

## **Improving Learning at Universities: Who is Responsible? Evidence-based Recommendations**

ELMAR Contribution by J. Scott Armstrong  
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In response to my Letter to the *Wall Street Journal*, The University of Pennsylvania *Almanac*, a newsletter for faculty and staff, requested that I recommend how learning systems should be designed. They also requested evidence for these recommendations. The following essay was published in December 2004.

Improving Learning at Universities: Who is Responsible?  
J. Scott Armstrong

Recently, I published a letter in the *Wall Street Journal* (Armstrong 2004a) with the basic message that business school education has been losing effectiveness. Most important, students are not learning to do things, such as making an effective oral presentation, writing a persuasive management report, listening to others, conducting a meeting, or using statistical procedures to analyze data. This problem is not confined to business schools; it is plaguing the educational system on almost every level. My letter drew responses from alumni, faculty, recruiters, consultants, and students. Nearly all of them agreed with my assessment, claiming that the problem is rampant but ignored. As I will show below, however, evidence-based suggestions can resolve the problem.

This problem is not just based on perceptions. Much research (e.g., Attiyeh & Lumsden 1972; Berg 1970; Hunt, Chonko & Wood 1986; Pfeffer & Fong 2002) has documented the failure of formal education to enable students to become more effective on the job or in other aspects of life. One way to refute this conclusion is to find empirical evidence showing that formal education is more effective than job experience at improving skills (holding cognitive and other abilities constant). However, I have issued this challenge for a number of years and have been unable to obtain such evidence.

Why is the educational system ineffective in teaching people to apply their knowledge? It is that we have designed a system that convinces most students that they are not responsible for their own learning. Surprisingly, the problem starts as soon as people are placed in groups. Zajonc's (1965) review of social facilitation research, done on rats and students, found that when subjects observe the critical responses of others, their learning is inhibited. This led Zajonc to conclude, "students should study alone," (He did not provide advice for rats). The presence of a teacher compounds the problem (Browne et. al. 1991; Tough 1982). Grading saps responsibility and thus inhibits learning (Condry 1977; Levine and Fasnacht 1974). Student evaluations of teachers lead to a further erosion of their responsibility because the students place the responsibility on the professor (Armstrong 1998; 2004b), not to mention that the evaluation process is viewed by some as a demoralizing and demeaning exercise for faculty (Gray & Bergmann 2003). I summarize some of the findings in order to develop action steps that schools could take. Those who are familiar with the research might regard these suggestions as old-hat. Those who are not

familiar might be incredulous. A few programs within the University of Pennsylvania as well as other schools already contain some of these design aspects. For example, many Ph.D. programs are successful in getting students to take responsibility. While my concern is primarily with skill training, these suggestions also apply to education focused on changes in attitudes and content.

### **Learning Activities**

1. Ask students to develop a learning plan. A team of coaches, who might or might not be faculty members, would assist in revising and improving plans. Students would evaluate their progress against their plan.
2. Organize learning activities around skills rather than content. Students could use classes, discussions, videos, books, teaching machines, self-directed exercises, papers, and experiential learning exercises, such as role-playing. Faculty members would develop learning materials for students that would be suitable for self-study. Students would be encouraged to do independent work. They would be free to choose whatever methods, including courses, they and their advisor think would work best for them.
3. Provide guides that identify faculty members who are available to help students. The guides would also list useful readings and websites.
4. Encourage the development and communication of useful research by faculty. Learning could be aided by summarizing all useful knowledge in an area so that students can use it. I have developed two such sites, <http://forecastingprinciples.com> and <http://advertisingprinciples.com>. Many of these learning materials could be placed on the Internet so that they are available to our alumni and others.

### **Assessing Students and Faculty**

1. Use independent assessment centers rather than have faculty grade students. The assessment center tests would require students to demonstrate mastery of the techniques and principles in given areas. Examples would include preparing and delivering a persuasive five-minute talk and describing the persuasion tactics that were used, or conducting a ten-minute interview to find out why someone is upset about an issue.  
  
Students and coaches would share a common goal in having the students do well on these independently administered assessments. Additionally, this would eliminate the need for grading by faculty. Administrators could track the extent to which individual faculty members develop materials that are helpful in mastering the techniques/principles/concepts.
2. Require detailed monthly assessments in which students would describe how they were progressing on their learning plan. This would replace student evaluations of teachers and would put responsibility on the student.

- Evaluations of the teachers and coaches could be done by looking at the success of their students on assessment center tests. These tests would be designed to assess the student's ability to use various techniques, principles, and knowledge for such skills as noted above. The schools would certify that a student received a degree. When employers request grades, students would be permitted to have their assessment center scores sent to prospective employers.

Judging from prior research, these suggestions would increase learning by students. They would also establish the university as an innovator in learning, even if the programs remain small in scale.

To reap the benefits of the changes, it is not necessary to adopt all of the action steps at once. Instead, some steps could be implemented as pilot programs. Our experience could then be used to refine our approach to implementing further changes. Over time, the programs could evolve.

I make these suggestions in the hope that the administration will be open to initiatives by departments, staff, and faculty members to experiment with ways to encourage students to be responsible for their learning. Better yet, they might convince key people to introduce some of these above-mentioned procedures.

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