Starting the Conversation: An Exploratory Study of Factors That Influence Student Office Hour Use

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As part of best practices for increasing faculty-student interaction, higher education institutions across the country require faculty members to hold office hours. Various studies have reported factors affecting student use of office hours; however, results are unclear at best and in some cases conflicting with respect to which factors matter most, as in the case of instructor approachability. We present results from a survey of undergraduate student perceptions at a large, mid-Atlantic public research university. Factors that significantly ($p < 0.05$) affect student use of office hours are largely out of instructors' control with at least one important exception: usefulness of instructor feedback. We offer best practices for increasing student use of office hours and suggest directions for additional research on the use and purpose of office hours.

Keywords: faculty-student interaction, office hours, student engagement, student success, undergraduate education

Office hours are an institutionally required component of academic life in higher education, yet as many instructors can attest, students seldom use them. Research on student office hour attendance confirms many instructors' individual experiences of office hours as a rather lonely time (e.g., Fusani 1994; Nadler and Nadler 2000; Li and Pitts 2009). This situation is unfortunate, as the benefits of faculty-student interaction outside of the classroom include increased student retention, satisfaction, and performance (Chickering and Gamson 1986; Kuh et al. 2010; Dika 2012). Institutions and instructors of higher education, therefore, have a responsibility to make sites of faculty-student interaction, such as office hours, accessible to students. Understanding why students do and do not use office hours will help faculty and administrators influence students to

visit their instructors more frequently and make office hours more productive for all parties involved.

Literature Review

Office hours became a standard offering in undergraduate academic life in response to ongoing scholarly and political dialogue about what constitutes good practice in undergraduate education (Tinto 1983; Astin 1984; Boyer 1987, 1990). In particular, Arthur Chickering and Zelda Gamson (1986) identified "Seven Principles for Good Practice in Undergraduate Education," the first of which highlighted the importance of interaction between students and faculty:

> Frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement. Faculty concern helps students get through rough times and keep on working. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and future plans. (Chickering and Gamson 1986, 3)

Chickering and Gamson's insights have been substantiated through empirical study (Pascarella and Terenzini 2005; Kuh and Hu 2001; Dika 2012). Quality interaction with faculty members has been shown to be a core element of student engagement, which is highly correlated with every desired outcome of higher education (Kuh et al. 2010),[1] as well as with students' confidence in their intellectual abilities (Cole 2007, 2008) and aspirations for further study (Hurtado et al. 2011). Office hours, by design, make space for such interaction.

Underutilization of office hours undermines a real and important opportunity for faculty-student interaction. Yet before educators can adequately tackle this perennial issue, they face the challenge of pinpointing the key factors that contribute to students' low use of office hours. It is particularly important for instructors to understand how much influence they have over their own students' use of office hours. Some studies suggest that instructors have measurable influence over their students' use of these sessions, while other studies suggest that instructors have little to no control over student turnout. We begin by examining the literature on instructor influence on out-of-class faculty-student interaction to probe which factors seem to lie within and which factors seem to lie beyond instructors' influence. Then we show how our research questions are derived from gaps in the existing literature.

Studies maintaining that instructors have a great deal of influence over students' office hour use may be divided into two categories. The first category presents instructors' influence as related to their social and physical identities (particularly instructors' race and gender) (Bippus, Kearney, and Brooks 2003; Jaasma and Koper 1999). The second presents instructors' influence as more interactional, particularly the ways in which instructors make themselves "approachable" to students (Wilson, Wood, and Gaff 1974; Jaasma and Koper 1999; Cifuentes and Lents 2010). Instructors' social and physical identities have been found to significantly affect the degree to which students seek out-of-class contact with faculty (Bippus et al. 2003; Kim and Sax 2009). More specifically, students whose own social identities align with those of the majority of professors at their institution are more likely to express satisfaction with their interactions with faculty (Kim and Sax 2009).[2] However, instructors have little to no ability to determine their social and physical identities, and thus this very influential factor lies primarily outside of instructors' control.

