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How can the kinds of knowledge needed for administrative practice be most clearly and usefully articulated?

Knowing Why: The Integration of Theory and Practice

David E. Engle

Overview

The central concern of this paper is to examine ways of knowing which might relate to and clarify the knowledge base of educational administration. The report of the National Commission on Excellence in Educational Administration the problem of the field:

school administrators need more than mastery of a body of knowledge. Their performance depends on the ability to determine the needs of those they serve and to meet those needs with practical skills rooted in an appropriate knowledge base. (pp. 18-19)

The distinction made by Gilbert Ryle in *The Concept of Mind* between knowing-that (or factual knowledge) and knowing-how (or performative knowledge/skill) is revisited and applied to educational administration praxis. Clearly administrators need both types in developing the epistemological foundations for doing administration. Factual knowledge (knowing-that) can be gained in such typical ways as classes, readings, papers, formal and informal discussions. Performative knowledge (knowing-how) can be gained through clinically supervised field experiences, simulations, observations. Knowing-that is an appropriate way to view knowledge acquisition in educational administration. Knowing-how is an appropriate way to view skill acquisition in educational administration.

But what about the practical application of such knowledge and skill acquisition? In this regard, it is suggested the third epistemological category be considered: knowing-why (synthetic knowledge or the ability to develop rationales for action). This category grows out of the philosophical analyses of Jane Roland Martin and Harry Broudy. It seems plausible to reason that if knowledge and skill are to be successfully combined, then we will be able to explain why and how they were successful in some practical situation and even under what circumstances such action should be repeated.

Further, this line of reasoning highlights the importance of clinically analyzed field experience. That is where fact (knowing-that) and skill (knowing-how) are analyzed to

determine reasons for their application (knowing-why). As such, this explication of epistemological foundations of educational administration rejects the notion that there is a theory-practice dilemma in the field. Instead, it suggests that theory and practice, especially in the preparation program, need to be viewed as reciprocal. In epistemological terms that means that knowing-that (fact) and knowing-how (skill) and related in terms of knowing why (developing/ providing a rationale for action).

Preface

Many of us engaged in the philosophy of education have been merged (thrown?) into departments of educational administration and policy studies. After the initial politicking has diminished and some degree of rapport has been established we ponder what role our field has in relation to such a practical one as educational administration. My experience has been that philosophy of education can play a vital role in explicating and expanding the rather thin knowledge base of such administrative studies. This paper applies Ryle's fact-skill distinction to educational administration and develops the (sometimes flirted-with) category of knowing-why as an epistemological basis for relating theory to practice for a field which has typically dichotomized to two.

Introduction

Another way to put the issue is in terms of the need for the administrator in training to acquire knowledge about the practice in the profession, to acquire skills that relate to day-to-day demands in administrative practice and the ability to bring together such knowledge and skills in practical application. The problem relates to the three components of administrative preparation: knowledge acquisition, skill acquisition and practical application.

To formulate the problem in epistemological terms is to ask: *what* do administrators need to know, *how* should they know it and *why*. In order to get at such epistemological issues, this analysis will focus on three elements of knowledge relevant to the field of educational administration: knowing-that (factual knowledge), knowing-how (performative knowledge or skill), and knowing-why (synthetic knowledge or the ability to develop rationales for action).

It is not intended that this analysis will specify a curriculum, although some curricular implications may be implicit. Instead, what is intended is a display of the kind of epistemological competencies needed in the field in terms of knowledge acquisition, skill acquisition and practical application through clinical experience.

Additionally, and by way of introduction, it can be noted that most educational administration training programs in one way or another already treat such matters. But it is doubtful that they do so with a clear epistemological basis. Many, driven by state certification standards, provide instruction in such specific areas as facilities, finance, staff development, organizational theory and behavior without a clear knowledge base to unify what is learned. In effect, administrators acquire knowledge and learn a set of skills in separated areas without an integrated vision of how knowledge and skills can and should be integrated to achieve effective practical application.

