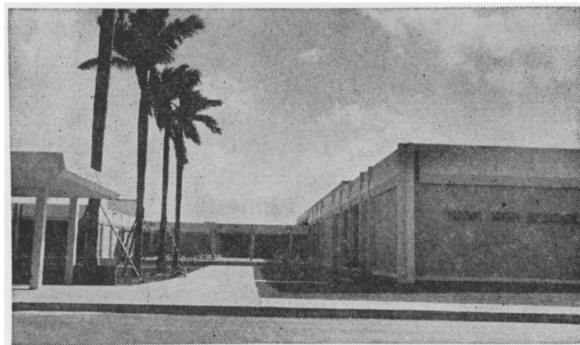


NOVA HIGH

Space Age School



For three years the director studied construction, equipment, curricula, and instructional methods which were being tested and proved in other places. Then he built the school which in one year has become a national showcase.

By BURT KAUFMAN and PAUL BETHUNE

THE Nova High School, which opened in September, 1963, is an initial unit of the South Florida Education Center, an educational complex imaginative in design and advanced in concept. Eventually this complex will house tax-supported schools encompassing kindergarten through junior college, plus a private university with a graduate school. This long-range program, when completed, will present a continuous integrated process of learning unparalleled in education history. Known as "The Nova Plan," this new approach may well develop a model educational system for the county, state, and nation.

In March, 1960, Dean Dessenberger, then chairman of the Broward County Board of Public Instruction, looked at Forman Field, a 545-acre government surplus airfield, and envisioned this exciting experiment in education. Tireless efforts by the school board and Broward's professional educators resulted in a government gift of 320.5 acres and the purchase of the remaining land. After months of research and intensive planning, construction of Nova began in August, 1962.

What makes Nova High School different? It is not experimental in curriculum but in concept. Its construction features, equipment, teaching aids, and instructional methods have been tested and proved in other school systems. In fact, the di-

rector of Nova High School, Arthur B. Wolfe, spent three full years visiting outstanding schools of the United States in order to incorporate the best of modern educational methods in the Nova plan for instruction. The educational specifications were completed in their entirety before the first brick was laid.

Nova is a space age school. Its philosophy is based on a concept best described as scientific learning for a scientific age. Interestingly, to achieve the goals of such a philosophy, there has been a return to a "hard-core" curriculum. Each Nova student pursues a schedule of studies which includes mathematics, foreign language, English, science, social studies, technical science, special studies, and physical education. A student may choose a foreign language from among Latin, Spanish, French, Russian, and German. His choice of a technical science or special studies course comes from electronics, mechanical and scale drawing, music, home economics, art, personal typing, mechanical technology, safety and driver education, physiology, and home nursing. A student who chooses a foreign language in one school year may elect two courses from technical science; a student who does not may elect five for that school year.

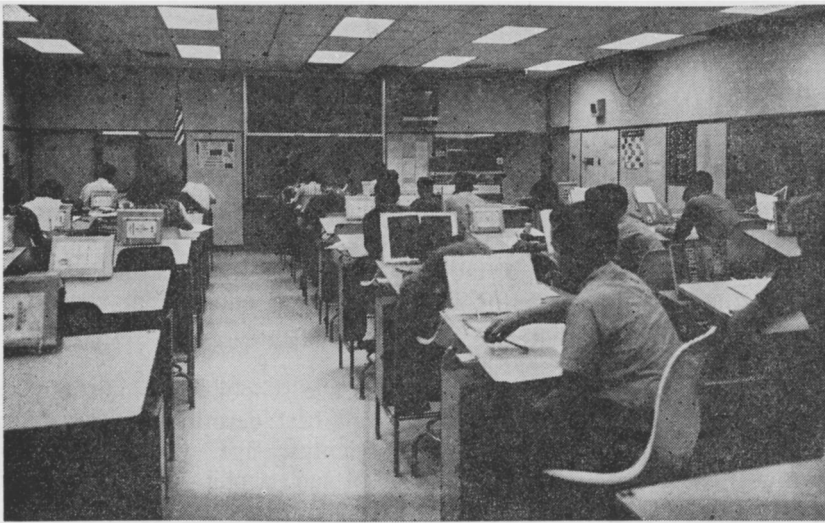
Despite the seeming rigidity of this curriculum, there is flexibility within its framework. Nova is a nongraded school and this is the main feature of its program. It is possible for seventh-year students to be studying math with tenth-year students, science with eighth-year students, and English

