

PERSONALIZING CLIO
HISTORY'S INTRODUCTION TO THE KELLER PLAN

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If a session at a recent Organization of American Historians' convention is any indication, the history profession sadly trails other disciplines in the development of new teaching methods. While physical and social scientists around the country explore innovative ways to make their courses more effective, American historians consider suggestions that instructors teach in reverse chronological order and that students keep personal journals on their history-related activities. Compared to the widely-used Personalized System of Instruction (PSI) of psychologist Fred S. Keller, these "innovations" seem primitive at best.¹ Indeed, it is remarkable that Keller's plan, which is especially applicable to student demands for personal attention, has largely escaped the notice of history teachers.

PSI, as envisioned by Keller, breaks the learning process out of its classroom mold. Lectures become infrequent happenings meant only to enrich or stimulate and not to supply testable information. Class meetings in the traditional sense vanish in favor of individualized work by the students and frequent dialogues between teachers and class members. Thus, the classroom takes on an "open" effect in that students are free to come and go as necessary to meet their own educational needs.

There are five key provisions to the PSI plan. The first of these is a "go-at-your-own-pace" feature which allows students to move through the requirements of a course at a speed conducive to their own rates of learning and non-history commitments. The teacher arranges the material in a series of units (about one unit per week in the school term) which the students must complete to finish the course. These units spell out what literature the students must cover and alert them to the most important information in the reading assignment through a series of learning objectives or study questions.

As a second provision, the students must "master"--that is, learn thoroughly--each unit before moving to the next one.² This is crucial. The Keller system presumes that, although students may not be exposed to as much material over the span of the term, they will actually finish the course with greater knowledge, because they must internalize all the material they do confront. For example, although students in a traditional lecture class would probably hear much about the Washington administration, they might forget most of what they heard. PSI students, on the other hand, might read only about Hamilton's financial program but learn that aspect thoroughly. If a choice becomes unavoidable, as it well may in an historical survey course, PSI opts for quality subject matter over quantity.

The third Keller provision relegates lectures and demonstrations to motivational roles, thus eliminating them as sources of crucial information. The practical reasoning here is readily apparent. With students working at differing speeds, a lecture on Andrew Jackson's bank war, for example, might come chronologically too soon for some students and too late for others. Moreover, the importance of reading increases when lectures supply only supplementary material. Keller's fourth provision, therefore, stresses the written word. PSI students read and reread the appropriate material and then take short written tests. If the students fail to pass the unit quizzes, they learn the precise reasons for their failures, restudy the material, and try again until they demonstrate mastery. These tests must meet two criteria. In addition to being written, the quizzes must be reasonably objective so that the answers can be rapidly scored and discussed with the students.

Finally, because this system quickly fails in its purpose if students do not have access to personal attention, Keller advocates the use of proctors.

Proctors (either graduate students, students who have already completed the course, or, indeed, more advanced students currently enrolled in the course) handle repeated testing, immediate scoring, and tutoring--in short, adding to the process a "personal-social aspect" that is beyond the abilities of one instructor dealing with perhaps 300 students.

In one respect both Keller and his codeveloper, J. G. Sherman of the Center for Personalized Instruction in Washington, D.C., remain quite traditional. In order to compare the results of this method to those of traditional lecturing, both urge the use of final examinations. Moreover, examination scores, together with the results of the unit tests, can produce final letter grades. Sherman cautions, however, that grade distributions will rarely be bell-shaped. Since completion of the course units provides an excellent preparation for a cumulative examination, those students who take the final exam usually perform quite well. Thus, the grade scales of PSI practitioners are frequently top-heavy with A's. Students who do not choose to work hard, and who might have taken "gentlemanly C's" in a lecture course, tend instead to withdraw from PSI courses, thus adding to the grade imbalance.

In 1972, the University of Michigan's Center for Research on Learning and Teaching evaluated published reports from the experiences of over 500 instructors using PSI.³ The center found students spent a "good deal of time" on their PSI courses. A frequent comment from students who withdrew from such courses was "too much work." Although grades ran high, Keller students proved the merit of their grades by always performing as well or better than traditionally-taught students on standardized tests. Students who studied under PSI tended to be "highly satisfied" with the experience, but the students answering post-term inquiries rarely included those who withdrew during the term. Undergraduate proctors especially benefitted from their experience and in turn proved quite popular with cost-conscious administrators.

As an instructor for the University of Maryland's European Division, I had an unusual opportunity to test the applicability of the Keller method to history courses. The university assigned me to teach a senior-level course in Black-American history since 1865 and two sections of sophomore-level Black-American history from Jamestown to Watts. The first class met on a large American military installation at Bremerhaven, West Germany, while the sophomore sections gathered at two smaller military sites nearby. In each case, the majority of the students were servicemen seeking college degrees in their off-duty time.

Since these courses provided my first experience with PSI, I was rather rigid about observing Keller's original principles and the admonitions of the Washington center. The eight-week term (two class meetings of two and one-half hours each per week) did force some slight modifications, however. Because I met each class only 16 times, I allowed the students to work ahead on as many of the 16 units as they wished. They completed as many units in a given class period as they found reasonable. The students demonstrated mastery of some units by passing short tests, as recommended by Keller, but they mastered others by writing short, three to five-page papers. In either case, I required a score of 90% to indicate mastery. If a student scored lower, he took another test or rewrote his paper.⁴

Furthermore, I eliminated all traditional lectures but did record a few comments on cassette tape so that each student might hear them at the time appropriate for him and replay them as necessary. Finally, since there were no graduate or advanced students available, I utilized proctors selected from students enrolled in the course. To encourage proctoring, and to pull the separate units together, I inserted four review units within the course design. A student could master these units in part by proctoring other

students over units he had previously completed. Slower students had the alternative opportunity of doing outlines covering the earlier work so that proctoring was not a requirement for passing the course.