This analysis will revisit the epistemological distinction made by Gilbert Ryle in his *Concept of the Mind* (1949) between knowing-that (factual knowledge) and knowing-how (performative knowledge or skill). Ryle's theory of knowledge has the advantage of expanding traditional epistemology to include skill or what might be called performative knowledge. As such, it may explicate important dimen-

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sions of a knowledge base for such practical fields as educational administration.

Background to Gilbert Ryle's Distinction

Discussions and arguments over the nature of knowledge have dominated the Western philosophic tradition. Broadly viewed, philosophers have looked at knowledge from two perspectives: the speculative temper and the analytic temper. Plato viewed the acquisition of knowledge or learning as an act of remembering what the mind innately held. That is the central argument in the dialogue of the *Meno*. But the grounds of that position is most clearly set forth in the *Republic* where Plato told the Myth of Er. Er, a soldier, seemed to have been slain in battle and his soul transcended to a realm of everlasting truth. But Er did not die and so when he recovered he was able to recount what he experienced. Souls in the realm of everlasting reality before they were reborn camped beside the banks of the Forgetful River. Those who drank a great deal would remember nothing of the truth they experienced. Those who drank less may recall, with help on earth, something of the truth (Soltis & Phillips, 1985). Thus Plato's notion of innate ideas as the basis of knowledge was born. But the Myth has a quality of fantasy and thus one can readily see its essentially speculative character.

In a less speculative manner, Aristotle provided an analysis which focused on one area of the ancient Trivium, rhetoric. From Aristotle we can derive an axiom: if you can say it, then you know it. As John Herman Randall (1960) has noted:

Knowledge is, like language, systematic and logical . . . We can be said to "know" a thing only when we can state in precise language what that thing is, and why it is as it is. (p. 7)

Later the British empiricists, especially Locke and Hume, emphasized sensory impression or sense data as the basis for what is known. Reinforced by the logical positivists in this century, the empirical movement came to view knowledge as justified true belief. One of the most articulate statements of this view is that of A.J. Ayer (1956) who argued:

The necessary and sufficient conditions for knowing that something is the case are first that what one said is known to be true, secondly that one be sure of it, and thirdly that one have the right to be sure. (p. 35)

Ayer (1956) expanded the commentary on his three criteria: When we claim the right to be sure of any given statement, the basis of the claim may be either that the statement is self-evident, or that its truth is directly warranted by our experience, or that it is validly derivable from some other statement, or set of statements, of which we have the right to be sure. (p. 40)

At bottom, Ayer's theory is radically empiricist. But the significant factor to highlight here is that knowledge is construed as propositional. To put Ayer's position in axiomatic terms, knowledge is that which can be demonstrated or justified in logical, empirical terms. John Wisdom (1957) has stated it very neatly: "The meaning of a statement is the method of its verification" (p. 51). In other words, meaning can be established when a proposition can be translated into other statements or sentences which refer to an experience which is logically possible and, typically, empirically verified. Once the translation is made no other explanation is necessary.

Note the movement of thought from speculation to analysis. For Plato knowledge was the remembrance of innate ideas which he supported by speculative reasoning, not empirical grounding. Recall what Aristotle was claim-

ing: if you can say it, then you know it. That is, knowledge is essentially propositional. Or consider again the British empiricists. If knowledge is based on sensory data, then it can be stated in propositional form as empirically grounded data, so Locke and Hume and Ayer believed.

A great deal of learning in educational administration proceeds in this manner of propositionally represented knowledge. Appropriately so. But the learning of administrative praxis, I would argue, goes beyond learning propositional knowledge. It includes the skill of putting together a wide range of propositional learnings and internalizing operational behaviors that can be called upon at a moment's notice and deployed in real situations. Philosophy's insistence on epistemological accuracy through empirical tests is not incorrect, but it will be argued here that it is incomplete.

Ryle on Knowing-that and Knowing-how

Gilbert Ryle saw the incompleteness of traditional epistemologies when he made his seminal distinction about knowledge types, contrasting knowing-that or factual knowledge and knowing-how or performative knowledge/skill.