On the other hand, some studies have linked out-of-class approachability with faculty in-class behaviors, especially their pedagogical practices, which instructors can control (Wilson et al. 1974; Jaasma and Koper 1999). Bippus and colleagues (2003), however, found that general perceptions of instructor approachability derived from observations of instructors' in-class behaviors are less influential on out-of-class contact than instructors' explicit invitations to students to engage in out-of-class communication. In other words, instructor approachability might have more to do with instructors directly inviting students to approach them rather than students interpreting indirect indicators. Here, in the case of direct invitation, approachability lies within instructors' control.

Speaking to such complications, other studies have suggested that approachability might be something more intangible—something over which instructors may have some, but perhaps little, control (Cox et al. 2010). For instance, instructors can modify but cannot fully manipulate tone of voice, accents, and facial appearance, yet Cox and colleagues (2010) found that these nonverbal elements influence students' likelihood of seeking out-of-class contact with faculty. Presenting similar findings, Cotten and Wilson (2006) reported that students' familiarity with the institution and its norms for interacting with instructors shape the degree to which undergraduates interact with those who teach them. It takes time, however, for students to become familiar with these norms (Cotten and Wilson 2006). That is, students' general perceptions of instructors' approachability is influenced by the length of time spent at a particular institution, with juniors and seniors experiencing greater comfort with faculty-student interaction.

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[1] Including retention and graduation, academic achievement, and employment (Kuh et al. 2010).

[2] It is this kind of satisfaction—emerging from interaction or from a relationship, real or perceived, between students and faculty—which the second category of "influential instructor" studies see as molding students' notions of approachability (Wilson et al. 1974; Jaasma and Koper 1999).

Other factors that influence students' use of office hours involve ease-of-access issues, including when, where, and increasingly how office hours are held. In an introductory major-level biology course at an urban commuter college, Cifuentes and Lents (2010) found that conducting office hours via instant messaging (IM) can be a highly effective means of addressing the lack of on-campus opportunities for commuter students to interact with their instructors one-on-one, increasing both in-person and online office hour visits. On the other hand, Li and Pitts (2009) found that even when Internet- and Web-based technology is used to conduct office hours, student attendance remains low. Such mixed results suggest that while instructors can have some influence over students' use of office hours by reducing barriers to access, these measures only go so far. The problem is more complicated than any single solution.

Several other factors also might play a role in students' use of office hours: class size, the level of the course, the availability of peer tutors, and where a student is in his or her progress towards a degree. These factors appear less within instructors' control. While some research has been conducted to investigate the influence of these potential factors (e.g., Perrine, Lisle, and Tucker, 1995), the results have largely been mixed. Consequently, further research could shed light on what instructors can do that could significantly and positively impact students' use of office hours.

Because no clear imperative for what instructors can do to encourage their students to attend office hours emerges from these studies, we designed a survey to address the following questions:

1. Which factors influence students' use of office hours?
2. What can instructors do to increase students' use of office hours?

METHOD

We designed a survey to capture undergraduate student perceptions of course and instructor characteristics, and the impact of these characteristics on students' reported use of office hours. The survey was piloted during a nine-week period and then refined based on student feedback prior to the start of data collection.

Procedure

Data were collected from undergraduate students (at least 18 years of age) at a large, mid-Atlantic public research university in spring 2013. (Prior to commencing the data collection process, the authors secured approval from the university's institutional review board[3]). A link to the

Qualtrics-based survey was distributed via university-wide list serves and forwarded to representatives of each college and department.

The survey contained seventeen items that focused on various course and instructor characteristics that were discussed in the relevant literature on faculty-student interaction (Bippus et al. 2003). The survey contained a variety of question types, including yes/no/not applicable, multiple choice, and five-point Likert items. Students were asked to identify the course that they attended most recently and to respond to the survey items with that course in mind to reduce any bias associated with "favorite instructors" or "favorite classes." For instance, the survey included items such as "How often have you attended office hours for this course?" and "What grade do you expect to receive in this class?"

The survey attempted to capture students' demographic information, their class standing/major(s), and non-academic obligations. The remainder of the survey focused on specific course and instructor characteristics. Course-related survey items focused on the level/structure/format of the course, the assignment regimen, the location and time of scheduled office hours, the presence of an online discussion or collaboration component, and the availability of academic support (e.g., from university-sponsored peer tutors). Instructor-related survey items focused on the availability/responsiveness of the instructor, the approachability of the instructor, the degree to which course material is explained, and the usefulness of the instructor's feedback. Responses to the question "How often have you attended office hours for this course?" served as the dependent variable.

