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Knowledge and Skill

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Introduction

There have been many criticisms leveled against MBA graduates in recent years (Porter and McKibbin, 1988) particularly in relation to skill-training. While most Universities have been emphasizing content-oriented education only a minority were pointing out the lacuna in this focus. For instance, in discussing problems with current education, Mintzberg (1987) mentions that his ideal management training would emphasize skill training and experiential education; perhaps forty percent of the effort should be devoted to it.

The focus of this paper is on the issue of comparative treatment of knowledge and skill in the teaching of management. We define the problem as an inadequate understanding on the part of some educators as to what actually constitutes knowledge and skills (their ontology). This stems, in our opinion, from a biased world-view that arises from incomplete appreciation of what the reality of management is all about. In the next section, we discuss the essence of these two concepts: knowledge and skill. We use understandings and concepts from the theory of knowledge. Subsequently, we trace our biases toward skill acquisition as arising out of the philosophical and cultural matrix of the twentieth century that dominate our Universities. We summarize our contributions in the conclusion.

What is Knowledge and Skill?

In his classic book "What is Knowledge," Pears (1966) defines knowledge by providing the following typology: (1) knowledge of facts; (2) knowledge of acquaintance; and (3) knowledge of how-to-do things.

(1) Knowledge of facts can be expressed in terms of statements that can be either true or false. Pieces of such knowledge may or may not reside in our heads as sentences but they can be expressed when required to do so. Sentences consists of words and these words stand for something out there. That is, in these sentences, words stands as symbols for objects in the real world.

(2) Knowledge of acquaintance consists of knowing particulars such as my neighbor, Mr. Smith, or universals such as the notions of combustion or acceleration. Knowledge of facts and acquaintances often coexist. I may know Mr. Smith and as well as know several facts relating to his resume. But it is also possible for me to know a person in the neighborhood without knowing any facts about him.

(3) Knowledge of "how to do" is often described as skill. This type of knowledge is rarely verbalizable. Sometimes a person knowing how to do things will also be able to state how he/she is doing it. But this is not common. I may know how to ride a bicycle or spot market opportunities or manage ambiguous situations without being able to describe how I do them. The nature of this knowledge is best described as

responding in a discriminating way appropriate to a circumstance. Aptitude relating to this knowledge cannot be stored and internalized as symbols.

John Dewey (1922, pp. 177178) introduced a similar distinction between knowinghow and knowingthat to differentiate between knowledge of facts and acquaintances and knowledge of howtodo things. On the basis of the above we might say that knowledge is a wider concept than skill. Knowledge consists of knowing-that and knowinghow. The part of knowledge that is knowinghow is synonymous with skill. Knowingthat, the part of knowledge that is different from skill, is called contentknowledge. In this paper, when we refer to skill we will be referring to those particular skills that play an important role in implementation such as communication skills and interpersonal skills.

The two kinds of knowledge: skill and contentknowledge have markedly different properties. In terms of the computer metaphor, contentknowledge is in the form of declarative memory and appears to decay more rapidly than skill which is like procedural memory or a compiled program. This is consistent with observations in our daily life. If I am good at dealing with certain types of customers I may continue to have that skill for a long time to come. Contentknowledge, as declarative memory consisting of symbols, will be forgotten if not often put into use. Procedural memory or skill also appears to be more specific to the mode of communication in which it is initiated. If I am very effective dealing with irate customers on the phone I may not be so effective in written responses. In this case the skill learned in one mode may not be available if the triggering information is presented in another mode.

(4) Why do some of us undervalue skill? The dominant culture or the worldview in the West in this century has

been shaped by the rationalistic traditions of science which gave rise to the spectacular achievement of science and technology that we witness all around us. It is our contention that it is this tradition that induces us to attach a lower importance to skills and skill training.

Our attitude towards objects under study in science and technology spills over into our attitude, style of discourse and practice related to objects that are not under the purview of science (Winograd and Flores 1986). We call

the rationalistic attitude fostered by science as: the cybernetic picture of the world. In this section we will outline the major elements of this picture as they relate to the nature of reality, language, interests and style of decisionmaking.

The Cybernetic Picture

1. Nature of Reality: The reality of the world consists of identifiable objects with welldefined properties. Such a world exists independently of us. These objects can be conceptualized as an hierarchy of abstractions. Science studies objects and identifies their properties.

