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### Reply to Professor Eccles

I thank Professor Eccles for taking time to read and to raise some questions regarding my article "Faculty of Education and the Development of a Body of Knowledge of Teaching." I also thank the Editor for giving me the opportunity to clarify some points in my paper which may have caused misunderstanding and which points I judge are central concerns of Professor Eccles.

At the outset, I must say that the use of the term 'Faculty' in my article nowhere suggested, even indirectly, that it refers to Faculty of Education, The University of Calgary. I did not say that the academic competence of all members of Faculty of Education, The University of Calgary, has been questioned (for whatever reasons). For someone to think that I did is, surely, a grievous mistake. It is, of course, unfair and unjust if the academic competence of a Faculty of a University, be it Faculty of Science, Humanities, or of Education, is judged on grounds other than academic competence. But what the political scene at the University of Calgary is, I do not know. And if I do know something about it, I am not interested in it.

The motivation throughout my paper is epistemological, addressing the question: "What are the criteria for the valid employment of the term 'knowledge'?" My article concludes with a suggestion that relative to a body of knowledge of how to teach, three conditions must be fulfilled by Faculty in order for its employment of 'knowledge' to be valid, namely, matters of meaning (conceptual task), matters of truth (empirical task), and matters of judgement. To the *extent* that these conditions are met, then, to that *extent* is Faculty justified in saying that there is now a body of knowledge of how to teach.

My article tried to show not that there is *no* body of scientific/empirical knowledge of how to teach but that its existence relative to the above set of criteria is in doubt. If it exists, its claims are meager and not established epistemologically. They are not in an integrated, organized, and ordered form. Employment of the term 'knowledge' relative to the set of criteria must be done with caution.

Professor Eccles argues that my argument and conclusion have to be rejected. The research materials cited as supportive evidences are no longer current. Recent research findings would show that I am wrong.

I do not deny the importance of current researchers and their findings. For bringing some of them to public notice, Professor Eccles is to be commended. However, the acceptability of my argument is not necessarily dependent on whether or not research is current. As an aside, it may be said that

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those I mentioned seem to retain currency, considering that they are cited in recent publications. But currency is not a sufficient ground for judging acceptability of research findings about some things. I am sure Professor Eccles knows this. I could, of course also cite recent researchers on micro-teaching, classroom situations, etc. which would not show the same degree of optimism as those cited by Professor Eccles. But this is not the direction that my response takes. For the point of my discussion is to show that if there are researches going on in how to teach, in effective teaching, in micro-teaching, then, it must be that the meaning of 'teaching' is now clarified such that logical derivations may be drawn from it. Agreement on what constitutes 'teaching' is established and teaching is now distinguished from every other activity in its central and necessary activities. To say that there are recent empirical findings about teaching is also to say that we know what constitutes 'teaching.' It appears that most empirical researches on teaching assume that this is so. If not, on what grounds may an empirical finding claiming to be true about teaching be accepted or rejected? The claim that there is such a finding may be true but whether or not it is true of teaching is another matter. To find out if it is so is to refer it to conditions judged to constitute 'teaching.' Surely, it is odd to say that there are recent empirical findings true about teaching, however, we differ in our consideration of what teaching is or we are not clear about it. If we do not know what a term 'x' means, how could we claim that activity 'y' is a case or an instance of 'x'? The question is whether or not the meaning of 'teaching' or what constitutes 'teaching' is now discerned.

Researches on teaching differ significantly in their consideration of 'teaching.' In not being clear on what 'teaching' is, so also we are not clear on when to apply it to what and when not to apply it to some things. It could be applied to a wide range of activities/objects of research. This leads to a broadening of its meaning (whatever this would be) and, consequently, an emptying of its discriminatory force. When 'teaching' is so conceived, we are hard put to discriminate between and among activities and distinguish those which are clear cases and not clear cases of 'teaching.' We are led to say something like "Teaching involves many things" or "Teaching covers many activities." But are all the many things and many activities equally central and necessary to the teaching act of teaching  $x$  to  $y$ ? To say "No" is to presuppose that a defensible, perhaps, even a correct, delimitation of the concept has been established. The concept has been properly mapped so it can distinguish out of the many activities those that are necessary and those which are not. If not, then teaching, indeed, covers *many*, even *any*, activities. So, researches on teaching could also take on many or a wide range of objects in the world. The concept 'teaching,' in being applied/applicable to many things, whether or not this should be so, is overloaded and overworked. No wonder we have teacher burn-out cases! That different conceptions of 'teaching' persist suggest that there is as yet no set of *public criteria* on what constitutes 'teaching' which may be employed to assess their acceptability. All conceptions of teaching are seemingly equally plausible. If assessment is made of a conception of 'teaching,' it is usually based on one's stipulation of what teaching ought to be. This is not good enough.

