

EXEGESIS...A PEDAGOGIC TOOL FOR MANAGEMENT INFORMATION SYSTEMS

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ABSTRACT

In this paper the dilemma of getting the college students of today to read, understand, and be able to communicate difficult theoretical concepts to one another and to others who are not conversant in the jargon of the discipline is addressed. The technique of exegetical reading is displayed as it is used to enable the student in this area. In addition, class protocol is described for the proper application of this method.

Keywords: Exegesis, pedagogy, general systems theory, boundary spanner, classroom procedure.

INTRODUCTION

ex· e· ge· sis (ˌɛk· ɛ· ɡeɪ· sɪs) n. pl. ex· e· ge· ses (-sɪz) 1. Critical explanation or analysis, especially of a text. [Greek ex· g· sis from ex· geisthai to interpret ex· h· geisthai to lead; See s³g- in Indo-European Roots.] (1)

How do we teach our students to read difficult materials in the area of management information systems and be able effectively explain difficult topics to those for whom they work or to clients not skilled in the theory and practice of information systems? This, after all, is the primary function of the systems analyst.

The notion of the “boundary spanner” was first explained to the author by no less of an authority than Gary Dickson during the summer 1984, AACSB Management Information Systems Institute held at the University of Minnesota to train ...”terminally qualified business school faculty members whose specialization and training is not in MIS, but who wish to move in this area to teach and to do research” (2, p. 57). The systems analyst must be able to extricate difficult concepts, which are technologically or theoretically formidable and communicate them to the end-user in a manner that allows the end-user to feel comfortable and able to make use of an idea that was previously cumbersome. It is often asserted that this is the *raison d'être* of the field of Management Information Systems (MIS). The systems analyst stands between the computer scientist, who has the methodological and scientific competence to solve or make the problems of business completed more facily through adoption of technology, and the business functionary who knows what needs to be done but has not the technical wherewithal to accomplish this. The systems analyst must understand both the technical aspects articulated by the computer scientist and the business concepts realized by the client. In addition, the systems analyst must be able to communicate with both and in turn translate to each that which is necessary for project completion in a non-threatening manner, which will facilitate cooperation.

How can professors impart skills not explicitly dictated in the course descriptions that our catalogs list in under the MIS major? To be sure many of these skills fall under the jurisdictions

of our colleagues in the Liberal Arts. At the author's school fully 50 per cent of the total course load is administered by the liberal arts segment of the faculty under the rubric of the General Education Requirement (GER). In fact, most of my business colleagues look upon this as an impediment toward imparting the requisite skill sets necessary for our business majors to be successful in today's competitive occupational environment. When our university applied for AACSP accreditation the number of courses, which were part of the GER, was looked upon as an obstacle for accreditation. Changes had to be made in course credit allocation, however the GER which is controlled by the Liberal Arts faculty, was not changed in the least. All of the changes that were made were done by the school of business in either the business core or within the functional areas of a given business major. This was done in order that the university's mission as a "liberal arts institution" be maintained.

Thus, as can be noted, the courses within a functional business area must be both tightly structured and meaningful. There is no room for courses that are not deemed a high priority and containing material specifically tailored to preparing the student for a specialized skill in a given area. This would seem to make the job of the MIS instructor all the more difficult. The rationalization often used is any critical communication, articulation, and analytic skills can and should be imparted in the liberal arts sector. To a large degree this is, in fact, true however, the comfort of analyzing, articulating, and communicating certain technical and theoretical concepts endemic to the systems major, itself, are often eluded because of the intensity of coverage that material giving the student the requisite basic skills needed for a sufficient understanding of the area.

The third course in the major at our institution has been the one in which the initial effort is made at developing an awareness of the additional communicative skills stressed above. The first course is the basic introduction to management information systems required of all business majors. This is a four-credit course containing three lecture hours in addition to two laboratory hours during which the "hands on" skills needed to obtain a level of proficiency with Microsoft Office. These were two separate courses before the application for accreditation. In order to appease the need for business functional area coverage, the two courses were made into one. This freed up a course, which could be then added to any of the areas. The process was not as easy as one might think. It underwent several iterations and four years before the present model was settled upon. All was made a bit easier when the business school adopted a policy under which all incoming students were to purchase a laptop as part of the requirements. The three non-laboratory hours are lecture on the basic principles on computing.

