaries are generally wonderful people who can be your best allies. When the interviewer comes out and greets you, shake his hand firmly and speak clearly. Interpersonal relationships and communication are a part of the job in this industry. Once the interview begins, expect most of the following to be evaluation points during your interview.

Professional Demeanor

In this business you will be expected to interact with the client who will
usually be military personnel. You may also interact with Department of Defense civil servants. The level of professionalism you show during the interview will be viewed as the behavior you will extend on the job. This does not mean be stiff and formal; it means be comfortable and friendly, but always professional.

Knowledge

The defense industry. If you have done your homework, you are ready for this. For example, you may be asked if you have ever designed instruction that included training device specifications. It is all right to say no; it is not all right to say, "Training what?". It is especially important to know what this industry is about in order to decide if it is suitable for you. It is a technical business, requiring the instructional designer to gain knowledge about the operation and maintenance of vehicles and equipment which are often computerized and employ state-of-the-art technologies. This knowledge will only come on the job; however, knowledge of computers, simulation, video disc, computer-based instruction and similar technologies is important. You need not have had specific courses, but reading some of the trade journals, such as Instruction Delivery Systems, can make you conversant in these areas.

Instructional Systems Development (ISD). It is essential that you communicate your understanding of the theory and application of ISD. The military adheres to ISD models that are based on the Interservice Procedures for Instructional Systems Development (1975) developed by Dr. Robert K. Branson, et al., at Florida State University, for military applications. When interviewing, you must first discern if your interviewer is a fellow instructional designer. If so, you can speak more technically, using ISD jargon. However, if the interviewer is non-ISD, you must communicate your knowledge and abilities in layman's terms. The defense industry is more interested in your ability to apply ISD under varying circumstances than in your adherence to the perfect ISD model. In fact, if you are a purist, this may not be the business for you.

Skills

Oral communication. As mentioned above, your ability to discern the experience level of your interviewer in ISD and then communicate on that level is extremely important. Much of the front end analysis in the defense industry is performed during interviews with military subject matter experts who have a variety of backgrounds and experiences. You must be able to communicate your interest and requirements to them in such a way as to ensure their understanding and cooperation. The only way for an interviewer to judge your oral communication skills is by your performance during the interview.

Organize your cover letter around the job description and your education and experience so that the employer has an "advance organizer" for reading your resume.

Written communication. The first examples of your written communication are your resume and cover letter. These are extremely important. If these are sloppy or grammatically incorrect, you will not be called for an interview. Samples of the work you have brought may be useful here. Be prepared to leave the samples with the interviewer unless it is something not copied, like a brochure or book. If the interviewer wants to look it over, ask if he can send it back to you.

Organization. The way you present your information to the interviewer will demonstrate your organizational skills. Again your preparation and notebook are useful here. Take a moment to think before answering a question. Recall that the basis of the instructional design process is logic. As an instructional designer, you must discern the structure of a job and analyze it. Task analyses, flow charts, objectives hierarchies and course outlines are all logical structures requiring organization. Some of your work samples may be appropriate here also.

Team performance. In the defense industry you will often be required to work as a team member. Be able to cite any experience you have had working on teams and your responsibilities as a team member.

Independent performance. It may sometimes be expected to work with little or no direction. Show that you have the ability to take control of a situation and develop your own structures and perform within them. Cite some examples of independent activity on your part.

Experience

The interviewer will use your resume as a guide to the interview, and ask you specific questions regarding jobs you have performed. He will ask you to describe what you did during the curriculum development for the flight simulator at Hi-tech Inc. He will very often ask you what difficulties you encountered during a job. He is interested not in the problem as much as in what you did to overcome it and to complete the job on time and within budget. You will be asked about your experience in
the following areas.

Instructional systems development. It is important to have experience which demonstrates your application of the principles of ISD. If you are going to be looking for your first job after graduation, get some experience whether through a graduate assistantship, consulting, or developing some instruction on your own time.

Technical/military training. You will be asked if you have any experience in military training. If not, then bring up any experience you have in technical training areas. You will not, of course, be expected to have this experience if you are a recent graduate or applying for a low level ISD position. However, the interviewer will try to discern if you can handle technical subject matter. So if you have any technical experience in training or otherwise, bring it up. Computer skills are also very important. Many businesses now provide computer terminals at each work station. Finally, be sure to mention military experience, if any.