In short, I am saying that one necessary aspect of our serious engagements in inventing and discovering knowledge claims relative to how to teach, and to other central matters of education/schooling, has been obscured, namely conceptual clarification or attendance to matters of meaning. It is an activity logically prior to engaging in empirical researches. Quite simply, if I do not know what a statement means, then I am not in a position to say whether it is true or false. Neither would I know its correct application to what objects/activities in the world. Conceptual confusion leads to empirical distortions. Why?

To disregard matters of meaning enables one to make any claim regarding any activity. Professors, for example, may claim that they are teaching, whether or not what constitutes 'teaching' is

established. That they do claim to teach and they engage in an activity which they claim is teaching may be taken to mean that what constitutes 'teaching' is now known. This is not necessarily so. That they do claim to teach is not to say that what they do and how they do it is a case of 'teaching.' But neither is it to say that it is not. What to say of the activity, in the absence of a set of conditions that constitutes 'teaching,' reduces to personal convictions. The claim cannot be accepted as true, nor can it be rejected as false. Since what constitutes 'teaching' is not established, one does not know what to say of or what expression to use with regard to the activity being claimed to be an activity of teaching. Or, anything can be said about it because it can be anything.

Of course, I am not saying that the above is a complete description of our attempts at inventing/discovering knowledge relative to teaching, schooling, and education. I am saying that there is much conceptual unclarity to many of the concepts we employ in talking about what we do. I am not saying that there should be exclusive attention to matters of meaning. To attend only to matters of meaning and problems of internal consistency may result in a clear, precise, and exact formulation of concepts. But they may be so clearly, precisely, and exactly formulated that they can only refer to themselves but not to any activity/reality in the world. They are, to that extent, useless. I am saying that conceptual clarification and engagement in activities in the world must go hand in hand. Independent of each other, the former ends up in vicious circularity and the latter in indiscriminate, if not meaningless, behaviour. Concepts, when clarified, guide us in talking correctly about the activities/realities in the world. We need to know when to use what terms correctly to what particular situations/realities. When the meaning of 'I am teaching,' for example, is clarified, the next task is to be clear of *what to do in the world* in order that it may be *said* to be a case of 'teaching.' The meaning of 'I am teaching' matches a certain state of affairs in the world. A logical fit, so to speak, is achieved. This is not arguing for the so-called "snap shot" theory of objectivity which suggests that words/meaning *match exactly* objects/phenomena in the world. It is to say that, based on what is conceptually established to be a defensible or correct meaning of 'teaching,' an activity in the world is verified to be a case of 'teaching' and the expression 'teaching' or 'teaching activity' is properly used. The rules governing a correct use of 'teaching' are observed and with the correct use is a corresponding correct activity. In other words, when the meaning of 'teaching' is established, the set of activities that ought (logical ought) to be done is also known and the set of activities is correctly *called teaching*.

Having elaborated on the main concern of my paper, I now direct attention to recent research findings cited by Professor Eccles that show I am wrong. The work of Peck and Tucker is mentioned as now "moving into a performance-based method of appraising teaching." So, is teaching performance? What constitutes 'performance'? Unless 'performance' is explicated, its different senses unpacked, and argument made that teaching is performance in one or any of its senses, what are the grounds for accepting or rejecting the view that teaching *is* performance and so appraised properly by a corresponding method? The terms "operational measures" and "developmental technology" in the quotation seem to suggest that 'performance' is employed in its mechanical sense, like the performance of a machine or drill. Is this an appropriate way of talking about teaching? It may be true that a number of studies cited are taken seriously as verified knowledge. But of what? To accept it as verified knowledge is one thing but to accept it as verified knowledge of something is another thing. To accept the latter requires that the meaning of "something" is discerned. If not, then it could be verified knowledge of many things. Relative to management of classroom problems, I showed that it is a precondition to the teaching act but it does not *constitute* teaching. It is related, of course, to the teaching act but it is *logically distinct* from it. To admit that management of classroom problems is now clearly understood is not to admit that problems of how to teach *x* and how to teach *x* to *y* are also clearly understood. To collapse these problems into one requires a stretching of one's imagina-

tion. The long quotation from Dunkin and Biddle concludes "at long last we are beginning to know what is actually going on in the classroom as well as what produces and results from classroom events." I do not see how this is conceived as "one of the most significant developments in education during the twentieth century." If anything, this is an indictment on Faculty's inability to discern the centrality of classroom settings in its considerations of problems of teaching. It took Faculty so long to take the classroom into account! To know what is actually going on in the classroom is to describe. But, perhaps, what is needed is not more descriptions but *explanations* as to why there are certain goings-on and not others in the classroom. And what, in any way, constitutes a 'classroom'? That the study of Medley found "600 important and dependable relationships . . . many of these relationships were verified . . ." still leaves us with the question whether or not these relationships are constitutive of relations in how to teach *x*.

