

# Personalized Instruction

James W. Keefe and John M. Jenkins

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In the final analysis, personalized instruction reflects deep concern for learners and the willingness to search for ways to adjust the teaching/learning environment to meet the learning needs of individual students, Mr. Keefe and Mr. Jenkins point out.

**K**enneth Sirotnik and John Goodlad caution us to think in terms of school “renewal” rather than “reform.” Sirotnik tells us that reform is usually preoccupied with accountability rather than evaluation. Much high-stakes reform, for example, is aimed at rewarding or punishing schools and educators. Renewal, on the other hand, urges a new accountability that is more akin to “responsibility.”<sup>1</sup> Goodlad points out:

The language of reform carries with it the traditional connotations of things gone wrong that need to be cor-

rected, as with delinquent boys or girls incarcerated in reform schools. This language is not uplifting. It says little or nothing about the nature of education, the self, or the human community.... School renewal is a much different game.... The language and the ethos of renewal have to do with the people in and around schools improving their practice and developing the collaborative mechanisms necessary to better their schools.<sup>2</sup>

Renewal is concerned primarily with what Seymour Sarason has called “creating new settings” that reflect critical inquiry about educational practice. Renewal is all about how a learner’s growth in knowledge and self-awareness leads to wisdom, personal happiness, and collective responsibility. But only a minority of schools achieve such high levels of reflection. Most schools are average and are satisfied with maintaining or perhaps fine-tuning traditional patterns of school organization and pedagogy.

## THE BASIC ELEMENTS OF PERSONALIZED INSTRUCTION

*Personalization of instruction and learning is the effort on the part of a school to organize the learning environment to take into account individual student characteristics and needs and to make use of flexible instructional practices.* Teachers committed to personalizing instruction help their students develop personal learning plans, assist in diagnosing their cognitive strengths and weaknesses, help adapt the learning environment and instruction to learner needs and interests, and mentor authentic and reflective learning experiences for their students.

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<sup>1</sup>“Personalized Instruction,” James W. Keefe and John M. Jenkins in *Phi Delta Kappan*, February 2002: pp. 440-448. This article was adapted from *Personalized Instruction: Changing Classroom Practice* by James W. Keefe and John M. Jenkins, Eye on Education Publishers, 2000. Copyright © 2002 by Eye on Education, 6 Depot Way, Larchmont, NY 10538, 914-833-0551, [www.eyoneducation.com](http://www.eyoneducation.com). Reprinted by permission.

In the past, personalization has been known under different names: nongraded education, continuous-progress education, individualized instruction, individually guided or prescribed education, and so forth. Each of these concepts is concerned with personalized education, but in a limited way. Personalization is broader in scope, more systematic in organization, and more authentic in its goals and strategies.

Several current systematic approaches to instructional improvement, such as instruction based on learning styles and differentiated instruction, do border on the truly personalized. The former typically draws on individualized instruction for its roots, and the latter tends to restrict itself to the individual classroom, but both can be highly personalized when implemented in a comprehensive, organic, and dynamic fashion.

What, then, are the basic elements of a personalized approach to instruction? If we consider the implications of historical efforts to renew schooling and take into account the most flexible of recent efforts to individualize learning, a direction begins to emerge. Linda Darling-Hammond has argued that we must put students first, that all children have a right to learn. She cites four factors that are important for powerful teaching and learning:

- structures for caring and structures for serious learning, structures that enable teachers to know students well and to work with them intensely;
- shared exhibitions of student work that make it clear what the school values and how students are doing;
- structures, such as teacher teams, that support teacher collaboration focused on student learning; and
- structures for shared decision making and dialogue about teaching and learning with other teachers, students, and parents.<sup>3</sup>

These structures are not a model to be imposed on schools but rather a broad blueprint for ongoing improvement in school organization and practice. With this important caveat in mind, we propose *six basic elements of personalized instruction* that should be present if a school wishes to develop powerful teaching and learning for student success. These elements or structures produce a challenging, integrative, but child-centered learning environment, one that is interactive and meaningful, but one that also features reasonably structured learning activities, flexible use of time and space, and authentic, performance-based assessment of student progress.