Technology. Be sure to detail any experience or education you have in computer-based instruction, simulation, video-disc or other high technology areas. These skills are essential in the military training/simulation industry.

Proposal writing. This is an area of the highest import in the defense industry, as this is how business is obtained. When a request for proposal in an area in which the company has been marketing is released, the necessary company personnel will be excluded from all other duties to write the proposal. Experience in proposal writing can be a significant plus in your interview. Many of the treatises on proposal writing are unpublished; however, Positioning To Win—Planning and Executing the Superior Proposal by J.M. Beveridge and E.J. Velton (1982), would be useful to review.

Post-interview

If the interviewer has not indicated when you can expect to hear from him, ask. Then, immediately write a thank you letter to him. Reiterate the response time he has given. You can also say something about the job you are really interested in. Mention the match between your skills and how you feel that this job is one in which you can excel. Then, wait two or three days after the indicated response time and call if you have not heard from the employer. Introduce yourself, mention the position, and ask if a decision has been made. If a decision has not yet been reached, ask if there is any further information you can provide. Ask when a decision is likely to be made. If you need to make a decision yourself, say so. Be prepared to state the date by which you must make your decision. If the employer is very interested in you, he will try to accommodate you.

Performance

During your interview you may be asked to demonstrate your skills in some practical way. You may be asked to perform a development task. In this case, you will usually be isolated and given a specific period of time. Take time to review the question and organize your response. Or, you may be given a scenario and asked how you would apply the principles of instructional design to solve the problem. If you are not isolated to do this, you may want to ask some questions. But first, take some time to think and to organize your response. Or, you may be asked to respond to materials. For example, you may be given a list of objectives or some curriculum materials and asked for a brief evaluation. Here's where your performance and response will be evident. You may ask about the materials, trying to discern if the interviewer thinks they are good or bad (or whether he wrote them himself). Review the materials and give an honest, but carefully-worded, review. Never make an overall statement of how good or bad they are. Instead, highlight specific areas that are, first, good, and then some that might need improvement. This task also highlights for the interviewer your ability to evaluate, as well as to communicate in an honest but tactful manner—a skill you will employ often in this industry.

Conclusion

Getting the job you want requires a great deal of thought, time, energy, and some cost. The most important aspect of

References


Getting a Job in the Field of Instructional Design and Succeeding at it: Reactions to the Papers

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There are several themes that run through these accounts of jobs in a variety of settings. First, I would like to say that the reflections, the problem analysis, and the advice given are generally excellent. The contributors to this special issue have each realistically described the job situation with which they have had experience. Their comments are both authentic and insightful. To the extent that they can inform about useful procedures, and help to establish salutary attitudes, these comments should be highly valuable to students of instructional design.

We are told that instructional design is not a part of the established order, either in industry or in universities. In industry, as we are all aware, training itself has always taken a back seat to production and marketing. Even more naturally, then, the improvement of procedures of training occupies a place rather far down the totem pole of operations. This reminds us, at the very least, that training improvements that contribute to the lowering of costs and the increase of profits are bound to command greatest attention. The pill that will replace a two-week training course will obviously be a runaway best-seller.

Training has always taken a backseat to production and marketing and is far down the totem pole of operations.

decades neglected the essential problems of human learning for dogged pursuit of the problem of verbal memorization. Unfortunately, established traditions like these tend to carry over into the definition of jobs in that most traditional of organizations, the military. Here, too, no civil service job classification of instructional designer is yet in existence.

The positive side of this message is, however, a strong one. Instructional design is a distinctive specialty that has sound technology to offer. It is distinct

In universities, economics shows itself not through profits, but through concern for job security in a highly labor-intensive occupation. Here the uphill task is composed of struggles like removing the "instructional" from well entrenched departments like Curriculum and Instruction, which have been living a lie for many years, or in nudging Psychology to admit that it has for from "subject-matter expertise" and also from "technical writing." While striving to become an expert in these other fields as they can within brief time limits, instructional designers can represent themselves. I believe, as professionals who can tune printed communications or those of other media to the needs and capabilities of learners, and therefore to the requirements of efficient learning.

