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# Commentary on: Tone Kvernbekk's "Evidence-based practice (EPB), means-end reasoning and goal-directed theories"

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## 1. INTRODUCTION

Evidence-based practice (EBP) has become more or less hegemonic in practical pedagogy at all stages of learner-development - from early childhood education to universities. When educators and policy makers consider the value of an intervention or method in the light of available evidence, the predominant form of practical reasoning they employ is ends-means reasoning. In the light of this predominance, and given what Professor Kvernbekk notes to be a difficult and ambiguous relationship between educational thought and means-end reasoning, it is both important and helpful to gain a better understanding and a clear account of the form of means-end reasoning that is intrinsic to EBP. David Hitchcock has developed a complex and carefully nuanced account of means-end reasoning that, Professor Kvernbekk argues, aligns well with EBP. As she notes, Hitchcock's schema for means-end reasoning captures most of the means-end reasoning at play in EBP when educators are evaluating interventions and methods of teaching and deciding whether or not they should be implemented. In what follows, I focus on two areas of the paper that particularly interested and engaged me. Firstly, I consider the role of learning by example and suggest that it can play a role in the means-end approach inherent in EBP. Secondly, I focus on the role of the environment in EPB and on sketching out a way that Hitchcock's schema might be amended better to accommodate interaction between the student and her learning environment.

## 2. MEANS AS CONSTITUTIVE OF ENDS AND THE ROLE OF LEARNING BY EXAMPLE

The author follows Hitchcock, and Audi, by differentiating between means-end approaches and cases where the means themselves are such that the end is brought about *by* their execution, rather than as a result of it. Another way of thinking about such cases is as cases in which a means is decided upon because of its character, rather than because of the likelihood of its bringing about the desired end. By actually pursuing this course of action – an intervention, or a teaching method, say – we bring about our goal. The author notes that the *what works* agenda that is central

to EBP does not sit well with cases in which means are constitutive, for it makes no sense to ask if the means *works* if it is constitutive.

In discussing an example provided by Biesta, the author considers the role of learning by example. She claims that in such cases the means also *becomes* the goal. This does not seem quite right to me. Such cases might in fact demonstrate that there is not such a clear distinction as has been suggested between cases in which means are a route to an end and cases in which means constitute ends. Mixed cases may be possible, and cases where a teaching method involves both instruction and modelling on the part of the teacher might provide such cases. Take the case of a typical critical thinking instructor. The immediate, narrower, goal of her instruction is to lead students to be able effectively and competently to apply the concepts and skills of argument analysis and assessment. A broader, and perhaps deeper, goal is to produce citizens who are competent critical thinkers who consistently manifest the characteristics of good enquirers. For instance, during their critical thinking course they may have become open-minded, thorough, persistent, epistemically humble, courageous, and so on. In part they have acquired these latter traits through the explicit example and encouragement provided by their instructor. In such a case, the desired end is to produce competent enquirers. The means through which this end is pursued and achieved is a combination of instruction and modelling by the instructor. The teacher's displaying the desired behaviour functions both as a means towards the end that is being pursued by and on behalf of the students – that they become competent enquirers – and an end in itself in so far as it is desirable for everyone to be competent inquirers all of the time. Further, in the course of their instruction, students may from time to time, but as yet inconsistently, display the traits of a good enquirer, so there will be occasions on which the means constitute the end at points during the course of instruction where the end is not yet fully met. Such cases may also play out in other areas of educational and intellectual attainment. For instance, in the case of numeracy any approach involving instruction plus role-modelling may include situations whereby the end – students becoming competent mathematicians – is achieved through a combination of means that include both instruction and learning by example. If learning by example leads to learning by doing, then we have instances of cases where the teaching method involves the end itself (competence in mathematical practice) as part of the means. Moreover, in some cases the means may appear to be constitutive of the end because the teacher is displaying the behaviour desired of the students, but the students aren't (yet.) The goal isn't to bring the teacher to the point where she is a competent critical inquirer (we might reasonably assume she is already), but to bring the students to that point.

### 3. ENVIRONMENT AND ACHIEVABILITY

Hitchcock's rich and complex schema for means-end reasoning lends itself to an amendment whereby it accommodates the crucial role played by the environment in which learning interactions occur; the way in which the means-end relationship holds relative to the environment. As Professor Kvernbekk notes, a school's, and a

community's, normative social fabric, mediates the components of any means-end structured intervention.

My suggestion focusses on Hitchcock's Achievability premise: M1 is achievable as a result of causal sequence initiated by some agent in circumstances C. Achievability may be a matter of possibility or probability rather than universality. (p. 7) As Professor Kvernbekk notes, the achievability of M is thereby relativized to C. For instance, M may be likely to work, all other things being equal, in an environment where it is properly resourced (C1), but less likely to be effective, or likely to fail, in an environment where it is insufficiently resourced. My thought, then, is that the C operator in the Achievability premise might be filled out in such a way as to include factors that influence the likelihood of M1 being achievable. This revised schema will include conditions on agents as well as on the environment in which learning interactions occur. There will be some conditions that make M likely to be realised, others that undermine the chances of realisability. The point of the move I am suggesting is to identify which conditions might be ruled out/in as conducive to achieving a means for a certain cohort and to accommodate this dimension of means-end reasoning in the schema. I have already adumbrated one factor that will weigh on the probability of achieving M1, that of adequate resourcing, others might be adequate professional development for educators, sufficient commitment to the intervention on the part of educators, and a normative social fabric in the institution that is (at least) adequate to support the intervention. Additionally, I imagine that some means will enjoy a greater probability of success with certain cohorts of learners than they might with others. Thus C might also include conditions on learners as well as on educators. To ensure the likely achievability of some M, it may be important for learners to occupy some range of normal or usual ability, or to lack a range of factors likely to undermine the probability of achieving the means. This consideration also highlights that achievability may be relative to cohorts. A means that has a high probability of being achieved with one cohort of learners may have only low prospects of achievability with some other cohort; what counts as sufficient means for one cohort may be insufficient for some other.

#### 4. CONCLUSION

The author writes that we can picture

[T]he school personnel running through a scheme like Hitchcock's to evaluate PBIS [School-Wide Positive Behavior Intervention and Support] and concluding that they wish to implement PBIS as M1 to solve a problem and attain the goal of improved social skills. (p. 11)

My overarching thought is that this practical, means-end, reasoning is likely to be somewhat more complex than Hitchcock's schema suggests because, as Professor Kvernbekk points out, achievability will depend heavily on the environment in which the means is pursued and on which educators pursue the means with which students, only some such conditions will be conducive to achievability. The C

operator in the achievability premise is carrying a good deal more weight than one might prima facie suppose, but its rich content can be fleshed out by gathering appropriate evidence about which environments are most conducive to achievability. This should, of course, constitute part of the evidence gathered as a basis for the practice. This seems to me consistent with ‘standing things on their head’ in the manner that Professor Kverbekk suggests (p. 13).

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