From an instructor's viewpoint, I discovered PSI had some distinct advantages. Compared with students I taught by lecture, most of these PSI students worked harder to learn the material. As one student put it: "I gained more out of this course than a normal lecture course because I was forced to work." Although class attendance was not required, most students appeared regularly, studied, discussed the material and took quizzes over the assignments. The students wasted very little classroom time on non-relevant conversations.

PSI, moreover, enhanced the performance of the slower students. These individuals quickly adjusted to the fact that failing an examination was not the end of the line. Given more time and more chances, most succeeded where they had earlier failed. They did so because they clearly understood their initial mistakes and had the opportunity to correct them without penalty. The increased self-confidence resulting from these later successes was readily visible in the students' performances on subsequent units. As another student noted: "Learning by self-pacing has proven to me that I can learn without having a teacher in front of the classroom. It gives a student a chance to learn at his own pace without trying to keep up with other students who may learn faster. . . ."

Almost unanimously, the students praised the self-paced concept. Faster students finished early and enjoyed a vacation from the classroom. Slower students often commented that they would have been unable to complete a lecture course due to crucial class meetings which their military commitments forced them to miss. By any measure, self-pacing relieved time pressures and created a more relaxed learning environment.

By no means was the PSI experiment a total success, however, as the grade distribution for the three classes quickly makes clear: A--20%; B--13%; C--9%; D--7%; F--11%; W--40%. Twenty-two of the original 55 students chose to drop out before final examinations and another six failed the courses.⁵ This withdrawal rate, which was clearly above that expected under PSI, resulted partly from uncontrollable factors such as military demands on the students, exceptionally good weather in a normally dismal summer climate, and, in one instance, an over-energetic course registrar.⁶

Compared to the PSI courses of other instructors, my course produced a larger number of B, C, and D grades. This particular distribution was partly the result of poor final examination scores. Apparently, some proctors had allowed certain students to glide past some of the unit tests, causing these students to be unprepared for the final exam. Thus, while the monitoring of proctors proved a problem, the examination did serve a back-up function by preventing coasters from obtaining high marks.

For a number of students, procrastination was a major problem. Several left much of the course work until the last two weeks, then worked feverishly to complete the units on time. This put unnecessary stress on those students and a serious time constraint on the instructor.

Nearly all the students who completed the course enjoyed the experience. Several students thought, however, that history courses should include more group discussions than I had organized. I had limited the number of these discussions deliberately, for forming more groups within these small classes would have forced me to combine slower and faster students and thereby negate the self-pacing principle. The few discussions I did conduct, however,

especially the ones on Fogel and Engerman's Time on the Cross and on Booker T. Washington, seemed to spark the thinking of the better students. These occasions, moreover, clearly enhanced overall student interest, which is itself vital to learning. A greater effort to work group discussions into the plan appears to be in order.

Additionally, several students raised another concern for historians. These pupils felt that the PSI approach failed to provide them with a broad perspective of the historical periods under study. The course design, in their opinion, proved too choppy: one unit, and then another unit and so on, without sufficient attention to fitting the individual units together. The review units, dispersed throughout the substantive units, were meant to serve this purpose, and, for most of the students, they were sufficient. But for these others the problem remained.

Reflecting on my experience with the Keller plan, I find PSI most useful for teaching beginning students and students with strong self-discipline. The former benefit from the clear-cut unit guidelines that indicate just what the student is to study and what is most important in the instructor's view. The system quickly instills study habits that can be invaluable to the beginner. Students who are able to discipline themselves also gain from the self-paced aspect of PSI. These students move efficiently through the material at their own best rates. Other students need more prompting than I found possible in this teaching method. Capable students who progress too slowly hide within the go-at-your-own-pace concept only to be discovered too late. Where possible, these students usually elect to take last-minute withdrawals.

I recommend that other history teachers try the PSI system in introductory courses and courses designed to prepare students for graduate school, such as senior reading seminars. This ironic combination will allow you to build good study methods into the freshmen and to introduce the seniors to the largely self-paced rate of graduate study. PSI, moreover, should prove especially useful to history teachers in extension schools and community colleges where many of the students have the incentive to complete college degrees but lack the study skills needed to obtain a diploma in a lecture-filled environment.

NOTES

¹Fred S. Keller, "Goodbye Teacher . . .," Journal of Applied Behavior Analysis, I (Spring, 1968), 78-89. For an evaluation of the method, see Bruce A. Ryan, PSI: Keller's Personalized System of Instruction: An Appraisal (Washington D.C., 1974).

²Keller accepted a 90% test score as proof of "mastery."

³"Learning Theory and the Teacher, IV, The Reinforcement Principle," Memo to the Faculty from the Center for Research on Learning and Testing, University of Michigan, No. 48 (April, 1972).

⁴This adjustment resulted partly from the teaching situation, but mostly from my own belief that all college-level history courses should require some writing and that more writing should be expected from senior-level students. This position forced me to do much of the grading, since evaluating students' papers requires more subjective judgment than proctors exercise in scoring unit tests.

⁵No student who took the final examination failed the course.

⁶Ryan, PSI, 18.