AERONAUTICS AND THE DEVELOPMENT OF AVIATION

JOHN C. KOCH

The development of aviation education at the State Teachers College at Bloomsburg is probably unique in the history of American colleges. The program started on a small scale in the fall of 1940, with ten trainees, under the Civilian Pilot Training project. Several of the training groups included a girl. One of these ferried planes and performed the other flying duties of a WASP during the war.

After Pearl Harbor the program was stepped up and over 100 civilian college students were given preliminary military flight training. Some of our country's first air defenders were men trained at Bloomsburg.

In conjunction with the Army Air Force program, the Navy asked Bloomsburg to train V-5 cadets, and North Hall at one time housed both Army and Navy pilots. Over 550 Army and Navy aviation cadets received training at Bloomsburg.

In 1942 the Navy asked that Bloomsburg do an exclusive Navy training job, and the Army program was discontinued.

In 1943 the Navy selected Bloomsburg, along with only four other colleges in the United States — Georgia, Chicago, Purdue, and Texas — to do a specialized training program for Navy flight instructors. This program, concluded in 1944, resulted in the training of 250 Naval flight instructors.

To meet the exigencies of war, faculty members at Bloomsburg adapted their talents. An art teacher taught aircraft recognition; a geography professor became a meteorology instructor; and a history professor taught civil air regulations. As a result of this new aviation instruction on the part of the civilian faculty, and the obvious adaptations needed in educational material to meet the needs of the air-age, a curriculum for the training of teachers in aviation education was devised. It was accredited by the Civil Aeronautics Administration as being the first of its kind in the country.

To test out the new curriculum, opportunities were made available in the summer of 1944 and 1945 for high school students above the age of fourteen and high school teachers to take aviation courses together, including flight instruction. This, again, was the first opportunity of its kind available in the United States, and the program received national recognition in metropolitan newspapers and national publications.

Pilots, students and teachers who received aviation training at Bloomsburg are scattered all over the world, and their influence in educational and aviation circles reflects credit on the thorough introduction to aviation which they first received at Bloomsburg.

ART

GEORGE J. KELLER

The development of visual art at Bloomsburg State Teachers College is a story of progress in educational objectives. Its growth may be divided into three distinct periods. The first, or imitative phase, started with the beginning of the Normal School, and had to do with the development of the pupil's ability to copy reproductions of the masters, as well as photographs and natural objects. Skill in drawing was the criterion by which the student's progress was measured. The Normal instructor was interested only in teaching accuracy in draftsmanship; and in turn insisted upon a repetition of this technique being carried out by students in the "model school." Skill in drawing was thus an end in itself.

The second, or creative period, began about 1921. The general tendency in the fine arts then was the encouragement of creative expression. Skill in drawing was now considered only a means to an end. The development of the individual and a respect for personality were becoming of paramount importance. The Teachers College instructor emphasized the value of self-expression and the omission of imitative procedures. College students met in conference with their teachers and were encouraged to suggest individual ways of motivating lessons in the training school. Creative activity became a joint affair between the teacher and the pupils.

The third phase in college art, from about 1932 to the present time, is a combination of the creative attitude and a tendency toward practicability. Today, all over the world, there is a movement in the direction of art in industry. Americans everywhere are demanding that their clothes, their homes, and whatever comes into their lives shall be beautiful. The best concepts of art are being applied to objects of daily use and environment. The Teachers College classes are not only taught the principles of beauty for the purpose of conveying this information to their pupils, but they are also encouraged to use these principles in their own lives. The college instructor, in conference hours, discusses the creative art teaching procedure, and arouses in the student teacher a consciousness of the importance of good taste in the child's social life, as well as in his future business life.

Appreciation of Art has been a part of the requirement for all Elementary and Secondary students since the institution became a college. In 1951, Introduction of Art became a part of all curriculums including special fields such as business.

AUDIO-VISUAL EDUCATION

H. HARRISON RUSSELL

The college course in Visual Education was taught first in 1932. At that time the equipment consisted of three glass-slide lanterns, one 16mm silent projector, one 35mm silent portable projector, one portable screen and the Auditorium 35mm sound projector. Prior to the acquisition of the motion picture equipment, hundreds of stereographs and glass slides had been available for use especially in the departments of science and geography and in the Training School. The museum equipment obtained from the Philadelphia Commercial Museum also was available.

From the beginning, the objective of the course has been to learn means by which pupils can have experiences which will enable them to acquire correct concepts of the universe, the earth and its inhabitants, and their interrelationship. These in turn will enable them to reason intelligently. In other words they should recognize that abstractions represented by verbal symbols are fundamentally based on sensory experiences, without which comprehension cannot be obtained.

Since radio and recordings are now used in the learning experiences, the course is now labelled Audio-Visual Education. Perhaps a still better name would be Sensory Aids in Education.

Through the past years, the college has given attention to keeping abreast of the times with reference to sensory aids. Evidence of this is found in the facilities for direct, purposeful experiences, contrived experiences, dramatic participation, demonstrations, field studies, exhibits, still pictures and motion pictures.

In recent years, emphasis has been placed on sound pictures, radio and recordings. This does not means that sensory aids of long standing have been abandoned. Each has its place. However, the learning process has been promoted by the opportunities given

the prospective teachers for experiences in the educational techniques associated with the modern equipment.

