

THE PROBLEM OF IGNORANCE: A CALL FOR RESEARCH

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ABSTRACT

This paper proposes that as marketing educators we may be overlooking a problem that has developed with our students that makes much of what we do relatively irrelevant to our stated purposes and goals. It then calls for research to investigate the problem.

We claim to be producing educated and skilled marketing parishioners, but there is increasing evidence that our graduates are relatively unskilled and lacking in general knowledge. We all believe that students leave our own classes knowing the material taught, especially if our students received high grades. At the same time, we are constantly concerned that our incoming students, even if they have had prerequisite classes, are poorly prepared and don't know what they need to know to be successful in our class. Obviously something is wrong. We can't all be producing knowledgeable students and all be receiving unknowledgeable students.

The writer admits that the hypotheses advanced in this paper may be controversial. In fact, it is sincerely hoped that some of the pessimism expressed is unfounded. Nevertheless, the probability of the problems outlined is strong enough to warrant a call for new research.

PROBLEM

A number of reports have appeared recently in the media outlining a general failure of our educational systems to produce students who can perform to even basic standards (News Tribune 2006; Wall Street Journal 2006). It has become a staple of radio talk shows and late night TV programs to interview people on the street. These interviews exist primarily to showcase the ignorance of the general public, and the interviewees very seldom disappoint the program's intent. A number of years ago, Jay Leno interviewed a new graduate of the California State University system, still in her robes. He asked her how many moons the earth has. "Oh," the student replied, "I ought to know that. I had an astronomy class." She then gave the wrong answer.

Even if numerous students had to be interviewed to find this one person, finding one student with this

depth of ignorance indicates that a serious problem may exist.

Not all evidence is anecdotal. A disturbing report on higher education was recently released by the U.S. Department of Education. In their National Assessment of Adult Literacy study they found that only 31% of college graduates were proficient at reading prose, a drop of 9% over the last ten years. Only 25% were proficient at understanding a document even to the extent of readily utilizing a TV guide, or finding a location on a map. Thirty-one percent were proficient at understanding a quantitative problem. This would be understandable if "proficiency" was defined as college graduates having an advanced knowledge of mathematical concepts. Yet all that a "proficient" person needed to show was that the graduate could do a simple problem such as finding the total cost of a number of items taken from a catalog. Over 20% were unable to make a decision from data as simple as the comparison prices between several products (National Assessment of Adult Literacy 2006).

It would be reassuring to find that marketing students do not follow these trends, but what little evidence that does exist is not encouraging. Stern (2000) found that 88% of the business students he surveyed did not know the population of the United States, and 90% did not know the population of their own city. Of some perverse interest, 84% did not know the name of the president of their own university. Clayson (2002) reported that marketing juniors and seniors at an AACSB accredited university believed that 27% of the nation's population was African-American. Only 22% of the students could identify the population of the nation to within plus or minus 60 million. About 1/3 thought the population was over a billion. About 1/3 did not know what state was south of Kansas. Over 56% of the students couldn't calculate the correct change in a store transaction, almost 70% did not know the square root of 0.25, and almost 60% did not know the interior angle of an equilateral triangle.

Consistent with these findings, the number of hours students spend studying has been declining rapidly in recent years (Young 2002). Students now spend 75 to 85% more time per week watching TV and other entertainment than they do in preparing for class, preparing for exams and quizzes, and preparing for projects and academic-related work

combined. Business students, by their own self-report, spend about an hour per week studying for each credit hour they take (Nonis, Philhours, and Hudson 2006).

At the same time, grades have been rising. The average grades students receive is currently higher than at any time in the past, and are increasing rapidly. If current trends continue, the average grade in America's colleges and universities by 2030 will be 3.56 at public universities and 3.81 at private colleges (Rojstaczer 2003). It is now common in many institutions to have 45 to 50 percent of all grades in the A range while C's have become almost as uncommon as F's once were (Johnson 2003). Research is consistent in showing that students now expect inflated grades for average work (Edwards 2000; Gose 1997; Kamber and Biggs 2002; Landrum and Dillinger 2000).

Even with inflated grades, modern students consistently overestimate their performance. Immediately after taking an exam, students will indicate that they should receive a grade considerably higher than the one they generally earn. One large study found that students at one university entered their business classes with an average GPA of 3.02, but expected to receive a 3.27 average in the new class, and thought they would "deserve" to receive a 3.34. In the last week of the class, students still "expected" to receive an average grade of 2.99 while the actual average turned out to be 2.75, a value 10 standard errors below the expected grade (Clayson, Frost, and Sheffet 2005). As one professor commented to this writer, "All my students think they are geniuses."

