

Introduction

The movement toward mass education began in Europe in the early 19th century. Horace Mann became interested in publicly-financed education for all citizens after assuming the position of Secretary of the Massachusetts Board of Education. He realized that qualified teachers would be required and he established the first normal school in the United States in 1839 for the specific mission of teacher training. The term "normal" refers to the establishment of standards or normalization of teaching practice.

At the turn of the 20th century, public education in many parts of Arkansas remained poor. Teachers often had little or no formal training and certification was gained by demonstrating one's knowledge to one of the "county examiners." Upon his graduation from the University of Virginia, J. J. Doyne began teaching in the Lonoke, Arkansas schools in 1879 and was active in gaining local financial support for the school to supplement the meager appropriation provided by the state. Doyne was active in teacher associations in the state, served as the Lonoke County Examiner, and was a frequent speaker across the state. He was elected State Superintendent of Public Instruction in 1898 and was serving in that capacity in 1906 when he wrote a bill calling for the establishment of an Arkansas State Normal School. Otis T. Wingo, originally from Weakley County, Tennessee, was a prominent lawyer and member of the Arkansas General Assembly. Doyne authored the bill to create the Arkansas State Normal School (ASNS) and B. W. Torreyson recommended that Wingo sponsor the bill to create the ASNS and it was subsequently approved (Bryant, p. 8). In 1907, Conway was selected as the site for the school and Doyne began his term as the institution's first president on July 1, 1908, just prior to the first fall semester of classes on campus. Beginning with 100 students and 7 faculty members (Bryant, p. 13), Arkansas State Normal School has grown to become the University of Central Arkansas, an institution with an enrollment of ca. 11,000 students and a faculty of more than 500. Of the seven faculty members who taught the first year of ASNS, two were science faculty, one physical science (O. D. Longstreth) and the other biological science (J. T. Buchholz), suggesting that the sciences were very prominent on our campus from the very beginning, as they are today.

ASNS was somewhat unique in that its mission was state-wide. As noted by Worley, p. 27: "Despite loss of teachers to other states and to other occupations,

the Normal had a great impact on education in Arkansas. In 1926 a survey of seventeen counties showed that forty percent of all teachers in those counties had received training at the Normal. Of the 160 graduates of the class of 1924, one hundred and forty taught in Arkansas the next year. By 1933, surveys showed thirty-four percent of all Arkansas teachers had received training at the ASTC." The effect of this history continues to this day in that UCA regularly registers students from every county in the state.

Initially the school offered both secondary and college level classes and awarded only two-year degrees. Then, in 1920, the first four-year degrees were offered on campus. Chemistry and the other sciences, including geography, were an integral part of the curriculum from the beginning.

In the early days of the normal school, since many of the potential students were teaching without having completed a secondary school curriculum, it was necessary for ASNS to provide students with the equivalent of a high school education, followed by a college-level, normal school education. As noted by Worley, p. 23: "In 1907 most teachers in the state were without high school or college training. The typical teacher had gone through an elementary school, attended county institutes to keep his license alive, and was often only a jump ahead of pupils he was trying to teach. He often used his advanced students to assist in teaching." The curriculum at ASNS was designed specifically to prepare teachers and made no attempt to prepare students to be professionals within their academic disciplines. Only the topics taught in secondary schools, especially those in rural settings, were covered and these courses were, in fact, listed in the bulletin according to where in the secondary school curriculum they would normally be taught. Once the two-year, college-level program was completed a student immediately qualified for a state teaching license good for six years that could be converted to a life-time license upon proof of effective teaching.

The academic discipline of chemistry has a long tradition at the University of Central Arkansas and its predecessor institutions (hereafter "UCA" when referring to the institution's current and three prior names (Arkansas State Normal School, Arkansas State Teachers College, and the State College of Arkansas). In determining how to organize this History of Chemistry at the University of Central Arkansas, several organizing themes for this book were possible, including by way of presidents of the institution as done by Jimmy Bryant in "The Centennial History of the University of Central Arkansas."

Another way to organize this book would be via the various names of the institution:

Arkansas State Normal (ASNS, 1908-1925)

Arkansas State Teachers College (ASTC, 1925-1967)

State College of Arkansas (SCA, 1967-1975)

University of Central Arkansas (UCA, 1975-present)

And yet another way to organize this book is via administrative structures of the departments involved. There were two administrative reorganizations at the departmental level during UCA's history, resulting in three major periods:

1. 1908-1926

Department of Science

2. 1926-1964

Departments of Physical Science, Biological Sciences, and Geography

3. 1964-present

Departments of Chemistry, Physics, Biological Science, and Geography

Since the focus of this book is more directed toward the academic aspect of our institution and the people involved, we decided to organize the book by way of the faculty who shaped our history. As one studies the history of chemistry at UCA, two prominent figures become immediately obvious: E. E. Cordrey and Jerry Manion, noteworthy for their longevity and the magnitude of their impact, the latter of which will become obvious throughout this book. Regarding longevity, since ASNS opened its doors in 1908, E. E. Cordrey, or E-squared (E^2) as his students called him, was at ASNS/ASTC from 1914-1950 (36 years) and Jerry Manion, was at ASTC/SCA/UCA from 1965-2014, for 49 years. When Jerry passed away, he was the longest-serving faculty member at this institution. As such, these two men had been at UCA and its predecessor institutions for 85 of its total years in operation. Both gentlemen served as department chair, 21 years for Cordrey and 27 years for Manion. By organizing this book in this fashion, we are taking Conrad Stanitski's advice to use the organizing principle used in "From Retorts to Lasers," a 1987 book regarding the history of chemistry at UC-Berkeley, which is organized as time periods before, during and after the tenure of G. N. Lewis.

Therefore, the organization of this book will be in four parts:

1. The very early years from 1907-1914, or the pre-Cordrey years
2. The Cordrey years (1914-1950)
3. The 15-year-period between Cordrey and Manion (1950-1965)
4. The Manion years, 1965-present

Within each of these time periods, we will attempt to describe the historical context, faculty, facilities, and curriculum. Our intent is to do so using many pictures and lots of good stories. It should be noted that a portion of this book will be based on personal recollections and stories intended to bring life, perspective, and some humor to this work, and therefore there is a strong likelihood that there will be some mistakes and that some of the history will be colored with personal perspectives. But, we would rather take this risk in an attempt to provide a meaningful and readable history of chemistry at UCA as opposed to writing a dry collection of facts about our history. As Jerry Manion wrote in the same November 2, 2012 e-mail exchange noted above, "I wouldn't think about writing something like a list of equipment and when it was bought. I'd want to relate stories that involve people. Like the time our guys got thrown out of the bar in Memphis. Or the fact that we had a group in New Orleans on a trip the night Martin Luther King, Jr. was killed."

This book borrows heavily from the published book by Jimmy Bryant entitled "The Centennial History of the University of Central Arkansas," an unpublished book of the History of Arkansas State Teachers College by Worley, an unpublished history of History of UCA by H. L. Minton, ASTC, SCA, UCA, 1954-1975; A Deaning Review, an unpublished history by Alger E. Burdick; and a biography of E. E. Cordrey, written by his daughter Louise. We also gathered information and stories from the minutes of the meetings of the Board of Trustees and materials in the UCA Archives (previously recorded oral interviews, the student newspaper *The Echo*, yearbook *The Scroll*, *The Log Cabin Democrat*, the bulletin, and the Cordrey Collection in the UCA Archives), and interviews with former and current faculty members, as well as alumni.