Participants

Of 625 valid responses, 31.17% self-identified as male and 68.33% as female, which is expected, as Porter and Whitcomb (2005, 133) report greater female participation in surveys. Responses were well distributed among class standing: 17.74% self-identified as freshman, 25.54% as sophomore, 28.69% as junior, and 26.04% as senior. Respondents' self-reported racial identities are representative of the undergraduate student body (table 1).

TABLE 1
Students' Self-Reported Racial Identities for the Survey
Compared to Full Undergraduate Enrollment

Self-reported racial identity	Survey (%)	Fall 2011 Undergraduate Enrollment (%)
White	66.3	62.2
Black	11.0	12.1
Asian	15.1	14.8
Hispanic	6.8	7.5

Source: http://www.newsdesk.umd.edu/facts/quickfacts.cfm

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[3]IRB acknowledgement number: 428245-2

Data Analysis

Responses from "other" community members (i.e., non-undergraduate students) were removed from the data set. Additionally, surveys that were blank or that only included demographic information were discarded.

The significance of explanatory variables was determined via independent t-tests using students' reported use of office hours ("never attended" and "attended at least once") as the response variable. Because some questions were skipped by respondents, explanatory variables have varying sample sizes and degrees of freedom, as noted by table 2; however, $\alpha = .05$ was used for all comparisons.

RESULTS AND DISCUSSION

Two-thirds (66%) of respondents reported never using office hours for the course under consideration. One-third of respondents reported attending office hours at least once during the semester; however, only 8% of all respondents reported attending office hours more than once per month. This result is consistent with trends from the literature, as Fusani (1994) revealed that 23% of students surveyed

reported neither visiting nor informally chatting with an instructor, while only 50% of students surveyed had experienced two or more contacts with instructors outside of class.

Table 2 provides a summary of survey questions and their related sample sizes and significance. Notes on the effects of significant factors are provided to indicate the nature of the trend. Significant factors identified by our survey that correlate with office hour use are largely beyond the control of the individual instructor. If instructors can do little to influence students to visit them in their offices, office hours cannot satisfy their originally intended goal of faculty-student interaction—a key benchmark of student engagement (National Survey of Student Engagement 2012; Kuh 2003; Chickering and Gamson 1986; Boyer 1990). As such, it is especially important for instructors and administrators to pursue a more thorough understanding of office hour use in order to guide best practices for implementing them.

We find that factors for which individual instructors have the greatest control largely have no significant effect on students' use of office hours. These include biweekly assignments, online discussion or collaborative component, usefulness of in-class discussions, clarity of class material, instructor approachability, availability of real-time online

TABLE 2
Summary of Survey Questions, Sample Size, and Significance

Survey Question	Sample size	Significance	Relationship to Office Hour Use
Does the instructor give useful feedback?	572	$p < 0.05$	Students who perceive feedback as useful are more likely to attend.
Are office hours held at a convenient time?	574	$p < 0.05$	Students who agree are more likely to attend.
Are office hours held at a convenient location?	574	$p < 0.01$	Students who agree are more likely to attend.
Is there a lab, discussion, or recitation component?	562	$p < 0.01$	Students were more likely to attend if there was not a lab or discussion section.
If there was an online discussion component, was it effective for your learning?	280	$p < 0.001$	If online disussion was perceived as not useful, students were more likely to attend.
What is the course level (i.e., 100, 200, etc.)?	604	$p < 0.01$	100- and 400-level courses garnered a higher rate of attendance.
What size do you consider this course (small, medium, or large)?	539	$p < 0.01$	Students are more likely to attend if the class size is perceived as small.
Is this course a general education requirement, a major /certificate /minor /program requirement, or an elective?	464	$p < 0.05$	Students are less likely to attend if the course is an elective.
If there were university-provided peer tutors available, did you use them?	276	$p < 0.01$	Students who utilized university-sponsored peer tutors were more likely to attend.
Does the instructor make additional scheduled OH an option?	538	NS	
Is there an online discussion or online component to the course?	547	NS	
Is the instructor available through email?	601	NS	
Is the instructor responsive to emails?	568	NS	
Does the number of class meetings per week affect the use of OH?	601	NS	
Does class format (blended vs. traditional) affect the use of OH?	539	NS	
Does class standing affect the use of OH?	601	NS	
Are there weekly or biweekly assignments due?	574	NS	
Is the instructor approachable?	574	NS	
Are in-class discussions useful?	574	NS	
Is course material explained clearly during class?	574	NS	