We think of these six basic elements as constituting the culture and context of personalized instruction. The cultural components—teacher role, student learning characteristics, and collegial relationships—establish the foundation of personalization and ensure that the school

prizes a caring and collaborative environment, student diversity, and individual development. The contextual factors—interactivity, flexible scheduling, and authentic assessment—promote and support student engagement, thoughtful growth, and proficient performance.

## DUAL TEACHER ROLE

The indispensable catalyst in the personalized instructional environment is the teacher, the instructional specialist closest to the learning situation who best understands the needs and interests of students as well as the policies of the school and the district. Personalized instruction demands that the teacher assume dual roles: teacher-coach and teacher-advisor. As a learning coach, the teacher collaborates with other teachers, with student peer tutors, and with community resource persons to guide student learning. As an advisor, the teacher provides advice, counsel, and guidance to from 15 to 20 students on academic and school-adjustment issues.

*Teacher-coach.* Teacher-coaches offer the same kind of instruction, demonstration, practice, and feedback to their students as athletic coaches and student activity advisors have modeled in successful programs. The needs of today's students are quite different from those of their counterparts two or three generations ago. The world has experienced several social revolutions and a knowledge explosion that makes it almost impossible to "cover" more than a small part of what students need to know for a reasonably successful life. Cognitive and problem-solving skills—what some call metacognitive skills—are more important today than any particular piece of knowledge. The teacher-coach in the school environment must be a facilitator of learning, a guide who helps students find appropriate resources and engage in suitable learning activities.

Members of the Learning Environments Consortium International describe such a teacher as "not so much educational broadcaster as academic troubleshooter. He devotes fewer hours to lecturing in front of a class and more to working with students individually and in small groups."<sup>4</sup>

*Teacher-advisor.* Teacher-advisors are the first line of offense and defense in a school guidance program geared to student success. Advising is the other facet of the new job description for teachers. Teachers and other qualified adults join professional counselors in helping students plan and achieve appropriate career, personal, and social goals. Teachers, counselors, and other adults work as a team to promote students' adjustment to and success in school. Professional counselors serve as advisors to a group of teacher-advisors and help them to learn their role and its functions.

Over the years, advisement programs have gone under a variety of names, including expanded homeroom, advisory period, home base, advisory base, student assistance, teacher-advisor, advisor/advisee, and personal adult advocate. The programs have varied from place to place, but typically call for a teacher to assume guidance functions that are narrowly limited to planning academic programs, dispensing information about careers and colleges, addressing school adjustment issues, and offering personal/social guidance.

In middle schools, many advisor programs take on the character of group guidance, but these applications are usually limited in scope and often in success as well. The most successful advisement programs emphasize personal contact between students and advisors along with continuing support of the student in his or her academic program and personal adjustment to school. *Breaking Ranks*, a 1996 report from the National Association of Secondary School Principals (NASSP), specifically mentions the role of the “personal adult advocate” in helping the student personalize the education experience.

## DIAGNOSIS OF STUDENT LEARNING CHARACTERISTICS

If the goal is to build a learning environment suited to the aptitudes, needs, and interests of each student, personalized instruction must begin with knowledge of the learner. The foundation of any personalized approach to instruction is some form of diagnosis—determining what are the learning-related characteristics of individual learners. Direct observation and various types of diagnostic assessments are among the principal tools available to teachers who view instruction as coaching, mentoring, facilitating, and advising. Diagnosis is concerned with discovering such student learning traits as developmental level, learning style, and learning history.

*Developmental characteristics.* Developmental characteristics are those specific stages in individual maturation when certain capacities for learned behavior appear (e.g., visual perception, language pronunciation, and cognitive thinking skills). Examining these characteristics of students can tell us *when* they are developmentally ready to learn something. They describe individual readiness for learning. Certain capabilities appear only after the appropriate stage in individual development occurs and need to be developed at that time. If teachers are to personalize student instruction, they must have a good understanding of learner developmental traits.