Some researchers have suggested that the inability to correctly judge grades is a "metacognitive" effect in which students who "don't know what they don't know" overestimate their performance (Kennedy, Lawton, and Plumlee 2002). Other research, however, only partially supports this hypothesis. It was found that students had a notion of their actual performance, but adjusted their expected grade about halfway from their actual performance to some standard held by the students. That standard appears to be the inflated average GPA of the university (Clayson 2005). Even though the students hold a rough estimate of their actual performance, they did not expect to be graded consistent with that performance. They seem genuinely confused, and in some cases, angered when their inflated expected grade was not received. It has been found that students tend to blame the instructor for the inconsistency (Clayson, Frost, and Sheffet 2005).

Since little research exists to clarify what our students actually know, it is possible that the above assessment may be overly pessimistic. Yet we do know that students with higher grades than ever before are graduating from our universities so poorly prepared that industry has had to initiate their own training programs to bring new employees up to basic standards. A research stream has developed highlighting problems our graduates have in the workplace (Kelley and Bridges 2005). A letter the writer received from a local business person is typical. "As a career-long marketing practitioner, I was in a position to hire perhaps three or four dozen college graduates for positions I offered. I can attest to your point that the 'quality' of such graduates has eroded, such that in certain cases we withdrew our open position and made other internal arrangements instead."

The bottom line is disquieting. Bluntly stated, we appear to be producing students that know almost nothing, and who are generally unaware of the consequences of their condition.

Proposition 1: It appears that the average IQ of Americans has been increasing (Herrnstein and Murray 1994), but the reason for this has been hotly debated (Teasdale and Owen 2005). There is no evidence that the decline in student performance is related to any type of general decline in innate ability. It is the experience of this writer that most modern students are bright and motivated. They are also pragmatic with many demands placed on their time. About 2/3 of them have jobs while attending school, and almost 20% have dependent children (Nonis, Philhours, and Hudson 2006).

If students are as pragmatic as they appear, then the reason our students may be deficient is very linear. If our students know practically nothing, it is because *it is in their immediate best interest not to know anything*. It appears that we may have created a system that not only does not produce knowledgeable and skilled students, but which reinforces the opposite.

Proposition 2: One scenario that may explain the lack of general knowledge with many students is a lack of connectivity. By the time we see students in our junior-senior level of undergraduate work, they know how the system works and how to survive within it. They have learned that nothing is ever connected to anything else. The system pretends that connectivity exists, but students soon learn that is a fiction. Students have found that the way to survive is to memorize (usually utilizing only recognition memory) a short list of factoids,

regurgitate these on the next exam, and then erase them so they will not interfere with the next group of unrelated factoids. Even prerequisite classes are seen as being disconnected. Many students seem genuinely surprised if an instructor requires them to know material from a previous class. Students fully expect that any material tested in a class will be taught in that class. Students not only expect modularization, some instructors actually take pride in being able to break a course up into small segments and then present and test the entire segment within one lecture period so the student will never have to see it again.

Imagine a large blackboard. Draw a circle to represent a learning module. At any given time there may be a limited number of circles on the board, but not so many as to interfere with memorization and short term memory. Once the material within a circle has been tested, erase the circle. The entire board now becomes manageable, allowing time for other activities, including the job that is necessary to pay inflated tuitions. Also note that at the end of any school cycle, including graduation, the board is empty. Surprisingly, this doesn't seem to matter enough to instructors or institutions for meaningful action to be taken. The writer is aware of at least one institution that has tested their students on standardized exams, found embarrassingly low scores, and then simply buried the information, forbidding even their own faculty to be told the results. As one business professor recently noted in a newspaper article about higher education, "I can think of no single piece of information that a college student is required to know to graduate from any of America's state universities."

Proposition 3: The above proposition does not explain why students seem genuinely confused when they don't receive higher grades. Part of this can be attributed to grade inflation, but not all. This writer believes that another factor is in play. An example may illustrate what is happening. In our marketing research classes, students are required to master the concept of scales as outlined by Stevens. The instructors can go over these concepts until students verbally express boredom and make requests that the class proceed. The definition of a ratio scale, as an illustration, will be given with numerous examples. On the next exam, if the students are asked what a ratio scale is, most will give the correct definition, and any example given in the class will generally be correctly identified. If however, the exam presents a new case of a ratio scale, identifying it as such will drop to what would be expected by random selection. Students will then appear in the instructors' offices sincerely

expressing their frustration with not getting a higher grade. A common expression is, "I thought I knew that stuff."

