

# 1. Imaginative, Dynamic, But Unproved

ONE of the most unusual high schools in the United States is the one at Melbourne, Florida, near Cape Kennedy. Instead of using the customary tenth, eleventh, and twelfth grades to structure its curriculum, the Melbourne High School has reorganized its courses into a system of "phases," which reflect not the grade in which they are taught but each individual student's ability to grasp the subject. B. Frank Brown, Melbourne's principal, has described his school in a new book entitled *"The Nongraded High School"* (Prentice-Hall, 233 pp. \$5.95). Two reviews of the book are presented herewith. Abraham Lass is principal of the Abraham Lincoln High School in Brooklyn and author of *"How to Prepare for College."* Jerome Bruner is director of the Center for Cognitive Studies at Harvard University and president-elect of the American Psychological Association.

By ABRAHAM LASS

**W**HAT'S wrong with our present-day high schools? Plenty, says Dr. B. Frank Brown, author of *The Nongraded High School*:

- They aren't turning out students who are prepared "for jobs which do not now exist and for professions which cannot be described."

- Educators are timid, pedestrian, unimaginative, shackled to outmoded traditions and procedures . . . window-shade and chalkboard men rather than dynamic leaders."

- In an effort to meet the demands of a curriculum which is suddenly being pushed "from auto mechanics to celestial mechanics and from terrestrial geography to celestial geography," schoolmen are "taking baby steps where giant steps are needed."

- The school has become a "citadel of routine," "a bureaucracy for children." The curriculum is "narrow, rigid, obstinate, and far from first rate."

- Students have little opportunity to experience the excitement of exploring or discovering either themselves or the world around them.

- The conventional high school organized by grades or years is a Procrustean bed on which both the slow and the bright are broken. Here the bells ring on time. The classes change on time. And everyone advances and grows or doesn't advance and doesn't grow on time. At least this is the comforting delusion most schoolmen share.

Dr. Brown finds nothing in the conventional high school worth saving or commending. If we are going to get to the moon first, master our space technology, produce the men and women who will control the mechanisms of our wildly automating civilization, it will, he is sure, come only through "an imaginative organization and dynamic process of educational enterprise," like the ungrad-

ed Melbourne, Florida school he presides over with such dynamic distinction. Here, out of his intense convictions, driving energy, and deeply felt commitments, Dr. Brown has forged what he passionately believes to be the only kind of school that provides the proper intellectual climate, facilities, organization, curriculum, staff, and community support necessary for high school students to learn, live, and grow into a full awareness of themselves, their time, and their responsibilities.

In *The Nongraded High School*, Dr. Brown sets down in some detail what the ungraded high school is like, how it is organized and taught, and how it differs from the conventional high school.

At Melbourne, students are grouped according to their achievements and readiness for future learning as determined by such objective criteria as placement on national standardized achievement tests. There are no conventional "grades" or "forms" or "terms" at Melbourne. The I.Q.—as too frequently misused—plays no role in determining where a student begins, how fast he progresses, when he is "promoted" or graduated. Each area of learning is organized into five phases for students of varying abilities and achievements: the

slow, the marginal, the average, the bright, and the very superior. The content and pace of the instruction in each area is geared to what the student needs and can absorb. When the student has mastered whatever "phase" of a subject he is in, he goes on to the next phase or area. Thus the bright ones are not held back by the slower ones; the slow students are not compelled to essay the impossible.

The emphasis throughout the Melbourne plan is on the individual student, on designing for him the program he can best cope with and master. All programs are tailor-made. There is no "block" programming at Melbourne. A poor or mediocre mathematics student may thus find himself in a very small Phase 1 class in mathematics where he will receive intensive remedial instruction. Being a gifted English student, he will be programmed for a Phase 4 or Phase 5 class, where he may be working on an independent project for part of the time, meeting with a small group in a seminar setting, conferring with the teacher at other times.

Other features of the Melbourne plan include:

- Exciting opportunities for academically gifted students to engage in honors, "depth," and independent study in advanced placement, college level courses.

- Team teaching.

- Classes of variable size to meet the students' special needs.

- The single textbook does not dominate Melbourne's classes. It has been replaced by a multiplicity of relevant materials and learning devices.

- There are no monitored study halls at Melbourne. Study time is for studying, not for sitting in "study halls."