Darling-Hammond calls for “developmentally attentive schools,” starting with the presumption that schools

should be user friendly.<sup>5</sup> School organization and student work must build on developmental consideration. Learning activities should be based on student needs and legitimate interests rather than arbitrarily on generic curriculum guides or the contents of approved textbooks. Particularly in the lower grades, students need hands-on learning with active and concrete learning activities. Nor should developmental attentiveness end with primary schooling. Jomills Braddock and James McPartland argue that many problems that teenagers have in school are a result of the notable mismatch between their developmental needs and the learning environments of most junior and senior high schools.<sup>6</sup> When teenagers most need close relationships, they get large, impersonal schools. When they most need to experience increasing autonomy, they get rigid rules, curricular tracking, and large doses of memorization.

*Student learning style.* The second broadest diagnostic element is student learning style, which encompasses information-processing habits, attitudinal tendencies, and biologically based responses that are typical of the ways a given student learns and prefers to learn. There are three broad categories of learning style characteristics.

- *Cognitive styles* are preferred ways of perception, organization, and retention. For example, perceptual modality preferences—whether a
- *Affective styles* include those dimensions of the learning personality that have to do with attention, emotion, and valuing. Each learner has a personal motivational approach.
- *Physiological styles* are individual traits deriving from a person’s gender, health, nutrition, and reaction to the physical surroundings, such as preferences for levels of light, sound, and temperature in the learning environment.

Learning style is a gestalt that tells us *how* a student learns and prefers to learn. Learning styles can be measured by a variety of assessment techniques. The *Learning Style Profile*, for example, assesses 24 independent scales representing four factors: perceptual responses, cognitive styles, study preferences, and instructional preferences. Seven cognitive skills are profiled, including sequential and simultaneous processing skills. The *Learning Style Profile* and other comprehensive instruments help teachers identify students’ strengths and weaknesses and organize instruction more efficiently and effectively. Learning style diagnosis is a key element in any attempt to make instruction more personalized.

*Student learning history.* “Student learning history” is a term coined by Benjamin Bloom and his colleagues in their mastery learning research to describe the aggregate of

personal learning that each student brings to a particular course, class, or school program. A learner's history characterizes his or her instructional readiness or "entering behavior." Learning history is the third broad area of diagnosis. In fact, existing student knowledge, skills, and attitudes define the fertile ground for student success in subsequent learning.

Learning history tells us *what* a student knows and can do at a given point in his or her learning career. Diagnosis of learning history involves the determination of what has occurred as a basis for what should occur. Observation, surveys, inventories, and curriculum-referenced tests best assess these levels of knowledge or skill. Information about student learning history is also available to teachers in cumulative record folders, in teacher and counselor reports, and from student questionnaires, inventories, and various diagnostic tests.

## CULTURE OF COLLEGIALITY

Another essential ingredient of personalized instruction is a school culture of collaboration, in which teachers and students work together in a cooperative social environment to develop meaningful learning activities for all students. Choice theory proposes that all behavior is an attempt to satisfy basic needs that are hardwired into us. We always choose to do what best satisfies our needs.

William Glasser, the originator of choice theory, tells us that "if what is being taught does not satisfy the needs about which a student is currently most concerned, it will make little difference how brilliantly the teacher teaches—the student will not work to learn.... Teachers are well aware that hungry students think of food, lonely students look for friends, and powerless students seek attention far more than they look for knowledge."<sup>7</sup> A constructivist environment and collaborative learning arrangements characterize a collegial culture.

*Constructivist environment.* Many educators today have adopted a constructivist view of learning. Constructivism holds that individual learners construct knowledge by giving meaning to their current experiences in light of their prior knowledge. Time and opportunity for reflective dialogue are critical elements of such a learning environment. Constructivist teachers build instruction on student learning styles and skills, and they encourage students to seek out personal knowledge of a topic. Students work with their teacher-coaches to improve their cognitive skills and to expand their current experience through reflection, seminars, and long-term projects. Constructivist teachers look for opportunities to encourage reflection, problem solving, and initiative.

*Collaborative learning arrangements.* The task of personalized instruction is to create learning communities in which students can confront important ideas and apply their learning to real-world experiences that they can understand and use. Collaborative learning arrangements provide an opportunity for students and teachers to work together to talk about their ideas and to sharpen their thinking. Considerable evidence exists, for example, that students learn better in cooperative groups than when alone.<sup>8</sup> Small cooperative groups encourage collaboration and better socialization than traditional classrooms, yet produce solid achievement gains.