The students apparently thought they "knew" the material because they had memorized a definition and several examples. Given the students' GPAs when they enter the class, this strategy had been successful in the past. Successful to the point that students honestly appear not to know that they did not understand the concepts taught.

Our students seem unprepared to handle any information beyond the basic factoids of a short memorized list. Even adding elementary additional steps seems to be confusing to many. The writer presented information about the average number of advertisements an American was exposed to daily, on three distinct occasions in a class. On the next exam, a multiple-choice question was asked with one additional step. The question asked how many ads a person could be expected to see in a *week*. All the students could multiply by seven, and the correct daily number was not identified as an option. Further, a post-test analysis showed that the students did not think of this as a "trick" question. Less than half of the students who would normally answer this question correctly identified the appropriate new response.

It is unfair to blame the students solely for these deficiencies. Although students share responsibility for their own education, the faculty and institutions are mostly to blame if the propositions outlined above are correct. If a person learns to successfully navigate through a complicated system created largely by others, then it is unfair to blame them if they do not meet standards of which they were generally unaware.

PROPOSALS FOR RESEARCH

There has been almost no research to investigate what our students know and how that knowledge impacts them in our classes. There is some weak evidence that general knowledge affects performance, even controlled for achievement as measured by GPA (Clayson 2002), but the depth and mechanism of this interaction is unknown.

A number of questions need to be addressed:

- 1) What is the level of general knowledge of our students? Does it influence how students perform in marketing classes?
- 2) What is the effect of general illiteracy in the

marketing classroom? For example, the writer took two words from a text used in consumer behavior classes, which were utilized as part of the definition of concepts. In two classes (n = 74), 1/3 of the students could not recognize the meaning of the word "vigilance" in a multiple choice response format. Over 23% could not identify the meaning of the word "hyper." It is possible that many of our students are having a difficult time with certain concepts, not because of a lack of attention, comprehension, or interest, but simply because they do not understand the words utilized to describe the concept. The same possibility exists for the exams we give. How often does a student do poorly on an exam not because they didn't know the correct answer, but simply because they couldn't understand the content of the question? The federal study previously mentioned would indicate that a large proportion of our students cannot understand moderately complex prose.

3) What is the effect of general innumeracy on the performance of our students? Innumeracy is basically the equivalent of illiteracy with numbers. The problem was first publicized by Paulos (1988). A participant at the MEA conference remarked to the writer that getting his students through the statistical section of his marketing research class was equivalent to, "... attempting to push someone through a wall."

4) How could classes be constructed to produce effective marketing practitioners, given the general educational deficiencies of our students? In other words, how can we teach to the abilities of the students we actually have?

5) In the larger term, what could we do as marketing instructors and as educational professionals to produce students who are generally knowledgeable, literate, and proficient with mathematical concepts? It does not seem reasonable or perhaps even ethical to not address this issue simply because we have limited input into what happens to students before they come to our programs.

As an example, the problem of connectivity could be addressed by investigating and experimenting with different curriculum combinations and by utilizing

different measures of outcomes. In a marketing curriculum, a core of information and skills should be identified and *everything* should be connected to it. This could be accomplished in a number of ways.

a) A senior capstone course could be created that requires the students to utilize everything that has been covered in other classes. Marketing theory and concepts, research, pricing, promotion, distribution, and management would have to be utilized to solve a problem. One program utilized a computer simulation in a capstone course that required students to utilize everything covered in the marketing curriculum. The course got only average evaluations from seniors, but received rave reviews from alumni.

b) Clayson and Haley (2005) suggested an interesting idea. Students who had completed a course would act as mentors, consultants, and tutors for younger students taking the courses they had completed.

c) It may be time to consider a comprehensive final that all students are required to pass to obtain a marketing degree. Given current attitudes and litigation precedents, a student who had failed the exam could still graduate, but they could not claim to have a degree in marketing.

CONCLUSION

The writer's college executive advisory board's recommendation at their last meeting show the importance businesses are placing on change in business education. They advised that the college must show, "... willingness and ability to define and measure outcomes, and to respond to evidence; [have] explicit intentions and ambitions, strategies to achieve them, and mechanisms to assess progress." The world may have passed beyond our current instructional paradigms leaving us with models that no longer fit the real-world conditions that now surround us. This paper argues that we need more information, and the courage to act if that information demands it.

References Available on Request