Knowing-that and knowing-how in Ryle's view are distinctive forms of knowledge. Knowing-how to swim is not dependant on any articulate verbal abilities. And the articulate verbalization of requisites for swimming are not necessarily related to the act of swimming. As Jonas Soltis (1978) comments:

if one knows how to swim . . . this does not imply or, indeed, necessitate that one have any verbal knowledge about swimming. And, alternately, acquiring verbal knowledge about swimming does not imply that one will then be able to swim. (p. 40)

In sum, Ryle clearly argued that these were two different and distinguishable ways of knowing. In terms of educational administration, one would argue that a superintendent's skill in relating to various political constituencies may be enhanced by academic preparation in the areas of organizational theory and organizational behavior (knowing-that). At the same time, exposure to actual circumstances involving such matters as school community relations and board-superintendent interaction provides a contrasting kind of knowledge (knowing-how). This, in turn, raises the question for the preparation program of how these distinctive knowledge types are, or can be, integrated.

But Ryle's distinction was not unchallenged. John Hartland-Swann (1956) argued that Ryle's analysis distinguishing knowing-that from knowing-how could be collapsed. He posited that knowing-that could be reduced to knowing-how. For example, if one knew that parrots are birds or that George Washington was the first President of the United States, such propositions were the product of knowing-how to answer such questions (pp. 111-115).

Jane Roland Martin granted Hartland-Swann's conclusion on logical grounds (i.e. all knowing is in some sense performative), but still held to Ryle's distinction between knowing-that and knowing-how. She reasoned that some performances require more practice than others. For example, swimming required practice far in excess of the utterance of a simple proposition, such as, "George Washington was the first president of the United States." Accordingly, Martin argued that Ryle's distinction was useful because according to her practice criterion the two performances were epistemologically distinguishable.

But, in the course of Martin's (1961) analysis, as well as affirming the distinction between knowing-that and knowing-how, she suggested that other forms of knowledge

were possible: knowing why, knowing-what, knowing about, etc. (pp. 69–70). Such extensions are open to question. For example, it seems dubious that one could maintain, either logically or substantively, a distinction between knowing-that and knowing-what. But knowing-why might be construed as the capacity to develop the relationship or interaction between knowing-that propositions and knowing-how performances.

In still another related analysis, Harry Broudy (1961) refers to knowing-why as “theoretical or explanatory knowledge” (p. 77). More development of this will follow in a later section of the paper.

Ryle's Distinction and Training in Educational Administration

Despite the challenge of Hartland–Swann's attempt to reduce knowing-that to knowing-how and Martin's elaboration of Ryle's epistemological distinction, his original analysis seems to hold. Further, in concert with Martin's and Broudy's elaborations, the contrast between knowing-that and knowing-how can provide a useful epistemological grounding for training programs in educational administration.

It is not uncommon to view such academic training programs in terms of knowledge acquisition and skill acquisition. Knowledge acquisition is typically provided through a series of courses of study, many of which also meet state certification requirements. Skill acquisition, also meeting certification standards, is typically provided in clinical field experiences and on-campus simulations.

It is not argued here that the acquisition of such knowledge and skill is either unnecessary or unimportant. Indeed, they are the heart of preparation in educational administration. But in the light of the epistemological analysis of Ryle and others like Martin and Broudy, we are enabled to see how propositional knowledge is logically distinguishable from skill and how, in turn, although they are not necessarily related, the relationship between them may need to be developed if “performance” is to be informed by “knowledge” and vice versa.

Tempting as it might be to assume that if administrative trainees know something, then they will do it, that doesn't necessarily prove to be the case. Knowing-that and knowing-how are different epistemological types. Knowing-that organizational theory suggests certain organizational behaviors is no guarantee that such behaviors will then follow in practice. Knowing that situation X suggests behavior A and situation Y suggest behavior B is epistemologically different from actual performance in the two situations. That is why educational administration programs combine the acquisition of theory and skill in classrooms and field experiences.