Glasser believes that small learning teams offer a good chance of motivating almost all students, for several reasons. Students gain a sense of belonging by working in teams of two to five, and a sense of belonging provides the initial motivator for students to do the work. As they achieve some success, the students will want to work even harder. Stronger students, Glasser argues, find it need-fulfilling to help weaker students, and weaker students find it need-fulfilling to contribute to the team effort. Students learn to depend not only on the teacher but on their teammates and on their own creativity. Collaborative learning arrangements are necessary for a personalized learning environment because they promote interaction, dialogue, and thoughtful reflection.

## INTERACTIVE LEARNING ENVIRONMENTS

Interactive learning environments are designed to foster collaborative learning and reflective conversation. Recent studies have found that high schools which are restructured to provide interactive learning arrangements produce higher achievement gains that are also more equitably distributed among socioeconomic sub-groups.<sup>9</sup> These studies found that collective responsibility for student learning, an academic emphasis, and high morale are important features of a good school learning community. Successful practices included school-within-school units, interdisciplinary teaching teams, and common planning time for teachers. Interactive learning environments are characterized by small school or group size, by thoughtful classrooms, by active learning experiences, and by authentic student achievement. Let us explore these characteristics.

*School or group size.* Darling-Hammond has reported that more than 30 years of studies on school organization "have consistently found that small schools (with enrollments of roughly 300 to 600) promote higher student achievement, higher attendance, lower dropout rates, greater participation

in school activities, more positive feelings toward self and school, more positive behavior, less violence and vandalism and greater post-school success.” These outcomes, she continues, “are also found in settings where students have close sustained relationships with a smaller than average number of teachers throughout their school careers.”<sup>10</sup> The 1996 NASSP report *Breaking Ranks* also recommended that high schools not exceed 600 students.

Unfortunately, earlier studies of class size were inconclusive or at best debatable. Smaller class size is invariably the better choice when the group is 20 or smaller, but in the range from 20 to 40 students, class size makes little or no difference.<sup>11</sup> Class size studies are difficult to conduct because so many other socioeconomic, organizational, and instructional variables can intervene. The issue becomes moot, however, when one approaches the issue of class or group size from the learner’s point of view. The question then is, How do we best meet the learner’s needs? What kind of grouping (large, medium, or small) best serves the target content or the activity? A choir or a band usually benefits from being larger. Skill learning, discussion, and reflective conversation demand small groups. Research and reading are often best done alone. The size of the group should be a function of its purpose. Having said this, however, we should reiterate that most school-based learning benefits from smaller groups because they encourage collaboration, interaction, and shared satisfaction.

*Thoughtful environments.* Smaller schools and smaller groups can better support thoughtful conversation, learning by doing, apprenticeship experiences, and authentic student achievement. Francis Schrag has argued for more “thoughtfulness” in classrooms.<sup>12</sup> And researchers at the National Center on Effective Secondary Schools at the University of Wisconsin developed a set of rating scales for “thoughtful lessons” in social studies based on Schrag’s conception of good thinking. The University of Wisconsin research found that social studies classes in 16 schools showed more thoughtfulness when school principals and department chairs promoted thinking as a central goal.<sup>13</sup>

Instruction is thoughtful when it focuses on a few important topics with coherence and continuity, provides plenty of time for investigation and interactive dialogue, raises challenging issues that require students to produce new knowledge, and stresses the quality of supporting explanations and reasons over the need for “right” answers. Barry Beyer argues that at least four elements must be present for a thoughtful learning environment:

- a classroom layout that invites thinking—not in traditional rows, but students facing each other in groups, working in learning centers or in meaningful clusters;

- classroom interactions that involve information processing, rather than information receiving or repeating—posing and solving problems, seeking out evidence, and judging the quality of supporting reasons;
- the use of precise, thoughtful language rather than vague terminology or generalizations—hypothesizing, sifting evidence, questioning inferences and assumptions, making predictions, drawing conclusions; and
- the organization of classroom study and courses around thoughtful questions—*inquiry built on questions of real interest to students themselves.*<sup>14</sup>

*Active learning experiences.* Susan Kovalik and Karen Olsen contend that prior learning experiences are critical to the success of active forms of learning.<sup>15</sup> The human brain continuously searches for patterns in incoming information as it attempts to find meaning in the data. The more active the learning experience, the more likely that the input will be rich in meaning. Kovalik and Olsen suggest two rules of thumb for enhancing learning:

- Provide real-life richness and context in all learning situations. The less the input, the harder the learner will struggle to find meaning.
- Curriculum and instruction must try to use all of a learner’s prior experience and to maximize the amount of sensory input during learning. Human learning is rarely linear or neat or orderly or typically logical, but rather multilinear, multisensory, and seemingly illogical until the learner perceives clear patterns in the information that are personally meaningful.

