DOCUMENT RESUME

ED 188 551 HE 012 843

AUTHOR Bartlett, Steven J.
TITLE The Rationale for Self-Paced Learning.
PUB DATE [80]
NOTE 13p.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Education; College Instruction; Higher Education; *Independent Study; *Pacing; *Student Educational Objectives; Student Evaluation; *Student Interests; *Student Motivation; Student Needs; *Time Factors (Learning)

ABSTRACT

The value of self-paced instruction is considered. It is suggested that academic education, as opposed to education outside the classroom, attempts to teach a student information and skills, yet a good portion of that information is forgotten. On the other hand, what a person is interested in and has learned independently may be retained better. In using self-paced instruction in the classroom, students are encouraged to make use of the resources offered by the teacher and to set their own tasks at their own pace. In a self-paced class, students are encouraged to decide which and how many tests they wish to pass, they are given a number of chances to gain mastery over the material covered by a single test, they are encouraged to select readings which relate to their interests, and they know in advance what evaluation corresponds to the goals they set for themselves. (SW)

The Rationale for Self-paced Learning

Steven J. Bartlett
Professor of Philosophy
Department of Philosophy
Saint Louis University

The Rationale for Self-paced Learning

The thoughts that follow seeks to convey what is perhaps the principal rationale for the use of self-paced learning, whether in or outside of an academic setting. No attempt is made to summarize critical evaluations of the approach; for this, the reader is referred to numerous studies, some of the most recent of which are listed at the end of the paper. As with any approach, it would be foolish to argue that it is always appropriate to implement self-paced learning: For some teachers and for some students, such an approach apparently is not ideal. For others, it is. It is in relation to these latter teachers and students that the rationale for the use of self-paced learning is explored.

Everyone who explores the world of learning is a student. If you are a teacher, you offer your services as guide to some part of this world. A guide guides best in a territory he himself has explored. Teaching linked to research means this, at least.

The following thoughts are addressed to you, whether you are a student, or a teacher, as well. I have found one of the many paths to learning especially valuable, and so, it seems to me, have some of my students. There is nothing novel about this approach, but we often neglect it to favor the glitter of the newer "teaching technologies". So perhaps a reminder is in order of a simpler, effective form of learning which sees the locus of all that one learns centered in the learner himself.

How much do you remember from your high school biology and chemistry classes? Do you remember even the names of the literary works you read in your English classes, to say nothing of what they were about? Can you still recall the theorems - a half dozen of them? - that you proved in plane geometry? And could you still prove the ones you can remember?

If you are like most people and if you are honest with yourself, answers to these questions make it clear that we don't tend to remember very much at all of what we had drilled into us once upon a time.

On the other hand, think of someting non-academic that interests you personally: perhaps you have a hobby, model construction, macramé, amateur astronomy, etc. It is probably safe to say that you can recall very close to everything that you have found useful in the context of your interest. The passage of time seems to impair your interested memory very little, if at all.

In other words, what you are interested in, and have learned on your own, in your own terms, at your own pace, you stand a very fair chance of remembering years later.

Of course, what you can recall explicitly is not all that you have, in fact, learned. You learned to speak, read, and write your native tongue, but most of us cannot remember learning the language. Can you remember learning long division or some elementary electronics in high school physics? But we are able to do long division now, can still make proper use of our language, and some of us can still wire a lamp, even if we have forgotten the theory.

Skills frequently stay with us, while specific information does not unless it is associated with interests we have cultivated on our own.

This generalization seems to hold true for almost everyone. There are rare exceptions of total recall, photographic memory, etc., but these abilities themselves don't appear to be teachable or learnable. You have them or, like most of us, you don't.

Academic education - as opposed to education outside the classroom - attempts to teach a student information and skills, and he is lucky if he can recall a good portion of that information by the time final exams

swing around, and fortunate if he learns any skills at all, much less finds he still can use them several years later.

It is unfortunate that such a discrepancy should exist between academic teaching and learning outside of the classroom on one's own. Much of the time we spend in attending school profits us comparatively little; much of the energy we expend and money we spend tend to be wasted - if future skill competence and recall of information are any standard of time, energy, and money well invested. To paraphrase somewhat, an education is what remains to us after we have forgotten everything we have been taught.

Students have been able to see this sad state of affairs before most educators. Their discontent with the inefficient character of much or most of academic education has led students to appeal to the criterion of relevance. But the criterion is very vague: Who knows what will turn out to be relevant to later needs? The criterion of relevance in education requires possession of a crystal ball, which again most of us don't have.

Recently, some educators have decided that there are inequities built into the academic classroom situation: Students have different abilities in different areas and learn at different rates. They have different interests. They are different people. But education requires and stipulates, sets up requirements and prerequisites.... There are deadlines, uniform testing procedures, well-defined hurdles many educators themselves couldn't jump over anymore because, like their students, they have forgotten much that hasn't turned out to be relevant enough to remain on in their active memories. They are people, too.