In other words, the positive message is that instructional designers have some technical knowledge that is highly valuable to education and to training. That knowledge must be guarded from contamination, and not compromised by the various influences of the marketplace. That knowledge must instead by continually polished, refined, and strengthened. The availability of jobs, whether in academia, government, or industry, will ultimately be determined by the high quality of performance exhibited by instructional designers.
Getting a Job in the Field of Instructional Design and Succeeding at it: Some Thoughts and Reactions

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Major Points Presented in the Articles

There are some common threads throughout these papers as to how that first and, perhaps, succeeding job is obtained. Among the points worth noting are the following:

- Before you make phone calls, write letters and request interviews, you should segment that part of academia, business or industry in which you would like to obtain employment. Further stratification by geographical area is also a worthwhile process in taking into consideration personal lifestyle constraints that may limit where you want to work. A last layer of segmentation is suggested in evaluating the intellectual challenge, diversity of work assignments, and travel opportunities inherent in a potential position.

- Jobs are not always advertised. There are several methods that organizations use to identify qualified applicants. These include: college placement centers, advertisements in professional periodicals, newspaper advertisements, personal inquires with faculty or practitioners, employment agencies, recruiting and search firms, and referrals from internal staff members.

- The interview process begins as you establish contact with key personnel in the networking scheme or within the organization where you are seeking employment. It then proceeds through the resume, telephone contact, personal interview and continues through the follow-up contacts that lead to the job offer, negotiations, and acceptance.

- There is wide variation in salary, benefits, career advancement opportunities and other prerequisites in the different types of organizations employing instructional designers. Differences in these aspects of employment may themselves be a determining factor in choosing the type of organization and geographical location where you seek employment.

- Signs and symbols of career success have both personal and societal referents for success. Included in the personal list is the ability to control your working environment, publishing and consulting opportunities, social environment and the level of professional recognition both within and outside the organization. Societal rewards in the field of instructional design are, in reality, no different than for other professions. These rewards include increased job responsibility, level of compensation, office space and appointments, size of budget, expense approval authority, and opportunities to continue professional activities under organizational sponsorship.

- Career success may be enhanced by joining and maintaining memberships in professional societies, staying current in the field of instructional design, making and maintaining contacts with other professionals who may serve as mentors or personal counselors throughout your career, and making sure others learn about the quality of your work.

Some Additional Thoughts

My thoughts on these papers are, of course, influenced by my experience, and therefore reflect some of my opinions about current issues in the field. For instance, there seems to me to be too much concern over compensation, benefits and perquisites. Those authors advocating a career in academia lament underpayment for their services. Those
encouraging a career in business or industry lament the loss of personal and perhaps intellectual freedom found in academia. As a society we need the most capable faculty we can find to staff our colleges and universities. I would discourage anyone from seeking a job outside of an educational institution solely on the basis of financial rewards. Conversely, I would be among the first to discourage those seeking academic and "intellectual freedom" from seeking employment in organizations where such behavior is not rewarded and may, in fact, be punished.

In either case, the choice of where and in what setting to pursue a career is a personal one. It involves both personal and professional trade-offs. I firmly believe the best service we experts can provide job-seekers is timely and accurate information from which they can make their own career decisions; when required, we can also provide objective counsel, support, and encouragement.

The advice to gain the proper educational background was well-intended. The reality, however, is that instructional design requires no license, is unregulated, and is practiced by individuals with educational preparation for careers in other fields. In fact, many of us currently employed in the profession of instructional design began in jobs and careers unlikely to follow a career path leading to our present positions. Instructional design both as a course of study and profession is a technology based on a solid basis of research but still very much in its infancy with regard to wide-spread application. I believe it to be a specialized technology that remains largely unrecognized as such by many persons in other professions. Its very future is being formed by those who teach and practice it. It may be a surprise to some that not all who practice it were, or are, prepared to do so. Many who do practice it are ill-prepared, and through their supervisory prerogatives they may hinder the progress of its application by the qualified practitioners they manage. This situation is unfortunate because the clients' judgments of the work done by people in the field will be the determinants of the long-term career opportunities in instructional design. If that work is judged to be unsatisfactory, then the profession is bound to suffer.

The journey toward a successful career in instructional design has many obstacles along the way. Tenure has a new meaning in today's academic set-

ring, job security in business and industry is not what it once was, budgets change from time to time, organizational priorities do not always support our individual aspirations, and career paths are irregular and unpredictable.