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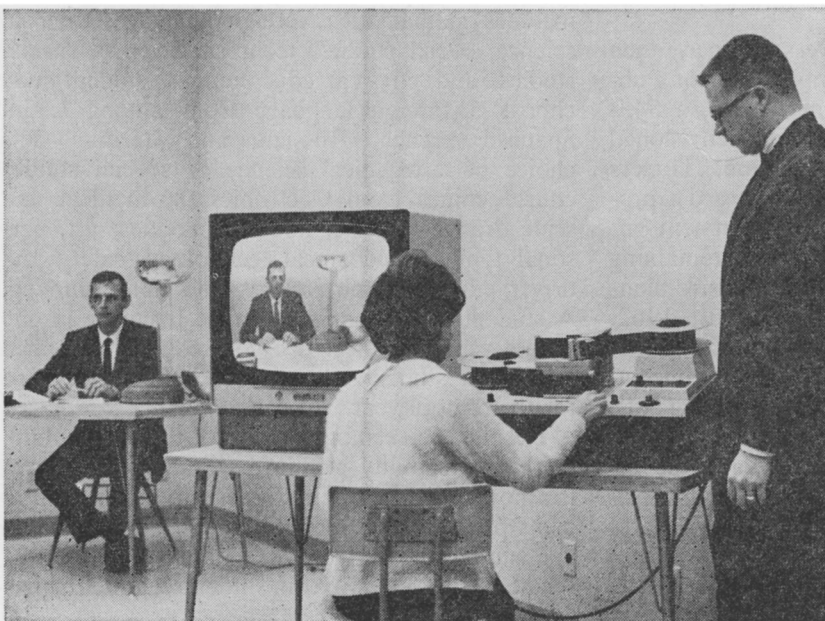
with seventh-year students. In other words, a nongraded program allows complete homogeneous grouping within each subject area without any regard to age or year in school. This educational program is truly tailored to individual needs and brings into practice the theory of "taking each student as far as he can go." For example, the mathematics department strongly believes in vertical acceleration for the gifted. The nongraded organization allows this to be done with ease. It is expected, therefore, that many students will study college mathematics courses such as abstract and linear algebra, calculus, and probability and statistics, beginning these in some cases as early as the ninth and tenth year in school. It is anticipated that, in the future, mathematically

capable students will be able, prior to their graduation from high school, to complete what is now considered a very strong undergraduate math major in leading universities. At the same time, many of the less capable students will not get through the normal high school curriculum, even though all students will study mathematics as long as they are in school.

Each discipline has identified the approach its faculty thinks best suited to remove extraneous retardation in the case of the gifted and relaxation of time pressures for the less able. The idea here is predicated on the fact that each student should go as far as his capabilities will carry him without pressures to complete material for the sake of artificially set standards which do not take into



A Nova High class in technical drawing. Although Nova features a "hard-core" curriculum, each student may study a technical science from a wide array of courses, including electronics, mechanical drawing, and mechanical technology.



Nova students have a variety of recently developed instructional media at their disposal, including closed circuit TV (at left) and recording equipment (at right) in the Audio-Visual Center. Innovations were financed by omitting such conventional facilities as an auditorium and cafeteria.

consideration the individual differences among students.

Instead of being promoted a grade level each year, students progress through a series of achievement levels called "units" in each subject area. At the end of each unit a test is given which determines whether the student may continue to the next level. A student performing below minimum levels on the test must repeat that unit satisfactorily before being allowed to advance. Thus no student ever fails a whole year's work in any subject. At graduation time it is not expected that all students will have completed the same amount of the curriculum. However, a student who reports for a certain unit is expected to have a set of values, skills, and knowledge in common with others who are promoted to the same units. The identification of material within a unit allows for ladder-like steps upon which the student is constantly building and will use in later units.

When students enter Nova they undergo area examinations and all information coming from their former schools is considered. The student is then placed in the appropriate units *in each discipline*. The class to which he is assigned may have students at various levels within the unit. For example, some students in the group may be working to considerably more depth than others in the same group. This is not intended to retard the more able students but rather to meet individual needs and interests. Some students need depth in chemistry; some do not. Even though the student does not elect major studies, he does in practice exercise control over a portion of his education.

A student whose interest is in science may elect to go far beyond what is required, while in English he may pursue a less time-consuming pattern. On the other hand, he may devote extra effort to languages and do a minimum of science and math.

As the student progresses through the sequence, he is aware of his status within the sequence. The units require approximately one month of time for the average student, about six weeks for the less able. During a major reporting period of seven and a half weeks a typical student would have completed at least one and often two units. Each student receives a quality grade and a quantity grade. These are recorded on the report card and averaged for a final grade for a period.

Students are encouraged to do independent study and research in every discipline. The student is taught from the very beginning that he is the person primarily responsible for his education. Far more freedom is allowed students at

Nova than at traditional schools, the goal being to help students develop mature study habits before they enter college. It is expected that Nova students will find the transition from Nova to college a smooth one.

The end of one trimester and the start of another means very little to the individual student or teacher. It calls for no major rearrangements. The one exception to this is the end of the third trimester, when the students embark on a one-month vacation. At this time we try to finish a unit so that the students will be mentally free for their vacation.

Nova is not attempting to become an educational racetrack. Students may apply for early graduation, but each case will be judged on its own merit. Ultimately, Nova will hold three graduations a year, to coincide with the student's entrance into the junior college or to one of the universities.

The newest and best of educational techniques and media are utilized at Nova. Among these are team teaching; closed-circuit television; overhead projectors in every room; reading laboratory; science and language laboratories; and large group, medium group, and small group instruction. There is also wall-to-wall carpeting throughout the school, resource centers equipped with a large number of reference books, micro-film readers, teaching machines, and tape recorders. At hand is also a complete data-processing center. The closed television system permits telecasting throughout the school as well as the making of video tapes of lessons and lectures for reshowing at a later date. Nova is also completely air-conditioned. These innovations were financed by the omission of facilities which have long been considered as standard equipment in conventional schools. Nova has no large auditorium and no expensive kitchen or cafeteria. Students either bring their lunches or buy food at snack bars which are supervised by a dietician. The students eat outside in a protected area.

Nova has already become an educational showcase in its own locale, Broward County, and is rapidly becoming a national mecca for educators hoping to see the newest ideas in practice. It is anticipated that many of the ideas and practices alive at Nova will be adopted elsewhere.

► Students at the Amphitheater High School in Tucson, Ariz., are experimenting with a new type of study hall. The study period is held in the school cafeteria where a snack bar is operated, permitting students to cram both their minds and their stomachs.

—Education Summary