



President's Angle

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In the July 2009 column, I promised to discuss process and content. In the big picture I see "process" as related to doing things right while "content" is more related to doing the right thing. A successful manager is one who excels in doing things right while a good leader has the vision and ability to do the right

thing. It is not a matter of doing one to the exclusion of the other but many people have more talent/aptitude for one or the other. Very talented individuals sometimes excel at both. If we can agree that process and content are not mutually exclusive then we may benefit from this inquiry that looks for an appropriate balance in whatever endeavor we find ourselves.

At the risk of oversimplifying the issue, I offer the following two-dimensional matrix of characteristics. Of course, the best result is one in which process and content are both present in proper proportions. The consequence to be avoided is where process and content are both absent or defective (that is why most bank robbers end up in jail - they do the wrong thing badly).

Increasing Process →		↑ Increasing Content
Content More Prevalent Than Process	Appropriate Balance Of Content and Process	
Content and Process Both Weak or Lacking	Process More Prevalent Than Content	

Most successful endeavors involve an appropriate mix of both process and content. A successful vision must be built upon reliable content. But, vision without supporting process often makes little progress. On the other hand, process without the foundation of content is often weak or shallow. Let's consider several rhetorical questions and examples – especially as related to education, surveying, and professional practice.

1. What is more important, learning (training) or learning how to learn (education)?
2. What is more important, measuring the right line or measuring a line correctly?
3. What is more important in the process of becoming licensed, being able to pass the exam or acquiring the requisite education, experience, and references?

I submit that none of the questions has a simple either/or answer. But my intent is that we read the questions, mull them over in our minds, and discuss our insights with others. As you do that, please be open to differing perspectives and be willing to share your ideas with fellow professionals (write a letter to the Editor or submit an article to the Benchmarks). That, I believe, will ultimately move us all up and to the right on the content/process diagram and will help enhance the stature of the surveying profession.

I'll start with the education question first. The surveying profession includes an enormous amount of content, i.e., concepts we should know, understand, and be able to use. On the other hand, I am one of those who feel intimidated at times by the onslaught of tools, gadgets, and processes inherent in this thing called the digital revolution. Oversimplifying again, education (learning and understanding the concepts) is the foundation of our professional activities while training is required for us to learn how to use the equipment/gadgets properly and productively. Do I know the right balance? No, but I can see where finding the right balance becomes a dilemma for educators, vendors, practicing professionals, and licensing boards. Each of us brings a different perspective to the question and we will not arrive at the same conclusion. But, I am optimistic that working together, asking good questions, and sharing experiences does make a difference in the quality of service the surveying profession provides the public. Re-statement - open discussion benefits everyone.

Question 2 has been around for nearly 100 years. In the Preface of "Boundaries and Landmarks," A.C. Mulford writes in 1912 (see link at end of column) - "It is far more important to have faulty measurements on the place where the line truly exists (content), than an accurate measurement (process) where the line does not exist at all." Note that I have taken the liberty of inserting two words. I am not aware of anyone really arguing with Mr. Mulford but I have heard "content" people use that quote as an excuse for making sloppy measurements - such as not calibrating their EDM, ignoring prism offset, or other "process" issues. In an article, "Cadastral Survey Accuracy Standards," Belle A. Craig and Jerry Wahl write in the ACSM SaLIS, Vol. 63, No. 2, 2003, pp 87-106, about the Mulford quote and include several paragraphs of analysis by Ben Buckner writing in the September 1997 issue of Professional Surveyor. Those too are worth reading and re-reading. I think everyone would agree that it is best to include both process and content and to measure the true line correctly. Craig and Wahl offer a corollary to Mulford's quote as, "An *inaccurate* measurement, even if on the correct line, is a source of unending mischief."

Lastly, it is not fair to single out the licensing board in the third question because the issues are fundamental to the entire surveying profession. Should entry into the profession be based primarily on content criteria or process criteria? Again, what is the right balance? Undoubtedly, the New Mexico Board of Licensure (BOL) has an enormous responsibility in protecting the health, safety, and welfare of the public and I do not wish to fault any of our BOL members. But, the content/process issue needs to be raised in that context as well. Many non-surveying experts have become quite proficient with gadgets and new technology (process) and there are persons who also possess the background (content) to competently handle issues such as spatial data accuracy, machine control, LiDAR, laser scanning, and photogrammetric mapping. I agree that surveying practice (and licensure) should legitimately include those activities but I need help understanding the following in terms of process and content.

1. Although many surveyors do a good job of keeping up with new technology, having a surveying license does not insure that a person has the level of knowledge/skill society can legitimately expect from our profession. Is the public sufficiently protected by our professional ethics which stipulate that we will not offer services outside our area of expertise? Overall, I would say "the system" works but many of us also devote a lot of energy and effort to staying current. My question - how do we allocate

1. our efforts between process and content? How does that tie in with mandatory continuing education or planning for Annual Meeting programs? Does it matter?
2. The converse of the previous statement also needs to be addressed. Not having a surveying license does not necessarily mean a person is not qualified to perform various surveying related services (machine control, LiDAR, laser scanning, photogrammetric mapping, etc). What is surveying? If the broad definition of surveying is used by the BOL (NM Engineering and Surveying Practice Act, Section 61-23-3), then what about those engaged in unlicensed practice? Is the public not being protected or maybe, more importantly, is the public being harmed? Question – what should be the balance of process/content in the BOL's licensing and enforcement efforts?
3. I think everyone agrees that boundary surveying is an activity for which proven competence is absolutely essential. But boundary surveying is only a part of those activities routinely encountered in the broad practice of surveying. Should competent persons be barred from offering services to the public in related areas because they lack the requisite boundary experience to be eligible to take the licensing exam? For some, boundary surveying never will be part of their service to the public. In part 1, I noted that we invoke professional ethics as a protection to the public against licensed (boundary qualified) persons operating beyond their area of expertise. Should it also work the other way? If the surveying BOL backs off on the boundary experience requirement to the point other spatial data professionals can become licensed, can professional ethics be relied upon to provide sufficient protection to the public? Conceivably a person could/should first obtain a "generic" surveying license, but additional qualifications would be required to qualify as a "boundary surveyor." That plays to a two-tiered system that does not enjoy wide support. But, as we (the profession) also look at process/content issues, is it possible the two-tiered system offers an acceptable alternative. What do you think?

I try to look at both sides of an issue, but I readily admit that I often focus more on content than process. On the other hand, administrators and efficient business operations often tend to focus on process to the detriment of content. After writing this column, I read a compelling article on page 68 in the August 17, 2009 issue of *Business Week* by Henry Mintzberg, Cleghorn Professor of Management Studies at McGill University. He makes the point that "We've been Overled and Undermanaged." He raises excellent points and brings a balance to the process/content discussion. I recommend it for your reading. See his 1-page article at the following link.

www.globalcogo.com/process.pdf

Question to be discussed in the President's Column in the next issue of Benchmarks –

What can or should surveying professionals do to ensure continued viability of our profession? Should we hunker down and focus primarily on the boundary issues or should we open up the profession and embrace others who, although they may do extensive work with spatial data, might not have the background, insight, or motivation to understand real surveying. Is it possible or desirable to have it both ways? Feel free to share your thoughts – the deadline for the November 2009 issue of Benchmarks is October 20, 2009.

The following is a link from which a free pdf file (2.93 mb) of Mulford's book can be downloaded.

www.archive.org/details/cu31924004602615 §