That there are many researches going on, such as those mentioned, I do not deny. However, I find it difficult to figure out how they constitute conclusive evidence that there is now a developing body of knowledge of how to teach. The researches deal with different kinds of problems, thus, management on classroom problems, authority, discipline, classroom events, appraising methodology, etc. No doubt all these are in some ways related to one another and to the problem of how to teach but they are also logically distinct from each other. To deal with one is not necessarily to deal with another. Similarly, talk of how to teach something is not necessarily talk of how to teach something to someone. These are two distinct problems. The task I am talking about is what may be referred to as the logical task, primarily figuring out the logic of the matter that is taught and the logic of the manner in teaching it. To attend to the learner's needs is a psychological task. To distinguish one from the other is not to say that one task is more important than the other but to say that one is logically distinct from the other. This is also Ennis' point. In figuring out the kind of problem that it is, appropriate solutions could be attempted. Our task is to sort out and distinguish the different problems in teaching (however this would be conceived), figure out their relationships, if any, and to discern the kind of relationship that holds between and among them. To distinguish these differences requires conceptual clarification.

To conclude my limited response, I refer back to the three tasks which I suggested are necessary in developing a body of knowledge of how to teach. The conditions I proposed approximate as closely as possible the strict conditions of knowledge. To the extent that they are met, then to that extent is our employment of 'knowledge' relative to how to teach valid. On the conceptual task, I was not offering *my* definition of 'teaching.' 'Teaching' is one of those concepts that does not readily respond to a definition, in the strict sense of equivalence. In any way, in developing the conditions necessary for the valid employment of 'teaching' I was showing how to go about or conceptual tasks. For example, I suggested that 'intention to bring about learning' is a necessary condition of 'teaching.' If this is judged correctly as restrictive (and its other aspects as well) it needs to be modified. But the basis for judging it to be restrictive is not derived from *discovered facts* about what teachers actually do when they teach or from certain states of affairs in the world. Its restrictiveness is shown by raising linguistic arguments and counter-arguments regarding the proposed meaning. The interest in the conceptual task is not in so-called *facts* about teaching but in the *meaning* of the term 'teaching.' In short, the conceptual task is to develop a set of formal rules for valid employment of a given term. The two other tasks are there not because I share the view of many that a scientific/empirical body of knowledge would prescribe good teaching practice. I do not know, although, perhaps, I can imagine, how to derive "good teaching practice" from "scientific/empirical body of knowledge." The two other tasks are not logical derivations from the conceptual task. They are, however, necessary to the development of knowledge of how to teach. How to relate the different tasks and their results and what kind of relationships should hold between them is another

problem, considering that these tasks enjoy different logical status. It could, for example, require the development of sets of rules that allow us to link them in certain ways, at certain points, and on certain matters. But this is another query altogether. If these tasks/conditions are acceptable for testing claims to knowledge of how to teach, the question now is: Do the different current researches in how to teach, how to teach  $x$ , how to teach  $x$  to  $y$ , come near to fulfilling them?

My contention that there is doubt whether or not we do now have a body of knowledge of how to teach is serious, but not in the sense of dangerous or threatening, giving cause for anxiety. It is serious in the sense that teaching someone something is fraught with much responsibility requiring much thought in its proper discharge. To say that teaching *can* be conducted *in any way* provided that intended learning is secured is to say that teaching is not a worthwhile activity, not requiring rules, regulations, and procedures internal to the activity itself. But this is not so. When we teach someone something (in the setting of formal education), we entice him/her to enter, along with us, into the world of human knowledge/activities where one is confronted with the different facets of life, examined and illumined with care, concern, and consideration, and with much affection. This can have a far-reaching implication for what the learner, as his/her human powers are cultivated and enhanced, could become. And how we teach what we teach is often instrumental to the fulfillment of this serious end. So, far better to be in a position to say that what we are doing and how we are doing it are informed by what we *know* about them.

Again, I thank Professor Eccles for responding to my article in the way that she did. I hope that my response is perceived as an invitation to continue the conversation and to others to join us in collaborative efforts in inquiring into problems of how to teach, how to teach  $x$ , and how to teach  $x$  to  $y$ , in the hope that knowledge about them could be developed and established.