- For the "academically able," class attendance is voluntary. An A student in physics need not attend classes. He may

(Continued on page 74)



## 2. A Vivid Glimpse of the Future

By JEROME S. BRUNER

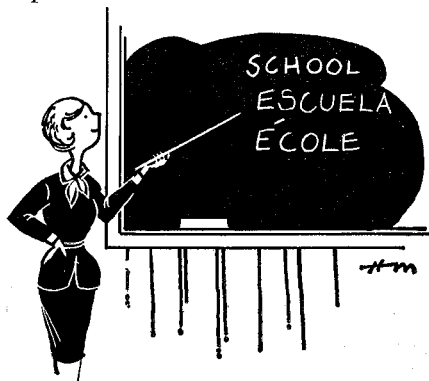
**T**HIS courageous book is a report of an experiment in pedagogy at a high school in Melbourne, Florida. As such, it might merit no special attention, but the experiment is so daring and so general in its applicability that Melbourne High School earns its right to special attention for the feel it gives of the future. To call it all a "report on the nongraded high school" is to do the venture a grave injustice—in much the same way that it would be an injustice to call the American Constitution an experiment in non-monarchical government. What turns out to be so deeply important about abolishing grade levels in a high school is that it forces a complete rethinking about what one is trying to accomplish in the high school years. It is not that a Procrustean system of grouping students according to their "year" was abolished, but that there was erected in its place something new and challenging and full of promise. The bare statistics of accomplishment hardly do it justice—reduction in dropouts from a normal 30 per cent to 4 per cent between 1958 and 1962, or an increase in college enrollment of graduates from the usual 40 to 70 per cent. That could have been accomplished by several strokes of good fortune. It is the process of change and all that it liberated in the students, the teachers, and the town that is striking.

There was good reason behind the decision to abolish the usual system in which a student enters as a "freshman" and pursues a "freshman" course all that year, going almost automatically to "sophomore" courses the next year, and on to the end, step by step. To begin with, there is the obvious fact of variability. Some students can go faster than their age-mates—phenomenally faster whether because of capacity or the fortune of background. If one demands a standard amount of work from all in any given grade, may we not be robbing the student of the opportunity of learning and using his own pace? Some will inevitably feel a sense of failure, however hard they try, while others will squirm their way through a year of unchallenged freedom. If a student can do college work in mathematics or history in his freshman year in high school, Melbourne argued, let him take Advanced Placement courses in those subjects from the beginning right to his last

year. And if another student needs extra, remedial work in mathematics his freshman year, let him not be dumped into a regular or even a "slow" algebra course to do his best—ending, likely, by memorizing matters that make no sense to him. Give him a course in the fundamentals he will need before launching him into algebra. These were the kinds of considerations that led to the decision to "ungrade" Melbourne.

As I read Dr. Brown's introductory indictment of the deadening effects of a graded system (where failure is punished by having to repeat the same work over), my first thought was that this was going to be another book of deploring. But it soon became clear that this was not what the book was about at all. School grading is simply a poor piece of technology for using the resources of a school, one that has to be removed if the next step is to be taken. It is like nothing so much as the replacement of the top hitch by the horse collar during the medieval period. Up to the introduction of the horse collar, the weight to be hauled was attached to the top of a yoke by a strap that passed over the horse's back. When the horse pulled, the yoke pressed against his windpipe in a self-choking manner. The innovation was a simple one: pass the strap under the horse's body and attach it to the lower part of the collar. With thrust, the collar would press against the horse's strong neck and shoulders. He could, then "put his back into it."

And so with the graded high school. The eager student pressed against the system and found himself stifled by the requirements of his grade. Soon he regulated his thrust to suit the system. What often resulted was boredom for the swift, bewilderment for the slow, and a general surrender of intellectual aspirations to what teacher wanted.



Seeing a difficulty clearly often requires that one see an alternative to it. Frank Brown saw an impressive number. Let me note only briefly what has replaced the older, graded system at Melbourne. It is the real story.

Courses were reorganized into a system of "phases" that reflected not the grade in which they were being taught, but the student's ability to grasp the subject and his willingness to throw his weight into the task. Phase 1 was remedial, for students who needed special assistance in small classes. When a student feels ready to try something more advanced, he is encouraged to set forth to the next "phase." His willingness is a major criterion. Phase 2 is for students who need more emphasis on the basic skills of a subject. Phase 3 is for those who are ready to have a go at the major substance of the curriculum in the field—about which more in a moment. Phase 4 is the subject in depth and with concentration. Phase 5 is independent study for the exceptional student willing to assume responsibility for his own learning and ready to use all available resources in doing so. He is supervised by a teacher with whom (as in any tutorial system) the student makes an appointment when he has finished a stint of work.

**T**HE phase system operates in four basic intellectual disciplines: mathematics, science, English, and history. They are at the core of the school's offering. Freed from the old pattern, Melbourne was now in a position to innovate. Virtually every one of the major curriculum efforts of the last decade has been incorporated and fitted to the school's needs—the Physical Science Study Committee course, the Chemical Bond course, the Biological Sciences Curriculum Study, several experimental mathematics programs, and some home-grown innovations in social studies and humanities. Courses have had to be adapted to different phase levels, and I wish more had been said on what this entailed.

"This realignment of students on the basis of achievement brings about a major difference in course content between the nongraded and the conventionally graded school. The motion of the nongraded curriculum compels the school to resort to a much wider range of materials than is used in the graded school. Standard textbooks aimed at a grade level are inappropriate and have been abolished. A multiplicity of materials has replaced these media." But there is more to it than that, something in the system that seems to challenge students to reach. Brown suggests it: "Motion itself is not the cure for monotony in the schools; liveliness of image is the key. The flexibility of the non-graded struc-