During 1949 and 1950, an audio-visual room was equipped with permanent 16mm projectors and screen with an experienced operator available during all hours of the college day. Two other buildings on the campus are equipped with portable sound projectors, silent film projectors, filmstrip and glass-slide projectors. Film servicing is done in a room adjoining the audio-visual room.

Other equipment includes opaque projectors, overhead projectors, disc and filmstrip combination, recorder and public address system.

The college film library has 132 silent films and 303 sound films, many of which are in color. Also, several hundred filmstrips and 2-inch slides are available. It is equipped as a lending library for vocational education in the high schools in our college service area.

EDUCATION AND PSYCHOLOGY

JOHN J. FISHER

During the eighty years in which Bloomsburg has been engaged in the education of teachers, the professional portion of the curricula has been greatly increased in amount and changed in content.

The Bloomsburg Literary Institute, qualifying under the Normal School Act of 1857, was recognized in 1869 as the State Normal School of the Sixth District. The act required that "a Model School with accommodations for one hundred pupils" be established, and that the course of study "include the theory and practice of teaching." These two requirements are the only features of the law that refer to the introduction of professional material into the course of study.

Mental Philosophy, the forerunner of psychology, was taught before the Literary Institute became a Normal School. Mental Philosophy was described in the 1879-1880 catalog as "including the intellect, the sensibilities and the will." The same description was used for Psychology when the title appeared in the catalog for 1885-1886.

In the year in which the Institute was given this status, the Model School was in operation. In the same year *Theory of Teaching* and *Methods of Instruction applied to practice in the Model School* were added to the course of study. Although the records are not entirely clear on this point, it is probable that these "professional" subjects composed from 8% to 12% of the course of study.

Trends in professional thinking in the Bloomsburg State Normal School are indicated by the change of the name of the Model School to Training School in 1918 and by the appearance of new titles of subjects in the catalogs as shown by the table:

History of Education	1869-1870
Science of Teaching	1873-1874
Psychology	1885-1886
Philosophy of Education	1885-1886
School Management	1885-1886
School Apparatus and Appliances	1902-1903
Practice Teaching	1905-1906
School Sanitation	1910-1911

As a point of view and content changed, new names were given to old subjects and new subjects were added. Although many new titles appeared, the percentage of professional subjects did not increase greatly for forty years. This percentage was increased to about 17% by a revision of the course of study in 1910. In 1920, after the State had purchased the State Normal School and it truly became a state institution, the professional material in the several curricula varied from 41% to 49%. In 1926 the professional content in these same curricula ranged from 29% to 34%. These percentages have remained quite constant to the present time. The minimum amounts of professional material in the curricula for elementary, secondary, and commercial teachers are 30% 28% and 27% respectively.

Enthusiasm for the objective measurement of capacity and achievement, which had been rapidly mounting in the universities, struck Bloomsburg State Normal School in the early 1920's. The 1920-1921 faculty included a "lecturer on educational measurements." In 1922 there was organized a Bureau of Educational Research which offered courses in "educational measurements, measurement of intelligence, statistical methods in education, and supervision of measurement." By 1924 all curricula, both two-year and three-year, included a three-hour course in educational measurements. Courses in methods carried topics pertaining to the construction and use of objective tests. Both standardized and objective teacher-made tests were widely used.

The new enthusiasm, however, was short lived. By 1932, although all curricula had been lengthened to four years, courses in educational measurements had been reduced to two hours and fewer objective tests were being given.

Two plausible explanations for this rise and fall of objective measurement in education present themselves. First, the measurement movement in its enthusiasm overreached itself. The instruments developed proved to be neither as valid nor as reliable as they at first were thought to be. Second, and this seems to be the more important explanation, there came to be a realization that there are extremely worthwhile outcomes of education which to date have not yielded to objective measurement. Among these "intangibles" are attitudes, interests, and appreciations. The question may be raised whether the conviction that these outcomes cannot at present be measured objectively may not lead to a neglect of instruments and techniques in areas in which they have proved to be appropriate and useful.

During the late 1920's and the early 1930's there was a great deal of discussion of and considerable effort to "professionalize" the academic subjects of the curriculum at Bloomsburg. In the "professionalizing" of subject matter the treatment of each topic includes considerations such as the educational value of the topic, the mental processes of children learning it, the best methods of teaching it, and appropriate techniques for determining the degree of its mastery. In brief, the professional treatment of subject matter calls for an integration of its logical and psychological development in every part of the same course. The synthesis never seemed to be complete. The double purpose of teaching college students the academic content of a subject and at the same time teaching them how elementary and secondary pupils learn that content probably proved to be incompatible. To pursue them simultaneously was distracting to both instructor and student.

One of the main features of the so-called "enriched program" set up in 1937 was to make the first two years a period of general education and to concentrate the technical and professional work into the third and fourth years. In this revision of the curricula the abandonment of the theory of the "professionalization" of subject matter became quite complete.

A study of the graduation requirements of the institution down through the years discloses interesting trends with reference to the differentiation of the professional content of the several curricula. Prior to 1920 the Normal School trained only elementary school teachers and apparently no attempt was made to divide grades one to eight into groups as a basis for differentiation of the professional portion of the course of study.

Even though the elementary curriculum has been lengthened and curricula on the secondary level have been added, a core of professional constants for all curricula has been maintained. This core usually was made up of courses in Introduction to Teaching or Place and Purpose of Education in the Social Order, and the first and second courses in Psychology.

The newer curricula, however, always included professional subjects peculiar to those curricula. When the secondary curriculum was extended to the senior high school, new professional