The second required course for all majors to be taken during the second semester of their sophomore year is one requiring "non-trivial" programming. Traditionally this has been COBOL, however the MIS Department now offers Visual BASIC, and allows Java, C+++, as well as selected third or fourth generation languages to be taken. The purpose is not to turn out programmers, but to force the students into an intense programming experience, which gives them insight as well as empathy for those who do indeed program. After all, this group will encompass those computer scientists with whom half of their explicative skills will be spent.

The third course for the MIS major is offered during the first semester during the junior year and it is entitled Information Systems for Managers and the intent of the course is to review the

hardware/software concepts learned in the prior two courses, make the students aware of what the field of MIS encompasses, and familiarize them with the major players in the field in every way.

To give the reader a “flavor” the salient course parts of the “course description” are reproduced below:

“The course is broken into four major areas. The first series of sessions will discuss the current status of hardware and software in the field as well as the major “vendors” of each. The first area is technical, providing the vocabulary and the concepts required in more advanced courses and for work in the field. The second area will provide an historical/sociological overview of the environment in which organizational computer use occurs. The third area will concern itself with how managers in today’s world can best make use of the advances in MIS. The fourth area describes problems which have arisen with the growth of IS including implementation, security, and the legal dimension.”

“The overriding objective of this course is to acquaint students with enough knowledge about Information Systems and organizational computer use so that they may eventually function properly within today’s environment. In the class, much will be said about the various roles involved in effectively using organizational information. Suffice it to say that today’s students, throughout their careers, play more than one role.”

“Specific sub-objectives include:

- * An appreciation of computer use in organizations now and in the future;
- * An appreciation of how the computer and computing technology will be affecting us in our future everyday lives;
- * The ability to understand basic computer ‘jargon’ and to be able to communicate with both technical and non-technical persons regarding the computer;
- * An understanding of the basic components of computers and computer information systems;
- * An appreciation of the evolution of computer characteristics, capabilities and applications, and a look to what may be expected in the future;
- * An awareness of current computer capability and knowledge of the computer and computer-related industries
- * A guide to knowledge regarding the computer and IS, e.g., periodicals, professional societies, reference materials and curricula in data processing and information systems;
- * An exposure to organizational computer applications and the process by which these applications are developed;
- * An understanding of what MIS is and its conceptual bases;
- * An appreciation of the roles played by senior management, IS management, and by users in systems development and operation;
- * Examination of organizational and individual factors associated with IS;
- * A general awareness of the IS state of the art and current problems in the IS area; and,
- * To get as many of you as possible ‘turned on’ to the IS area.

This means doing more than just attending class; it means reading and investigating beyond the published course requirements, and seriously contemplating taking additional courses in the area.”

“Many of the detailed objectives are of an appreciation nature, since this course must give a student the “big picture” as quickly as possible. The information systems field is truly unique! And as you will appreciate very soon, the area is very broad. Furthermore, it is dynamic and expanding. For these reasons, students of information systems must be equipped with the frameworks that will allow them to categorize an abundance of material. This course provides the overall frameworks for understanding computer information systems, as well as paradigms to appreciate the subtleties and nuances of the area.”

This “course description” is markedly adapted and liberally paraphrased from the syllabus given to the students of the introductory AACSB MIS taught by Gary Dickson at the University of Minnesota in the summer of 1984. It was used by Dickson in his MIS graduate course. The list of readings was extensive and remains so in the one used in the course described above. The list, of course, contains about 90% different articles reflecting the past 17 years.

This brings us to the exegetical portion of the course. Certain of the readings in the above are quite formidable for a third year college student. It is important to give the students of today (who are much more comfortable with “quick and dirty”) a “feel” for the type of “true” scholarship expected in advanced courses requiring not only reading with a nod toward remembering, but also, reading with the expectation of true understanding of the intent of the author in order to communicate it to others. This is rarely done for today’s undergraduate business major.