I believe that a person who desires a long-term career in instructional design might be better served beginning his or her career in another field. While not always the best advice, and as contrary as this observation may seem on its surface, it is one that holds empirical validity in the careers of those who are now tenured experts in instructional design. While taught as a science, it is practiced as an art. Therefore, it may be worthwhile to begin a working career in a job where you can learn another, perhaps more widely-recognized, skill and identify ways in which the applications of instructional design can benefit the organization. It is a path that will lend you some credibility with those in key management positions, upon whom your future success and career opportunities may very well depend. This unlikely career path may, in fact, lead you to enter the profession of instructional design in a management position rather than as an entry-level technician with less opportunity to gain the organizational support necessary to obtain a supervisory job.

It may be news to some readers that instructional designers in most organizations are considered as support staff. They make few "bottom line" organizational decisions and very often don't even have a voice in them. Frequently, they and their departments are subject to the earliest of budget reductions during times of limited fiscal resources. Their contributions to the organization's improvements are rarely recognized. At the same time, organizational performance deficiencies are nearly always training-related in the eyes and minds of time management. And, sadly enough, in this world where management laments for the want of a "qualified" and "skilled" workforce, it is not at all uncommon for instructional designers and their departments to be considered a luxury rather than an absolute necessity.

Another eye-opener for some is the sobering realization that in business and industry, graduate degrees in instructional design often do not have the leverage provided by other advanced degrees. As a result, there may be less initial, and perhaps long-term, potential for high compensation levels and other individual financial incentives than found for MBAs and other more "technical" degrees. In instances where this observation is found to be erroneous, we are most likely to find that it has been overcome via effective networks and personal relationships with key decision makers within the organization.

In conclusion, in spite of the present realities of the profession, I strongly believe instructional design as a career field is one with an exciting future and will be one of many opportunities and rewards. This is particularly evident in the need for more technically qualified and skilled personnel in an increasingly sophisticated market place.

Gaining a job in this field requires planning, flexibility, adaptability, making a few short-term sacrifices to achieve desired long-term outcomes, determination, and tenacity in facing the challenges ever present in any profession or career.

Readers of these papers should find themselves enriched by the robustness and diversity of the opinions that are expressed. By following the advice expressed in the papers, readers should be better prepared to enter or continue in the profession of instructional design. In addition, I believe readers will gain an understanding that career success in instructional design is an individual measure of satisfaction, based upon personal values and the knowledge that you did your best with every opportunity along the way. For, in the end, the pursuit of the prize is the most exciting and challenging phase of any career.

Improving Individual Performance by Dean R. Spitzer is one of ten books in the Techniques in Training and Performance Development Series. In Spitzer's own words, "The purpose of this book is to explore a wide range of options available to trainers in working with individuals." To that end, he has assembled within the space of about 130 pages over 70 techniques designed to enhance individual learning in the group context.

Spitzer's techniques are organized according to the stages in his defined learning process: Preparing for Learning, Organizing Information, Practice for Retrieval, and Evaluation of Learning. Each technique is designed to address a specific need within a particular learning stage. For example, the Personal Needs Analysis Technique in the Preparing for Learning stage asks trainees to think about their own objectives for the training in which they are participating. In this way, Spitzer believes trainees tend to focus more clearly on their specific learning needs. In addition, trainee responses can provide valuable information for trainers attempting to meet those needs.

All of the techniques presented are compact and designed to be easily implemented in the real world. Many simply involve trainee participation and do not require significant materials development or redesign of an existing course.

Having said all this, does the book achieve its aims? I believe it does. Spitzer does indeed offer the trainer a wide variety of options for enhancing individual learning in a group situation—options he claims are useful, based on his own experience. Even seasoned trainers will undoubtedly discover a number of techniques that are unfamiliar, thought provoking, and useful.

This is in fact the book's major strength. Spitzer has targeted a very specific area—individual learning in a group environment—and offers a multitude of unique and practical approaches to achieving that goal. Some of my favorites include: The Pre-Course Trainee-Trainer Contacts Technique, the Personal Vantage Point Technique in which trainees are asked to view the course from various perspectives, the Objective Rewriting Technique in which trainees revisit the course objectives at various points in the course, and the Benefits and Costs Techniques in which the trainees evaluate the course based on their personal and professional "benefits" and "costs".

The only weakness in Spitzer's book is the somewhat uneven quality of the techniques. In an attempt to provide a broad range of options, he has included a few that I believe are trivial and could easily have been excluded. The "Creative Name Tags" and "Bumper Stickers" techniques for example, have a very limited value compared to the other techniques offered in the book. Fortunately, these examples are few and far between and should not discourage the potential user.