2. Nature of Language: Knowledge of the world is symbolic where symbols name the objects in the world. Language consists of such naming. Sentences say things about the world, and can be either true or false, but their ultimate grounding is in their correspondence with the objects they represent. Our cognition or thinking is in terms of such a language that consists of names and abstractions. Thus, the triad: world, language and thinking line up in reference to each other (Finch 1995).

3. Nature of Interest: We use science to study objects that make up nature in order that we can control nature to our purpose. Habermas (1971) identifies this as instrumental interest, which is the perspective that motivates the rational empiricalanalytical study in the sciences. This perspective limits meaning to empirical facts only whose validity can be scientifically determined.

4. The Nature of Decisionmaking: Given the nature of reality, language and the way we engage with the world our approach to decisionmaking is as follows: define the decision problem, list all alternatives, determine consequences, determine the preferences, evaluate those consequences in terms of preferences and make a selection (Simon 1947, p. 67).

What the Cybernetic Picture Hides

Readers may recognize the influence of the cybernetic picture of the world in how technology and technology management is viewed in the Universities. What is of interest to us in this paper is not what this picture discloses but what it hides from our pointofview. Heidegger (Guignon 1983, p. 167) cautions us that any method of discourse or picturing the world brings along its own logic and criteria of legitimacy. Truth within a framework is as much revealed as it is hidden. This is in line with the Heideggerian view of disclosure that truth can never be immediately revealed entirely and explicitly but is also implicit and hidden which requires further efforts towards revelation. In this paper we are interested in what the

cybernetic picture hides from us.

(1) The fallacy of Misplaced Concreteness: By emphasizing objectively valid elements of the world whose properties we can validate in subjectneutral fashion it hides elements that are not fully objective. Measuring elements such as emotions or feelings such as trust, goodwill, etc., is very problematic at best. Philosopher Alfred North Whitehead has called this the Fallacy of Misplaced Concreteness (1925, p.51). Concrete and objective things are believed to exist less concrete things such as leadership, empathy, etc., are not.

(2) Nonverbal elements of reality are unacknowledged: The view of language as a nameobject model hides facets of reality that cannot be put adequately into words. If you have high order skills to persuade or motivate your colleagues you can barely describe in words how you do it. Following the triad model: no word, no thought and, therefore, no reality.

Skills become visible during a process of interaction and are neither there before nor after. They are not there sitting on a place, such as in a laboratory, making themselves available for scientific study and inspection.

In contrast, we can describe our content knowledge in words and in situations that may be far from actual context (such as in a classroom). Skills engage people and their moods and emotions. They affect how they feel about a subject or a proposal. Knowledge, in contrast, affects people by letting them know. Verbal contentknowledge is ideally what the cybernetic picture of the world is all about. When it comes to describing, teaching and mastering skills that approach falls short.

Conclusion

This paper focuses on the comparative treatment given to two factors: knowledge and skill in teaching of management. We use the theory of knowledge to differentiate between knowledge and skill. Knowledge is shown to be of two types: knowingthat, called contentknowledge in this paper, and knowinghow, called skills.

While Universities are competent in delivering contentknowledge the concept of skill is not well appreciated. We trace this bias to the scientificobjective approach to knowledge, called the cybernetic picture of the world. We identify the main elements that constitute this picture. While the rational focus in the cybernetic approach has done exceptionally well in the field of science and technology it provides an incomplete view of the reality of management practice.

The cybernetic picture by focusing on what is objective and concrete, what is clearly representable in language, and processes of decisionmaking and control that are clearly verbalizable, fails to emphasize the

social and openended aspects of the reality of practice. It obscures the fact that most management problems are essentially contestable. The essentially contestable nature of business decision problems opens up the space whereby skills come to dominate in the real world in how problems are defined, how solutions are obtained and justified, and how effectively they get implemented. Exclusive focus on what is verbalizable and what can be defined precisely is responsible for the underemphasis of skills. Most skills can be exercised in varying degrees of craftsmanship and while one is often at loss to describe their qualities in contentbased terms it is vital. To realize that these skills are disclosed clearly in skilled performance In the right context.

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