The course expectation is that all of the readings be comprehended with an ability to articulate, however a certain few of the readings are of a sufficient depth that the student is unable to grasp it at any level and will often dismiss them as “unimportant” or not “relevant” for the Information Systems Major of today.

The reading that was the most readily dismissed by students for more than a ten year period was “General Systems Theory: Applications for Organization and Management,” (GST) by Fremont E. Kast and James E. Rosenzweig (6). This particular reading does indeed go into great depth and covers a great deal of intellectual territory but is very difficult for today’s undergraduate student to appreciate. Year after year this particular article was brought up by the **very** good students as one that should be dismissed in future years. (When the semester was finished and the grades handed in, students were queried as to the importance of articles so that next year’s reader could be contemporary as well as meaningful.)

This reading, although difficult, is felt by the author to be seminal in order to allow for proper discernment of a system. Students today grasp the “hands on” software commands as well as the logic behind utilization of Databases, Decision Support Systems, “Visual Languages,” and so forth, not to mention the application software included in a suite like Microsoft Office. However, when abstract conceptualization is called for, and the necessity for comprehension of principles elucidated in an article such as GST they will read the article in a perfunctory manner and understand little. This is a characteristic of the “mind-set” of most of our students today, both those who fare average and also well. The thorough comprehensive reading of an abstract article is a skill lost much like the ability to estimate without a calculator. (The inability to do relatively simple mental calculations has become commonplace since the ubiquitous use of the hand-held calculator.) A generation ago that ability was present in almost all college students. Today, when asked to do the simplest arithmetic task almost all students will immediately reach for their calculator. Concomitantly, the ability to round numbers in order to facilitate mental arithmetic chores is also something which may be lost forever among the present and future generations.

The phenomenon of a careful, meticulous reading with an comprehension of all words and referents is lost among today’s students, who believe that a word can be understood from its context, and the significance of the reading will be summarized for them if not in the article itself in a study guide

which brings out all salient points that the professor desires from them. Reading in the 21st Century has taken on a “quick and dirty” characteristic of cursory fact gathering with any detailed explanation revealing insights in the passage coming from the professor. In most instances this works for both the student and professor in today’s mass education environment containing “watered-down” texts with all types of ancillary materials for both teachers and students. Perfect, if you will, for the multiple choice test mentality provided by most college text publishers.

The dilemma becomes apparent when an arduous reading as GST comes along and students are asked to summarize it on their own and articulate the salient concepts back to their classmates and/or to the professor. If, as was stated above, the systems analyst must be able to comprehend difficult concepts as they are expressed in written form and then explain them to the client in a manner that the client (in conjunction with the analyst) can act upon those concepts with a sufficient understanding of such material and implement those apperceptions in order to make a system function better, the analyst must have that thorough comprehension which is not easily accomplished given today’s trends in higher education.

This is where implementation of the age-old pedagogic method of exegesis is an asset to overcoming one of the deficiencies of mass education in higher education today. The class in which exegesis is practiced meets for three 50-minute classes a week. The text consists of approximately two hundred readings, some less than a page in length, others encompassing ten to fifteen pages. The class consists of discussion and analysis of the readings. The professor acts as a facilitator and forces the students to arrive at the intent and importance of each reading. On the last session of each week (usually Friday) the students prepare for the exegesis of the GST article.

The entire twelve-page article is read from beginning to end. A student will read aloud a sentence or two and then explain the intent of the authors word by word. All words are important, as are punctuation marks. Pronouns must have their referent defined. It is illuminating to watch the students grapple with word definitions, pronouns, as well as punctuation (even pronunciation presents a learning experience for them). It is explained to the students that today they rarely have the opportunity for this type of reading. Every Friday for a fifteen-week semester is spent carefully reading and dissecting each and every sentence and then slowly bringing all of the words and sentences into the interpretive structure desired by the authors in this classic article. This is done in the same expository manner of biblical scholars who pioneered exegesis. The article builds slowly and the students must be made to be patient since it is not until mid-semester, at the earliest, that some of the better students begin to understand the purpose and witness the in-depth discernment of the material garnered through implementation of this technique.

