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Intentional Learning As A Goal of Instruction

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Contemporary cognitive psychology has only recently begun to make contact with an important set of everyday intuitions about learning. These intuitions have to do with the role of intentions, plans, and mental effort in learning. It is not that intentions, plans, and mental effort have been ignored in accounts of cognitive behavior—quite the contrary (see, for instance, Dennett, 1983, on intentions; Sacerdoti, 1977, on plans; Kahneman, 1973, on mental effort). But we have yet to do justice to what folk psychology treats as their role in learning itself.

Informal educational talk is full of idioms that are applied to learning and intentions. Teachers will voice the opinion that one student is not trying hard enough, that another may be trying too hard, and that a third is "working up to capacity." The extent to which such notions are internalized by students is suggested by the fact that even among severely learning-disabled students a substantial number attribute their problems to insufficient effort (Schneider, 1984). Yet, such references to effort are ambiguous. It is not clear whether *trying* refers to overt matters such as doing homework and getting assignments in on time or whether it refers to internal, specifically mental efforts. One of the weaknesses in everyday psychologizing is a tendency to leave the concept of effort dangling, without indicating what the effort is applied to. A less ambiguous but more deeply puzzling reference to intentionality and learning is suggested by the expression, "a *serious* student." Here, something is implied beyond efforts involved in getting good grades. The word *serious* seems to refer to a special relationship between the student and the subject matter. But what kind of relationship is it? Suffice it to say, at this point, that the relationship does not seem to be adequately represented by available scientific terms. Finally, we may note the somewhat overused term, *lifelong learner*. As the term is used by educators, it refers to more than the obvious fact that people continue to learn throughout their lives. It seems to refer to someone who has a lifelong *commitment* to learning, that is, someone whose top-level goals, the goals that govern major life plans, include learning goals. Thus, the lifelong learner appears to have more than a lively curiosity and a willingness to study, more even than a

serious involvement in some subject matter. The lifelong learner treats learning itself as a valued part of life and structures other activities in life so that they will serve learning.

Clearly, folk notions about intentions, plans, and effort in learning touch on some of the very deepest concerns of the educational enterprise. In instructional research, however, these deeper concerns have tended to fall into the gap between two divergent research traditions. One tradition has been concerned with *opportunities* for students to exercise their intentions in learning. Its focus has been the learning situation, especially the relative amounts of external direction versus self-direction. Representative research has been concerned with evaluations of open education (Giaconia & Hedges, 1982), with classroom management styles (Doyle, 1985), and with self-direction in programmed learning (Steinberg, 1977). Such research has tended to focus on external manifestations or avowals of student effort and therefore has not contributed to an understanding of what, internally, might distinguish the serious student from the less serious one or the student who is trying to learn from the student who is not. A more far-reaching limitation of such research is that, in focusing on observable behavior, it has tended to foster the impression that students are intentionally involved in learning only when they are visibly engaged in independent learning activities. Yet it is obvious on introspection that this cannot be the case. We know that we can be actively pursuing learning goals while listening to a lecture or doing assigned problems, just as surely as we can engage in the same overt behavior without any active effort at learning. Indeed, as a first approximation, we might characterize the serious student as one who maintains pursuit of learning goals under external conditions that can be satisfied without doing so.

The contrasting research tradition has examined what students do to advance their learning, often in cases where remedial supports are required. We refer to research on study skills, as summarized for instance in Anderson (1979). Although research in this tradition yields results of both theoretical and practical interest, its remedial emphasis has meant that it has tended to concentrate on learning goals of a circumscribed nature. The goals that might be associated with being a serious student, a lifelong learner, or a liberally educated person are thus little accounted for in the study skills literature.

In recent years, however, a cognitive science approach has begun to penetrate both of these research traditions, with the resulting promise of closing the gap between them (see, e.g., the collection of papers in Chipman, Segal, & Glaser, 1985, and in Segal, Chipman, & Glaser, 1985). Research on classroom conditions has begun to pay attention to what is going on in students' minds and to the procedural knowledge that they bring to classroom processes (Doyle, 1983; Winne & Marx, 1982). At the same time, research on learning and study skills has begun to attend to higher order learning objectives—for instance, to what is involved in achieving an organized knowledge of a domain as contrasted with achieving the knowledge required to pass a test on a particular unit of text (e.g., Chi, 1985).

We use the term *intentional learning* to refer to cognitive processes that have learning as a goal rather than an incidental outcome. ¹All experience, we assume, can have learning as an incidental outcome, but only some cognitive activity is carried out according to procedures that contain learning goals. Whether intentional learning occurs is likely to depend on both situational and intrinsic factors-on what the situation affords in goal-attainment opportunities and on what the student's mental resources are for attaining those goals. Thus, focusing on intentional learning provides a natural way of coordinating the two relevant research traditions-the tradition dealing with learning situations and the tradition dealing with learning skills. As a step toward such coordination, this chapter looks at learning situations and at children's beliefs about learning from the standpoint of how they support or deter intentional learning.

¹ Thomas and Rohwer (1986) propose the term *autonomous learning* with much the same meaning. We prefer *intentional learning*, however, because *autonomous* unfortunately suggests freedom from external direction. We think it is important to be clear (and in their discussion of the topic Thomas and Rohwer are clear) that the kind of learning we are talking about can occur, and indeed should occur, in both self-directed and teacher-directed learning situations.