At Central Park East Secondary School in New York City, all classes are organized in seminar style. The objective is to encourage a more active and interactive learning environment. Central Park East students spend their classroom time “building replicas, writing books, transcribing interviews, constructing mathematical models, creating dramas, developing photos, writing lab reports, or debating a class decision.” In the field, they spend their time “collecting samples, interviewing contacts, sketching and drawing, looking for tracks, measuring, recording, searching, or just asking why. The point is that they are ‘learning through doing, through genuine experience.’”<sup>16</sup> Teachers who are concerned about personalizing the learning process believe in teaching through genuine experiences and thoughtful reflection.

*Authentic student achievement.* Instruction is authentic when it focuses on the kind of mastery found in successful adults, and personalized instruction must be authentic. Authentic human achievement is concerned with what is

significant, worthwhile, and meaningful in the lives of successful adults from all walks of life—from artists and electricians to laborers and scientists. Authentic academic achievement, then, must be concerned with accomplishments that are significant, worthwhile, and meaningful for learners preparing for adulthood.<sup>17</sup>

Fred Newmann, Walter Secada, and Gary Wehlage, researchers at the Center on Organization and Restructuring of Schools at the University of Wisconsin, Madison, devoted five years of research to the formulation and study of criteria and standards for authentic academic achievement, authentic instruction, authentic assessment tasks, and authentic performance.<sup>18</sup> They characterized authentic academic achievement in terms of three criteria: 1) construction (not production) of knowledge, 2) disciplined inquiry (mastery of a field), and 3) value beyond school.

Human cognition is complex, but the need for “authenticity” in learning is straightforward. All learners need to feel competent and capable if they are to understand and accomplish real-world tasks. Newmann, Secada, and Wehlage argue that “the kind of mastery required for students to earn school credits, grades, and high scores on tests is often considered trivial, contrived, and meaningless—by both students and adults. This absence of meaning breeds low engagement in schoolwork and inhibits transfer of school learning to issues and problems faced outside the school.”<sup>19</sup> Engagement is the key word here. Without engagement, much of schooling is meaningless and unproductive. It is difficult to envision a personalized instructional environment without authenticity.

## FLEXIBLE SCHEDULING AND PACING

The schedule of a school makes the educational philosophy of the school evident and visible. If the philosophy is traditional, the schedule is likely to be very structured, even rigid. If the philosophy is constructivist or learner-centered, the schedule will almost necessarily be personalized or at least very flexible.

Two ingredients seem necessary to the development of a more personalized school schedule for students. First, both students and teachers need to have input into the way time is used. Teachers can accomplish this by making requests through team leaders, department chairs, or other representatives. This information can then be communicated to teacher-advisors, who meet with individual students to guide their scheduling decisions and to monitor their progress. Obviously, state and local mandates must be acknowledged, but waiver processes now in effect in most states permit some latitude in redefining credits and time.

Second, achievement should be judged on the basis of performance. Placing the emphasis on performance rather than time increases opportunities for students to make choices in curriculum and instruction. (See the discussion of authentic assessment below for more on performance-based assessment.)

In *Horace’s School: Redesigning the American High School*, TheodoreSizer proposes a sample high school schedule designed to tailor school practices to the needs of every group of adolescents.<sup>20</sup> The first, third, and sixth periods are 105 minutes each; the third, fourth, and fifth periods share two hours for lunch, advisories, and tutorials by the teaching team. Team members decide on group and individual activities, and advisors schedule tutorials for individual students. Between the first long period and the second, there is a 10-minute passing period; between all the others, there is just five minutes. Subjects are scheduled on a four-day rotation to provide opportunities for teachers and students to meet at different times of the day.