Patience is also required on the part of the professor in order to allow this technique to have its desired effect. In addition to patience, the instructor must be prepared to anticipate and be able to answer all of the definitional, grammatical, and referential points not to mention the possession of a thorough familiarity with the intent and purpose of the entire article.

Enthusiasm for the technique is necessary in order to convince the students of its efficacy, especially in the beginning because of the innovative nature of the method as well as the difficulty experienced by the learners. Perhaps even more important than enthusiasm, since this approach is both unique in

addition to being quite demanding, the professor must show both confidence and proficiency if the technique is to win the approval and compliance of the students.

Class size should be about 20-25 students, although the author has been able to use it in a class as large as 45. Also, the ideal configuration would be one in which all students can see one another. Chairs and desks that ~~no~~ facilitate this. This professor sits in a different location during each session to allow for seeing and calling on all of the students.

The GST reading begins with a short literature review that cites a number of early figures in management theory. Each of these is highlighted and the contribution of each is noted. This serves to set the tone for the rest of the reading and the exegetical portion of the course. Students are expected to look-up these notable theorists and speak with authority on the part that each played. Hegel and Pareto are excellent examples for students to get the "big picture" of systems theory. In addition, they get a socio-historical picture of the development of the field of management.

Concepts abound in this selection. Suppositions such as organismic and mechanical models are excellent starting points for the beginning analysis of the student. The reading is rife with important conceptual insights, if the teacher can make the interpretive point to the class. "Open and closed" systems, the notions of boundaries, subsystems, entropy, synergism, and homeostasis are but a few of the salient concepts which can be brought forth through a careful instructive exposition of the article.

In addition, there are other articles, which the GST piece can lead. In order to further explain some of the concepts (subsystems, for example) the student is directed to certain articles such as: "Toward a Comprehensive Framework for MIS Research," (7) and "Management Information Systems: Evolution and Status," (3). Also, current articles such as: "The Gee-Whiz Company," (4) and "The Sad Saga of Silicon Graphics," (5) are juxtaposed to enable the students to get a firm grasp, in a concrete manner, of the theoretical concepts bantered about throughout the reading.

To reinforce the importance of the exegetical reading, two of the four final exam essay questions concern the reading.

At semester's end the student response is positive in regard to the exegetical experience, however the real payback comes after the students have taken some of the other advanced MIS courses, especially Systems Analysis and Design. Analysis and Design is a difficult course to teach because of the application of concepts that are both new and abstract to the student. Almost always, while taking Analysis and Design, students will stop by and mention that the careful reading of GST was invaluable to their understanding and appreciation of the concepts presented there.

In addition, the exercise is valuable for the reasons alluded to at the beginning of this article, that is, not only understanding abstract concepts, but the ability to communicate and articulate those concepts to those not trained in the field of MIS.

REFERENCES

1. American Heritage Dictionary of the English Language. (1992) (3rd ed.). Boston: Houghton Mifflin.
2. Banville, C. & Landry, M. (1989). Can the field of MIS be disciplined? *Communications of the ACM*, 32, 48-60.
3. Dickson, G. (1981). Management information systems: evolution and status. *Advances in Computers*. New York: Academic Press.
4. Hof, R. D. (1994, July 18). The gee-whiz company. *BusinessWeek*, 56-64.
5. Hof, R. D. (1997, August 4). The sad saga of Silicon Graphics. *BusinessWeek*, 66-72.
6. Kast, F.E. and Rosenzweig, J. E. (December, 1972). General systems theory: applications for organization and management. *Academy of Management Journal*, 447-465.
7. Nolan, R. L. and Wetherbe, J. C. (June, 1980). Toward a comprehensive framework for MIS research. *MIS Quarterly*, 1-13.