I highly recommend this book to anyone involved in any phase of group instruction from design through evaluation. The ready-reference, practical approach that Spitzer takes has resulted in a useful tool for trainers seeking strategies to enhance individual learning within their programs.

Whether or not the techniques Spitzer offers will work in a specific training situation, only application and time will tell. At the very least, however, Improving Individual Performance offers trainers a number of useful and imaginative techniques which they may modify to meet the needs of their learners.—Reviewed by Joe Williams, Bank of America, San Francisco.


Instructional Technology: Foundations is worth buying for the introduction alone (Chapter 1). In it Gagné describes the state and nature of our field beautifully. His sentences seem to flow from a bottomless reservoir of experience towards the common vision he articulates so well.

The book started out as an outline of topics that would clarify the state of knowledge in the field. The goal was to represent all the dimensions of Instructional Technology (IT) in one volume through chapters written by well-known contributors to theoretical areas. Gagné reports that the task of writing the chapters "... was undertaken with goodwill and immediate understanding. This fact itself reveals something about the field—that despite its disparate origins, there is a consensus in conceptualization of instructional technology as a field of research, development and application."
The result of this collaboration is a superb reference on research and theory related to conditions for effective instruction. The research and theory can come from studies on learners or media-delivery systems but whatever the source, its purpose is to clarify ideal conditions for learning. The thirteen contributed chapters are presented in the order of steps in the ISD model. Chapters 2-4 give background information on theoretical bases for the field. Then, the analysis step is described in chapters 5 and 6, instructional strategy in 7, 8, and 9, media strategy in chapters 10, 11, and 12, and processes of design and development, such as evaluation, project management, and diffusion in Chapters 13-16. The list of authors includes: Robert Glaser, Bela Banathy, Roger Kaufman, Sivasailam Thiagarajan, Charles Kieguth, Sigmund Tobias, Malcolm Fleming, Robert Tennyson, Robert Morgan, Eva L. Baker and many others. Chapter topics include: history of IT, learning research, system design, identifying requirements for instruction, job and task analysis, instructional models, aptitude treatment interaction, displays and communication, innovations in telecommunications, computer-aided education, artificial intelligence, assessing outcomes, planning and development, and utilization of instructional systems. While each author assumes a different viewpoint and chapter organization varies from chronological, to enumerative to logical, a consistently high quality of writing is maintained.

Most of the theory has been published previously, for example, Kaufman's Organizational Elements Model or Fleming's principles of message design, yet because each chapter has been written expressly for this book in order to summarize knowledge and trends, the presentation of information is fresh and illuminating. Thus, Kaufman's OEM theory is presented more concisely than in past publications. Newer areas of concern such as maintenance are considered as carefully as older areas such as task analysis. Another strength of the volume is the many ways the potential contribution of cognitive science research is analyzed through chapters on learning research, computer-based education, and artificial intelligence.

The instructional designer who uses the concepts of macro and micro design will find both concepts addressed explicitly and implicitly. There is a concern for design at the levels of both task analysis and component display research.

This is another milestone book in a decade that has seen several such books—Richey's Theoretical and Conceptual Bases of Design, Kieguth's Instructional Design Theories and Models, Heimlich, Molenda and Russell's Instructional Media and the New Technologies of Instruction—to mention a few. The conclusion that the field is maturing is inescapable. After reading the book I found myself wondering "What has Gagné left out?" Very little! I could think of only two major foundation areas; although I'm sure others will think of more.

The first is no matter how clearly he presents the concept of IT, the field is dogged by the dual meaning of IT as hardware and process and by the necessity of explicitly incorporating the term instructional design as well as the concept. Gagné wisely did not pursue the definition problem in depth, wisely because the book already tackles enough areas. But perhaps more could have been done to make the reader knowledgeable about definition issues at an awareness level. The second topic I wish had been explored is research on environments and its potential contribution to instructional design and technology. This topic would have required reporting on classic studies and exploratory areas that are currently generating excitement, such as constructivist theory and social models.

This book is an excellent reference on the continuity of the past, present, and future in the IT field as seen through the eyes of researchers and theorists. It is readable enough to be used as a text in an advanced course.—Reviewed by Barbara Seels, Associate Professor, Instructional Design and Technology, University of Pittsburgh.

