

## Discussion Question Answers

### “The Physicist’s War:” Dr. Herman Branson and Scientific Training of African Americans during World War II

#### J.A. Crowther, “Physicists and the War”

1. J.A. Crowther was from Great Britain, and was a member of the British Institute of Physics.<sup>1</sup>
2. Crowther believed that physics and physicists were crucial to winning World War II due to the increasingly mechanical nature of the war. Specifically, he noted the need for “junior physicists,” to assist and work in the “construction, testing, maintenance and operation of new and complicated experimental devices.”<sup>2</sup>
3. Crowther claimed the new physics students would be “less widely read,” than their predecessors, and their studies would not include the traditional one year of research that had become common before the war.<sup>3</sup>

#### Harold W. Woodson, “The Present Status of Physics in Negro Colleges”

1. Woodson included 45 black colleges in his study. They were selected at random if they met the criteria of being four year, degree-granting institutions that were regionally or state accredited.<sup>4</sup>
2. Woodson recognized that lack of education and preparation at the high school level was a significant obstacle for the inclusion of physics in general collegiate curriculums. He noted that physics was not a part of many southern high school curriculums, and was being forced out elsewhere. In addition, he acknowledged the State Department’s emphasis on biology over physics and chemistry as a point of concern. As a result, students were often largely unprepared for physics coursework at the college level.<sup>5</sup>
3. The main challenges facing physics departments at HBCUs were “limited funds, lack of properly trained students and few opportunities for employment of its graduates.”<sup>6</sup>
4. Three schools offered graduate degrees in physics. They were Fisk University, Howard University, and Virginia State College.<sup>7</sup>

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<sup>1</sup> J.A. Crowther, “Physicists and the War,” *Journal of Applied Physics* vol. 12 (1941), 767.

<sup>2</sup> Crowther, “Physicists,” 768.

<sup>3</sup> Crowther, “Physicists,” 767-768.

<sup>4</sup> Harold W. Woodson, “The Present Status of Physics in Negro Colleges,” *American Journal of Physics* vol. 9 (1941), 180.

<sup>5</sup> Woodson, “Present Status,” 180-181.

<sup>6</sup> Woodson, “Present Status,” 181-182.

<sup>7</sup> Woodson, “Present Status,” 183.

### **Herman Branson, “The Role of the Negro College in the Preparation of Technical Personnel for the War Effort”**

1. World War II improved and expanded the economic opportunities for African Americans, as the millions of troops called to serve left vacancies across many fields and industries, including the physical sciences. In addition, Branson recognized that “well-trained Negroes with laboratory and industrial experience will have a decided advantage in the super-technical world we may have after the war.”<sup>8</sup>
2. Branson claimed that HBCUs traditionally specialized in medicine, dentistry, and law.<sup>9</sup>
3. The physical sciences at HBCUs were still lacking by 1942. There were too few teachers, and funding was in short supply.<sup>10</sup>
4. Howard University during this time had begun giving standardized tests in select cities in order to locate “able secondary school graduates.” In addition, the University initiated a program similar to that of Pennsylvania State College. In these short programs, which lasted a set number of weeks, each student was required to attend a prescribed number of class hours per week in assigned subjects, including chemistry, physics, mathematics, and engineering.<sup>11</sup>
5. The Engineering, Science, and Management Defense Training (ESMDT) program was the successor to the Engineering Defense Training Program. It was a federal program that administered large-scale funding for training technical personnel and conducting war-beneficial research. Most black schools did not meet the requirements for an ESMDT, which included:
  - a. A specified “number, training and experience of staff members”
  - b. Laboratories facilities
  - c. Conferral of a specified number of degrees in engineering physics, chemistry and management training between 1939 and 1941
  - d. Listed requirements for a “major field of specialization”

The National Defense Research Committee (NDRC) was another federal fund-granting program, but was almost exclusively concerned with funding research projects. Some of their contracts exceeded millions of dollars, and were almost completely exclusive to major research institutions.<sup>12</sup>

### **Herman Branson, “The Training of Negroes for War Industries in World War II”**

1. The two major programs initiated by the U.S. Office of Education to address the need to train personnel for World War II were:
  - a. Vocational Training for War Production Workers (VTWPW)
  - b. Engineering, Science, and Management War Training (ESMWT)<sup>13</sup>

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<sup>8</sup> Herman Branson, “The Role of the Negro College in the Preparation of Technical Personnel for the War Effort,” *Journal of Negro Education* vol. 11 (1942), 298.

<sup>9</sup> Branson, “The Role,” 299.

<sup>10</sup> Branson, “The Role,” 299-300.

<sup>11</sup> Branson, “The Role,” 302.

<sup>12</sup> Branson, “The Role,” 300-302.

<sup>13</sup> Herman Branson, “The Training of Negroes for War Industries in World War II,” *Journal of Negro Education* vol. 12 (1943), 376.

2. In 1942, 58,228 students enrolled in the Vocational Training program's pre-employment courses, and 13,066 enrolled in the supplementary courses. 65 black colleges participated in the ESMWT program. 12 directly contacted the Office of Education; the remainder functioned as "sub-contractors." 1,174 of the 112,616 students in the ESMWT program were black.<sup>14</sup>
3. In the various fields of training offered by the VTWPW, African Americans were most represented in training for machine shop work, and least represented in training for inspection and foremanship.<sup>15</sup>
4. The most African American pre-employment trainees came from the Midwest, while the fewest came from the far West. The most African American supplementary trainees came from the North and Northeast, and the fewest hailed from the far West.<sup>16</sup>
5. The ESMWT's goal was to assist in training the requisite large number of people in physical sciences and management during wartime. If a manpower shortage in a specific field was identified, and enough possible trainees were available, one or more short courses were created at local institutions in order to remedy the problem. Students and educators received training from the Office of Education, in a variety of subjects deemed pertinent to the war effort, and courses ranged in length from weeks to months.<sup>17</sup>
6. African American women, Branson claimed, were either too timid," impressed by their clerk's job," or discouraged by the workload for positions which would vanish once the war ended, to participate in the ESMWT in any significant capacity.<sup>18</sup>
7. Branson asserts that the training of African Americans for war industries had improved considerably by 1943. He cited growth in the ESMWT program and VTWPW in the Southern states as indicative of this improving condition.<sup>19</sup>

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<sup>14</sup> Branson, "Training," 376, 379-381.

<sup>15</sup> Branson, "Training," 377.

<sup>16</sup> Branson, "Training," 377.

<sup>17</sup> Branson, "Training," 379.

<sup>18</sup> Branson, "Training," 381.

<sup>19</sup> Branson, "Training," 383.