The longer periods in this version of a block schedule permit students to take part in community service and other extended experiences. Teachers have time to plan with colleagues; to serve as advisors to a prescribed number of students; to work on curriculum, instruction, and assessment; and to contact parents. That the schedule accommodates these priorities shows the relationship of scheduling to the purposes of the school.

## AUTHENTIC ASSESSMENT

Authentic assessment is the sixth defining element of personalized instruction. Assessment is the process of gathering information about students. The improvement of student learning, not sorting or grading, should be the primary purpose of assessment. Assessment is authentic when it focuses on real performance and mastery of a field of knowledge. The words assessment and testing are often used interchangeably. Tests, however, are only one form of assessment. Assessment goes beyond testing and includes such activities as demonstrations, oral and written presentations, performances, contests, projects, and problem-solving activities. Athletic competitions are assessments of how well a team or an individual has prepared for a contest. Similarly, a dramatic performance is an assessment of the cast’s talents and readiness. The response of the audience is one measure of the quality of the performance.

In all cases, the method of assessment should fit the purpose of instruction. If students are expected to learn to write well, the competency can hardly be measured by multiple-choice questions about grammar. Having students actually

write or develop responses to open-ended questions seems a more suitable assessment device. Even better is to give them time to write and then revise their writing. The various types of authentic assessment can be grouped under the headings of naturalistic assessment, performance assessment, and portfolio assessment.<sup>21</sup>

*Naturalistic assessment* is the kind of appraisal that takes place during normal learning activities. Naturalistic assessment involves the teacher as a “participant observer,” a technique long used in anthropology. The teacher systematically collects information about students and records it for later analysis and summation.

*Performance assessment* is an umbrella term that refers to evaluating what students can do by watching them in the process of demonstrating some skill or performing a specified task or by examining a product that students construct and develop in response to a set of directions.<sup>22</sup> The object of this kind of assessment is a student performance or a student-developed product. Performance assessment can be used in such diverse activities as conducting a science experiment, using or programming a computer, debating, manufacturing or repairing an object, playing a musical instrument, speaking a foreign language, and writing a script or story. The merit badge system used in scouting is a form of performance assessment. Some educators call the more formal versions of these performance assessments “exhibitions,” which are comprehensive demonstrations that enable students to present their academic efforts for review and discussion and to certify their competencies in specific areas.

*Portfolio assessment* involves both students as compilers and teachers as supervisors. Students collect and select pieces of their own work over a period of time as evidence that they have met their learning objectives. Usually, students also write a rationale explaining why they think the selected pieces are their best work. Portfolio assessment has its origin in the practices of artists, architects, and designers who assemble key examples of their work for prospective employers.

## THE BIG PICTURE

George Wood characterizes the quintessential personalized instructional environment in his description of the learning community at Hubbard Woods Elementary School in Winnetka, Illinois. Wood writes:

“A community of learners.” This is the watchword of the Winnetka school district. It graces the cover of the most recent district curriculum report, appears frequently in

newsletters home, and is often referred to by the staff as a guiding principle. It is not mere rhetoric. The notion of the school as a learning community directs virtually all aspects of the school—from the length of the school day, to teaching, to staff relations, to the very layout of the buildings....

Most tasks are taken on collaboratively, with students working in teams to solve problems, create large-scale displays, or write plays, for example. Much of this is possible because the curriculum is geared to the developmental needs of children.

Rather than workbooks and worksheets, which require only the ability to manipulate a pencil and to copy, most classroom tasks involve a hands-on experience. Math games, tools for measuring or counting, costumes for plays, plants and animals all fill the rooms so that students can touch, feel, and experiment as they learn. Such learning does not require that students memorize “correct” answers, compiling enough of them to earn a grade; in fact, letter grades are not given. Rather, students learn through collaboration how to help one another find out, how to ask good questions, in short, how to learn. The notion of competitiveness on abstract tasks only hinders learning, and so these teachers break away from that orientation.<sup>23</sup>

In the final analysis, personalized instruction reflects deep concern for learners and the willingness to search for ways to adjust the teaching/learning environment to meet the learning needs of individual students.

## NOTES

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