A prescriptive theory of learning which delivers prescriptions for designing prototypes of instructional materials with different knowledge structures, the Elaboration Theory of Instruction (ETI) is based on important principles and theories of learning and instruction. This paper reports three experiments which tested ETI. The first experiment was concerned with the effect of ETI and individual differences (prior knowledge, cognitive style, anxiety, motivation, learning strategy, and attitude). Subjects were 18- to 20-year-old students in a middle technical school. The results confirmed the hypothesis that the strong structured approach of the ETI is effective for students who need external cues in the text. The second experiment, which was conducted with 14- to 15-year-old high school students, focused on the effects of synthesizers in text processing. Few differences were found between the conditions, but there was a tendency for students in the general-to-detailed sequence to perform better. The third experiment explored the possibility of using ETI for adaptive text presenta-

tion involving learner versus text control of the learning process. Subjects were undergraduate education students. It was found that students in the learner control condition retained information better and longer. The need for more research on the amount of training in the use of learner control to optimize performance is noted. A list of 32 references and six data tables are attached. Microfiche 78 cents, paper copy $3.70 plus postage, as document ED 274 313.


The behavior of approximately 50 employees learning to use a Los Alamos National Laboratory personnel information system with fixed-format and context-sensitive online help was monitored through direct observation in the following situations: training workshops, actual use, logging of consulting phone calls, and interviews. Information was sought to determine: (a) the type of training that would produce the greatest amount of learning for these users and their preferred learning styles, (b) how frequently they accessed online help, (c) the number of consulting calls that could have been answered by online help and the learning styles of the frequent callers, (d) ways to improve online help, and (e) whether the time invested in generating extensive online help was cost effective. Three preferred styles of learning were exhibited by users. Those with a guided discovery learning style were the most willing to access online help; users with a discovery learning style tended to enter an option to see what happened instead of accessing help, and the structured style learners were more nervous about using function keys and accessed online help the least. The context-sensitive help tended to be accessed when users were in trouble, and it seemed to be more frequently accessed and more useful to learners than the more general fixed-format help. It was also found that help that is context-sensitive (but not "intelligent") does not require major increases in software development resources. Microfiche 78 cents, paper copy $1.85 plus postage as document ED 276 305.


This research was conducted to compare the effects of a cooperative instructional context with a competitive instructional context on the verbal and nonverbal behaviors of same-sex student pairs within a microcomputer environment. Subjects were 20 male and 20 female sixth-grade students who were randomly assigned to same-sex pairs. All pairs were assigned to both experimental conditions, which consisted of playing the educational game, "Dueling Digits." In the cooperative condition, students worked together to score 100 points within a 20-minute session; in the competitive condition, students worked individually and the winner was the one who scored 100 points first. Videotapes were made during the experimental sessions and students completed self-evaluative questionnaires at the end of each session for both treatments. The statistical model used to
analyze the data was Analysis of Variance with repeated measures. Findings indicated that competitive instructional contexts promoted more self-oriented and belittling behaviors than a cooperative one, and that the cooperative instructional context promoted more other-oriented and positive behaviors, although some negative behaviors occurred in both contexts. The pairing of students by sex was not found to be a basic determinant of variance in student interaction. A ten page reference list is provided, and appendices include excerpts from student observation records, the conventions used to code data, the student questionnaire, and statistical data. Microfiche 78 cents; paper copy $1.85, plus postage as documented ED 276 305.


A general science course designed to meet one of the science requirements for prospective elementary school teachers at the University of Alabama emphasizes mastery learning of factual content, and is intended to provide an overview of the several areas of science that typically constitute elementary school science. This course is one of three developed at the university which use the "Keller Approach" to provide individualized instruction. At the beginning of the semester, each student receives a course outline with the topics to be covered, textbook assignments, and descriptions of the course and procedures to be used for progress checks, attendance, the final examination, and final grades. The course consists of 18 units, and all units must be completed in sequence. Prior to starting work on a unit, each student receives a study guide for that unit which includes an introduction to the unit, a list of the objectives to be mastered, and a suggested procedure to ensure mastery. A quiz is given on completion of each unit. The staffing consists of one professor and five student proctors. Attendance is not required at each class period. However, the professor is present to assist students who need help and to administer unit progress checks. Final grades are based on a single comprehensive examination and two points are given for completing progress checks on time. Leaders in the class may earn bonus points by serving as student monitors. Appended materials for students include an outline of the course, the course description and procedures, the study guide for Unit 12 (Engines), and a unit progress schedule form. Microfiche 78 cents; paper copy $1.85, plus postage as documented ED 246 337.

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