It is an understatement to say that it isn't easy to design a plan for education that is thoroughly equitable. But a poor system can be made to function better, though it will probably fall short of what is ideal, and therefore not realizable.

We take this to be fundamental: Learning best means learning in a way so that the time, energy, and money spent on education profit the student most after actual classes are long past. Everyone learns best what he is interested in and learns through his own effort, at his own pace. This is a basic truth that seems incontestable. (Although there are always those who will deny the most obvious!) The question is then posed, how may academic education be encouraged to reflect this fact about human beings?

Instead of listening, often with half a heart and half a mind, to a lecture, to a steady input of techniques and ideas, and trying to motivate oneself to be active in what is usually a passive learning situation, let us turn the tables around. The assumption is that the teacher knows something the student wishes also to know. He can assist the student to learn these things, or he can instruct, and hope the student can learn what he has been taught. The teacher can, then, act as guru or task-master. You go to a guru; you submit to a task-master. You may learn from yourself with the guru's help, or you may be required by the task-master to memorize what will quickly fade.

Of course not all teachers can be gurus in their own areas of interest and specialization. There are fine lecturers, and they have a place. A good lecture, for the appropriate student, who knows he is interested, has clear-cut ideas of what

he needs to learn, and happens to learn at the rate presupposed by the lecturer, profits a great deal. But notice there has been some sleight-of-hand here: The student has become his own task-master, and the fact that he happens to be in a lecture situation is accidental and unimportant. The external task-master, who cracks the whip in a deliberate teaching situation, has disappeared for the "appropriate" student.

If one decides in favor of learning with a guru, the question of relevance is shelved: You need to know in advance, at least tacitly, that you want something the guru has. You cannot suppose he will be able to tell you why you should want what he can give. No one can give you this. In this western world, we appeal to reasons, but reasons are relevant only to the ear that finds good reasons, in advance, to be useful in walking the right path. The appeal to relevance, when few have operational crystal balls, is meaningless. We have inclinations, interests, potential abilities, talents, tastes, and the guru can appeal to these, but they cannot be fabricated. Like the notion of total recall, you have it or you don't; unlike total recall, most of us do have our interests and our needs to guide us to the right gurus. Unfortunately, we don't pay ourselves much heed.... It is understandable, then, that we will occasionally find ourselves in the wrong learning situation, sitting with the wrong guru - a guide in a territory we could care less about. Usually, it is for lack of attending to our own interests and needs that we find ourselves wasting ourselves in the wrong company. The rest of the time, it is convenient to blame external events for forcing us to learn what is uninteresting to us. The fact is, the teacher cannot legislate our interests and inclinations, and any pin he may

stick in groping, weak, or failing motivations usually has only a transitory effect. It isn't his fault if we aren't interested in what he can offer, while even the most uninspiring teacher can i...part useful knowledge to the person who has the inspiration of his own interests. The fault lies in another place, usually quite close to home.

Self-paced learning is a compromise in a world in which, much of the time, interests and ends are unequally mated. The student is encouraged to feel free to make use of the resources offered by the teacher, and he is encouraged to set his own tasks. Assuming the student is relevant to the course (and not the other way around!), the teacher can help the student realize some of his relevant interests in the context of the class. What is learned in such a situation stand the best chance of profiting the student when he is on his own.

To be more specific, consider a class for which there is a set of readings which gives the course its principal content. If self-paced learning is emphasized in the course, then what the student decides to read is left up to him. What pace he sets for himself is up to him. What material he wishes to assert his competence over, is up to him. How much he makes use of his opportunity to learn, is therefore in his own hands (as it really has been all along).

Education is dominated, whether we like it or not, by concerns which are basically economic. A price is gradually placed on the head of each one of us, and normally a more or less uniform yardstick is employed in setting the prices. In other words, we are assessed for our real or apparent value. No one enjoys this part of the game, and no attempt is made to justify a characteris-

tic need in most human beings to have values, set values, evaluate, and be evaluated, in turn. No justification is possible for the way things are; if we wish to improve our understanding of the way things are and wish to alter the way things are, we may be able to offer some justification for our proposals. But the game at any point in time is always the way it is at that time, and, at least for the time being, the game is normative, evaluative.

Which brings us to the matter of assessing learning: grading. If so much is in the hands of the learner, how can grades be determined?

