

Faculty Technology Use Patterns: Comparing HBCUs and PWIs

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Purpose

While previous research suggests faculty at Historically Black Colleges and Universities (HBCUs) are more likely than their counterparts at Predominately White Institutions (PWIs) to use engaging teaching techniques, the reverse is reported in terms of technology use in teaching. This study explores technology use in teaching and variations in usage patterns between faculty on historically Black and predominantly White campuses studies of faculty perceptions and experiences with teaching clarity behaviors.

Literature

This study hinges on the following premises:

- Black faculty members spend less time teaching and more time in service than their White colleagues (Bellas & Toutkoushian, 1999)
- Regardless of race, faculty members at HBCUs were more likely to engage students in certain “educationally purposeful” activities both in and out of the classroom (Shaw, Cole, Harris & Nelson Laird, 2012)

With this understanding, we designed this study to better understand how previous finding align with technology usage in the classroom?

Technology Use at HBCUs

One study from 2000 by the National Association for Equal Opportunity in Higher Education (NAFEO), the Technology Assessment Study (TAS), is this most comprehensive study conducted to-date of technology on HBCU campuses. The report identified two major issues that are important for the current study as contributing to the digital divide between HBCUs and other institutions: student access to networking and computing resources, and faculty underutilization of technology in the classroom. The TAS authors concluded that “HBCU faculty and staff must realize that they will be measured, in coming years, on their ability to participate in networks and provide students with global access to knowledge” (NAFEO, 2000, p. v). Having now reached the years to which the authors referred, our study will offer updated information on technology use in the HBCU classroom and thus a view of whether HBCU faculty accepted the charge presented.

HBCUs as Learning Environments

In areas outside of technology, HBCU campuses have been thought of as positive learning environments, particularly for African American students. In comparison to PWIs, HBCUs tend to have smaller total enrollments and offer classes with lower student-faculty ratios (Kim, 2002). Considering the reported benefits of increased student-faculty interaction (see Chickering & Gamson, 1987), these characteristics of the HBCU environment are advantages to the students enrolled on these campuses. Much of the research comparing student learning on HBCU and PWI campuses primarily assesses student experiences by race. How faculty members contribute to this experience is less analyzed.

The Influence of Institutional Type

Previous research suggests that (a) Black faculty and HBCU faculty are more likely to engage students in certain educationally purposeful activities; and (b) HBCU campuses are structured in ways that inherently improve the student experience. However, in the development of this study, no publications were able located that document the differences in faculty practices between HBCU and PWI faculty or how the faculty role contributes to the elemental differences distinct to HBCUs. As Gasman, Lundy-Wagner, Ransom, & Bowman (2010) write, “the achievements of HBCUs in terms of African American student success throughout history make the lack of information on their faculty peculiar” (p. 47). Given the positive outcomes associates with HBCUs, the faculty role warrants further exploration. This study is designed to explore the faculty role in enhancing student learning, and how that role differs across these two institutional types.

Research Questions

1. What types of technology do faculty members' use in their teaching?
2. How does faculty technology usage compare between HBCU and PWI campuses?

Data Source and Sample

- The data come from the 2009 administration of the Faculty Survey of Student Engagement
- The sample for this study consists of nearly 2,079 faculty members from 50 different colleges and universities, nine of which are HBCUs.

Technology Extra Item Set:

During the current school year, how often did you use the following in your courses: (VO/O/S/N/IDK what this is)

- Course management systems
- Student response systems
- Online portfolios
- Blogs
- Collaborative editing software
- Online student video projects
- Video games, simulations, or virtual worlds
- Online survey tools
- Videoconferencing or Internet phone chat
- Plagiarism detection tools

Sample Faculty Characteristics:

- 54% Women
- 73% White
- 10% African American
- 95% US citizen
- 69% Earned doctorate degree
- 24% Professors
- 26% Associate Professors
- 30% Assistant Professors
- 20% Instructors or Lecturers

Course Size (%HBCU / %PWI)

- Small: ≤19 students* (23% / 32%)
- Medium: 20-49 students* (65% / 56%)
- Large: ≥50 students* (12% / 12%)

Course Level (%HBCU / %PWI)

- Lower Division* (44% / 48%)
- Upper Division* (52% / 47%)

Grouping Technology Use

During the current school year, how often did you use the following in your courses:

Asynchronous Tools (alpha .83, 6 items) Synchronous Tools (alpha .82, 4 items)

- Course management systems (WebCT, Blackboard, Desire2Learn, Sakai)
- Online portfolios
- Blogs
- Collaborative editing software (Wikis, Google Docs, etc.)
- Online survey tools (SurveyMonkey, Zoomerang, etc.)
- Plagiarism detection tools (Turnitin, DOC Cop, etc.)
- Student response systems (clickers, wireless learning calculator systems)
- Online student video projects (using YouTube, Google Video, etc.)
- Video games, simulations, or virtual worlds (Ayiti, EleMental, Second Life, Civilization, etc.)
- Videoconferencing or Internet phone chat (Skype, TeamSpeak, etc.)

A copy of this poster can be found at
fsse.iub.edu/html/pubs.cfm

Results

Mean Comparison	PWI Mean (SD)	HBCU Mean (SD)	Mean Diff.	Effect Size	Effect Size with Controls
Synchronous Technology	1.58 (1.42)	1.68 (1.61)	0.10	0.07	0.01
Asynchronous Technology	1.82 (1.25)	1.86 (1.36)	0.04	0.03	-0.01

Used the following “sometimes,” “often, or “very often”:

	HBCU	PWI
Synchronous Technology		
Student response systems	14%	12%
Online student video projects	25%	20%
Video games, simulations, or virtual worlds	11%	8%
Videoconferencing or Internet phone chat	8%	8%
Asynchronous Technology		
Course management systems	66%	71%
Blogs	14%	10%
Collaborative editing software	16%	12%
Online Survey Tools	18%	13%
Plagiarism detection tools	26%	23%
Online portfolios	18%	15%

Findings

- Technology use in teaching is low on both types of campuses
- Synchronous tools are less likely to be used
- Course management systems are highly used across institutions
- Technology that is most-often used are those that serve a practical, organizational function
- HBCU faculty use technology slightly more than their PWI colleagues in every category expect course management systems and video conferencing
- Faculty of courses taught via distance or at auxiliary locations use technologies

Conclusions & Recommendations

- Faculty may be deterred from using classroom technologies that require consistent interaction (i.e., PD tools require a one-time set up while online portfolios need monitoring)
- While technology is heavily integrated in the daily routine of most faculty and students, it is largely missing from the teaching and learning environment
- The dominant narratives regarding HBCU resources and technology use by PWI faculty are challenged by these findings, while the narrative regarding engaging teaching at HBCUs is confirmed
- Faculty should challenge themselves to experiment with technology in the classroom at least once each semester.
- Faculty developers should:
 - consider ways to promote experimentation with technology in teaching
 - offer series of sessions help faculty learn to integrate innovative classroom technologies into their teaching