While classrooms are adequate for the learning of theory and the initial learning of skill, there is no substitute for the field site for the application of the theory and skill previously learned in isolation from actual practice. So viewed, the field site becomes an important element in the training program for developing the interrelation between theory and skill. Here, in this estimate, an important question is raised. Is there adequate time and opportunity for reflection about the relationship between theory and skill? Are there adequate instruments (e.g. seminars, field practica, mentorships) to develop these relationships and provide explanations of how theory and skill inform one another? I think that Alfred North Whitehead (1974) captured the importance of this interrelationship in the following remark:

What the faculty have to cultivate is activity in the

presence of knowledge. What the students have to learn is activity in the presence of knowledge.

This discussion rejects the doctrine that students should first learn passively, and then, having learned, should apply knowledge. It is a psychological error. In the process of learning there should be present, in some sense or other, a subordinate activity of application. In fact the applications are part of the knowledge. For the very meaning of the things known is wrapped up in their relationships beyond themselves. This unapplied knowledge is knowledge shorn of its meaning. (pp. 218–219)

Knowing-why

The contention here is that the interrelationships between knowing-that (e.g. knowing how to use budgeting systems or knowing how to relate to a variety of publics) is a complex epistemological activity. It requires not only a knowledge of facts and a knowledge of skills, but also a rationale for explaining why some pieces of knowledge and some particular skills apply to the situation at hand. It will be referred to as knowing-why and should be the objective of preparation programs in educational administration.

Martin and Broudy both have suggested that a category of knowing-why appears to be possible. But neither worked it out or analyzed it thoroughly. Martin saw it as one among many distinctive types beyond knowing-that and knowing-how. Broudy (1961) felt that “in most subject matters there is some kind of reasoning by which it is argued that one way of looking at experience is more sensible or more logical or more trustworthy than another” (p.77). In this view this kind of reasoning to provide explanations may be termed knowing-why. And he comments on the relationship among three knowledge types.

Actually, all three are involved with each other, because the terms used in stating facts and theories are concepts and these, in turn, affect what we perceive the facts to be. (p. 77)

For educational administration, the three epistemological categories suggest how the relationship between theory and practice is best construed as one of reciprocity instead of a dilemma. Theory can inform practice (knowing-that). Practice (knowing-how) can inform theory. The relationship between them can be determined by the sufficiency of reasoning each brings to the other (knowing-why).

Broudy's suggestion that knowing-why is explanatory knowledge is useful in this analysis. Knowing-that is an appropriate way to view knowledge acquisition in educational administration. Knowing-how is an appropriate way to view skill acquisition in the field. What is entailed epistemologically in the application of such knowledge and skill? It seems reasonable to argue that if knowledge and skill are successfully combined in some activity, then one will be able to explain why and how they were successful and even under what conditions they should be repeated.

Further, this line of reasoning suggests why practical experience at a field site needs to be clinically analyzed. In this regard, state certification requirements for field experience are typically not sufficient when they are stated in quantitative terms (e.g. 150 hours of on-site experience). What is learned will be dependant on the quality of knowledge and skill derived from experience not just the quantity of time spent in the activity. The point of a clinically oriented seminar related to field experience is to promote reflection on the relationships between knowing-that and knowing-how by diagnosing problems encountered in practice, evaluating the success of action taken and then developing alternative strategies for like and unlike circumstances. Such

reflection promotes the development of knowing why, and will hopefully promote a tendency for administrators to engage in "relationship seeking behavior" throughout their careers.

A Postscript

It seems to me that, although he used different terms, much of John Dewey's (1916) educational philosophy points in the same direction. For Dewey there was clear intent that one develop what he called "executive skills" or the ability to take what one knew (knowing-that) and apply it to the problem at hand (knowing-how) and be able to analyze how successfully what one intended had been accomplished (knowing-why). Intentions for Dewey, if they were to be anything more than dreams, required that one develop clear "ends-in-view." The educational administrator as educational leader thus needs to have a vision of what a good education is and what steps are required to approach it. Most importantly, educational administrators need to have a rationale for their vision.

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