Note. OH = office hours. Significant factors are further delineated based on the relationship to office hour use.

discussion, and instructor availability for additionally scheduled office hours by appointment (table 2). Factors affecting students' use of office hours are largely beyond the control of individual instructors (and may be determined at the departmental or institutional level or by students themselves). These include perceived convenience of office hour time and location, course level, inclusion of lab-/discussion/recitation section, student use of university-provided peer tutors, whether a course is a major requirement, an elective, or counts towards the general education requirement, and student perception of class size.

Our results lead us to two key conclusions: (1) Most students are not making use of office hours, and (2) in the current culture surrounding office hours, individual instructors have limited control in influencing student attendance. Nevertheless, instructors have the most local and up-to-date information about how frequently and in what ways students use their office hours. Given the prevalence of factors that are determined at an administrative level, clear communication among individual instructors, departments, and administrative units must be established to progress on issues surrounding office hours. As a best practice, we recommend intentional conversations and action between these different scales within the university, specifically targeting office hours.

Our results point to the primacy of students' perceptions of office hours' temporal and locational convenience. Students who perceive the time and location of office hours as convenient are more likely to attend. However, the mechanisms instructors use to mitigate convenience issues (such as availability through real-time online discussion, or additional office hours by appointment) have no significant relationship ($p > 0.05$) with students' use of office hours. Additional research is necessary to explore what individual instructors can do to effectively mitigate barriers to perceived convenience of time and location, since this factor is as much student-related (what students perceive to be convenient) as instructor-related (setting the time and location of office hours). As a best practice we recommend that instructors seriously address the questions: Do students perceive my office hours as convenient? What time, location, and even medium (i.e., face to face or online) might work best for my students? Instructors may consider requesting student input through a poll or other feedback mechanism to address this question. We additionally recommend that instructors educate students about the benefits of office hours as a way to potentially overcome perceptions of time and location inconvenience. In doing so, instructors are providing students with clear and accessible roadmaps to institutional success, which Kuh and colleagues (2010) found to be a commonality amongst institutions with high degrees of student engagement.

Our results point to usefulness of instructor feedback as a factor correlated to office hour use over which instructors hold considerable control. Students who perceive the instructor's feedback as useful are more likely to attend office hours. In contrast, perceived instructor approachability did not affect students' use of office hours, suggesting that instructors should put more time and effort into providing substantive feedback than into perfecting an atmosphere (table 2). This result suggests that instructors should provide useful feedback on a consistent basis to indicate that they will also give useful feedback during office hours. It seems that instructors can establish themselves as fonts of useful information by providing useful in-class or assignment feedback, which may in turn affect students' perception of the benefit of using office hours.

While our study offers valuable insight, it is exploratory in nature. More rigorous studies that examine the key themes extracted from this study will help elucidate additional best practices for office hours. Qualitative data that address student attitudes and motivations surrounding office hour attendance could provide valuable insight into these and additional themes. The current study is limited in that it was only administered at one university; as such, transferability is limited only to other large public research institutions. The present study also does not consider the correlation between race and/or gender of students or instructors and office hour use. Future studies that draw robust demographic correlations and consider institutional diversity can address these limitations. Additionally, we encourage the exploration of new but similar research questions. For example, further studies are needed to determine instructor perceptions of office hours. While this study largely focused on office hour attendance, further studies are needed to clarify attitudes and beliefs on the part of student, faculty, and administrators about the purpose and appropriate use of office hours.

Faculty-student interaction is central to student engagement and has prompted academic institutions to require faculty to hold office hours. Yet to encourage students to use office hours, we have to critically examine the factors that truly matter. This will require effort on the part of the instructor, and, perhaps more importantly, the institution. Individual instructors and institutional actors must identify and understand their responsibilities, limits, and capabilities when it comes to best practices for student office hour use. Otherwise, we have institutionalized a practice that has not reached its potential, literally wasting hours of opportunities to improve students' educations, careers, and lives.

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