There are quantitative and qualitative assessments of minds and what they learn. We will put quality first, since there is no point in learning much poorly. Better less, well. In a self-paced course it is normal to give a number of tests during the semester, or quarter. A student may take the tests he feels he is prepared to take, and may have the opportunity to take another, different test on the same material if he did not do well on the first. A student passes a given test when he demonstrates that he has mastered the material covered on that test. There is no point trying to define here what "mastery of material" specifies: a student knows when he attains mastery of something, his teacher will know, and there are usually fairly well-defined objective standards by means of which we determine when we do know these things.

It is normal, in a self-paced class, to tell studentsthat they must pass a certain minimum number of tests to pass the class. If a student decides to set more than minimal goals for himself and masters quantitatively more material, then he earns a higher grade.

To avoid the problem of giving alternative tests indefinitely, it can be useful to allow a student to retake a test on given material at reasonable intervals until the next scheduled test is given, at which time the preceding test would no longer be available. This decision will have the effect, of course, of reducing somewhat the self-paced character of the class.

In short, in a self-paced class, a student is encouraged to decide which and how many tests he wishes to pass, he is given a number of chances to gain mastery over the material cover ' by a single test, he is encouraged to select readings which relate to his interests, and he knows in advance what evaluation cor sponds to the goals he sets for himself. (Obvious modifications will suggest themselves for distinct fields of study.)

From this point of view, what a student derives from the experience of academic education is his own affair; he establishes his own goals, makes his own decisions, works at his own pace within the limits prescribed (whether by mortality or by the length of the term, depending upon how many tests the teacher can endure scoring).

Self-paced learning responds only to requirements the student undertakes to meet on his own initiative. The approach accepts the maxim, "to learn is to assert self-responsibility."

For more detailed descriptions of self-paced learning in the context of specific disciplines and for empirical evaluations of the effectiveness of the approach, the reader is referred to the following works:

Adamsky, "Increased Learner Progress in a Self-Paced Teacher Education Program without the Use of Sanctions", J. Ind. Teach. Educ. 15 (1977), 26-31.

Bausor, J., "Advanced Physics Project for Independent Learning", Educ. Media Int. 1 (1977), 9.

Buterbaugh, J.G. and R.G. Fuller, "Personalized System of Instruction (PSI):- An Alternative", AV Instruction 20 (1975), 62-65.

Cook, D.A., "Personalized System of Instruction: Potential and Problems", Educational Product Report 7 (1974), 2-13.

DesLauriers, Marc P., Robert L. Hohn, and Gary M. Clark, "Learner Characteristics and Performance Effects in Self-paced Instruction for Community College Students", Educ. Resources Information Center (ERIC), #ED 172 868, 1979.

Finch, C.R., "Individualized Instruction: What Can You Learn from Research?", American Vocational Journal 49 (1974), 28-29.

Gagné, Robert M. and Leslie J. Briggs, Principles of Instructional Design (New York: Holt, Rinehart and Winston 1974).

Gibbons, M. and G. Phillips, "Teaching for Self-education: Promising New Professional Role", J. Teach. Educ. 30 (1979), 26-28.

Harris, M.B. and R.A. Liguori, "Some Effects of a Personalized System of Instruction in Teaching College Mathematics", J. of Educ. Research 68 (1974), 62-66.

Hogan, R.C., "Humanistic Self-instruction", Coll. Comp. and Comm. 29 (1978), 261-263.

Hohn, R.L., M.P. DesLauriers, and W. Deaton, "Learner Characteristics and Performance Effects in Self-paced Instruction", Psychological Reports 40 (1977), 1011-1012.

Ledbetter, E.W., "Self-paced Course for the General Student", J. Chem. Educ. 55 (1978), 666-667.

Mabee, W.S. et al., "Effects of Self-pacing and Use of Study Guide Questions within Behavioral Instruction", J. Educ. Res. 72 (1979), 273-276.

Mack, Herschel and Stephen Littlejohn, "PSI as an Approach to the Teaching of Empirical Research Methods", Educ. Resources Information Center (ERIC) #ED 149 408, 1977.

Metka, J.W., Fourteen Years of Self-paced Chemistry", J. Chem Educ. 56 (1979), 405-407.

Morris, E.K. et al., "Self-pacing versus Instructor-pacing: Achievement, Evaluations, and Retention", J. Educ. Psychology 70 (1978), 224-230.

Penland, P., "Self-initiated Learning", Adult Educ. 29 (1979), 170-179.

Proia, Kathleen, "Individualized Learning in Theory and Practice", Educ. Resources Information Center (ERIC) #ED 149 377, 1973.

Scully, M.G., "Independent Scholars Find There is Life Beyond the University", Chron. Higher Educ. 19 (1979), 11.

Walbesser, H., Constructing Behavioral Objectives (College of Education, University of Maryland 1968).

Whitehurst, C. and J. Madigan, "Slow Learners in PSI Courses: Do They Learn Less?", J. of Higher Education 46 (1975), 55-62.