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Technologies to Enable "Virtual" Student Contact and Advising

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Abstract
Educators face a great demand for their time in order to facilitate student contact and academic advising. Exacerbating this issue is the need to travel for academic engagements as well as perform administrative responsibilities. The problem is that the requirement for student contact and advising is not offset by the requirement to publish, present and perform institutional service. The purpose of this paper is to discuss technologies that will assist educators in fulfilling all of their academic duties.

Introduction
Educators face constant demands for their time and attention. Grant writing, publishing, presenting, teaching, and student advising are only some of the tasks that require constant and sometimes immediate attention. Educators often have available time such as airport layovers, but are unable to meet with students due to geographic separation. However, technologies are available to allow virtual student contact and advising. These technologies range from no to low cost, to expensive virtual systems that allow for group meetings and course delivery.

The author begins the paper by discussing the importance of student contact time and advising. Within that discussion, the types of advising along with ideas on assessing the efficacy of advising programs will be presented. This will provide the context for the subsequent sections and the discussions therein. The next section explores specific challenges faced by educators in relation to student contact time and advising. This is followed by a presentation of tools that can be utilized by educators for conducting virtual office hours.

Importance of Student Contact Time and Advising
A review of the research literature indicates that student contact time and student advising are essential for student success. Light (2001) finds that student satisfaction with advising is important to the student's successful college experience. Bruan and Zolfagharian (2016) find that student advising participation moderates failure attribution between the student and the advisor. Student retention is heavily influenced by effective and high-quality academic advising (Tinto, 2002). Noel-Levitz, a research group, (2006) found that academic advising was the second highest rated student satisfaction factor following a close second to instructional effectiveness.

Types of Advising
The particular type of advising may depend upon the type of student. Community college students, graduate students, undergraduate students, international students, part-time students and online students may all require a differing style of advising and student contact (Yi, 2016). Time and availability are considerations for academic advising as well. The two general constructs for academic advising styles are developmental academic advising and prescriptive academic advising (Crookston, 1972).

Prescriptive advising is compared to the doctor/patient relationship: the advisor asks specific questions to the student and prescribes a course of action. Crookston (1972) explains that this academic advising relationship is based on authority. Jordan (2000) further elaborates that in this authority-based model, only questions are answered and the student's individual development is not a consideration.

In developmental academic advising, academic goals as well as personal growth are considerations. Career, personal and academic goals are all forms of consideration with developmental advising (Jordan, 2000). This type of advising is more personal and relationship based than prescriptive advising. This advising approach is a holistic approach that is concerned with the entire student well-being McGill (2016). Graham and Johnson (2009), in their research on student satisfaction with academic advising, found that most students (96%) preferred the developmental advising style.

Assessing the Efficacy of Advising
McClellan (2011) argues that even the advising program should be assessed for efficacy. In his article, the researcher expands Bolman and Deal's (1991) work on organizational framing and suggested extending it with a balance scorecard approach to develop a multifaceted, comprehensive assessment program for the student advising efforts. The balanced scorecard framework is an assessment system that rates organizational performance metrics. This would allow assessment of the advising program itself as opposed to assessment of student performance as a result of the advising program. The implication is that student advising programs are so critical to student performance that the programs require comprehensive assessment as well.

The Association for the Study of Higher Education (ASHE, 2010) contends that academic advising is so critical for students that advisors should be viewed as "partners" in academic success (p. 105). The partnership they recommend is extended to encompass students, faculty, administrators and policy makers. Concomitant to the partnership-centric view is the need for assessment of effectiveness for the advising. The ASHE recommends that the assessments of advising efforts consist of measurements for learner support, faculty development and class-based tutoring.

Student Satisfaction with Advising
In the research literature, academic and institutional success are positively correlated with successful and high-quality academic advising (Light, 2001; Tinto, 2002; Corts,

Lounsbury, Saudargas, Tatum, & Holly, 2000).   Low (2000) finds that student satisfaction with academic advising is important for the student's overall academic experience. Hale, Graham and Johnson (2009) finds that students with a preferred advising style and an advisor with the same advising style (i.e., congruence) had a significantly higher satisfaction with the advising experience. Furthermore, most students find that advising and interaction with academic advisors is an important factor related to their college experience (Allen, Smith, & Muehleck, 2013).

The Noel-Levitz (2006) research report found that only 60% of the 226,423 undergraduates surveyed (across 425 US institutions) were satisfied with their advisor's assistance with goal setting. Furthermore, only 67% of these students were satisfied with their advisor's expressed concern regarding the students' success. As quality advising is one of the most important factors in the college experience (Light, 2001), there is some room for improvement.

Challenges for Educators
Educators face an increasing demand for their time. Most university educators are expected to present at conferences, publish manuscripts, perform university or community service duties as well as teach their course load and maintain office hours/advising time for students. When educators are presenting or performing service they are usually not available for student advising. However, there is some downtime in travel schedules (e.g., airport layovers, conference breaks) that can be leveraged for academic advising and office hours with the appropriate technology.

Job characteristics such as job demands and resource availability can lead to mental and physical health issues for educators (Baka, 2015). Research has found that some groups of educators may experience job burnout at a rate between five and twenty-five percent (Friedman & Farber, 1992).   Many educators have mastered the art of maximizing every available time slot in order to fulfill job demands. While that assists educators in their job responsibilities, a career in academia can be a stress-inducing experience (Sangganjanavanich & Balkin, 2013).

The role of an academic advisor is challenging. The duty often consists of more than just student academic advising. Often the advisor becomes a cultural navigator (Strayhorn, 2015) that assists the students in navigating the culture of higher education. This effort can be fraught with generational, cultural, economic, and sociological issues.

The technology learning curve for many of the tools presented in this research article can be another challenge. This challenge presents itself to students as well as educators. Having the students learn a new communication tool to assist in advising could be a daunting task. Learning a new technology tool could be a daunting task for many educators as well.

Tools for Educators
There are a number of tools available for educators to conduct virtual office hours that can provide real-time, synchronous advising to students. These tools range from free software to more expensive (possible university provided) software. In this section, four tools will be discussed at length followed by a more cursory introduction and discussion of other collaborative tools for conducting virtual office hours.

The features provided by these software tools can vary from simple text-based typing to fully synchronous video chat with multiple participants. Other features include web-based calling (i.e., telephony), video conferencing, whiteboards, real-time collaboration, and group chat. In general, the software requires participants to register with the provider and create an account with a user ID and password.

Google Hangouts
Google provides an integrated software platform that combines their telephony (Google Talk), instant messaging, and text-based chat platforms. Hangouts is accessible through a web browser and does not support a downloaded client version. Hangouts was launched by Google in 2013.

Google Hangouts is a free service that supports video conferencing (up to 10 users), IM (instant messaging), SMS (text messaging) and VoIP (telephony using Internet). This is a free product, however, users must create an account with Google in order to login and use the service. The product can be used in conjunction with Google Docs for real-time collaboration.

The Google Hangouts software is available via Google Play (Android) and iTunes App Store (iOS). The mobile app synchronizes the chat history with the web-based application by saving the chat history online.

Yahoo Messenger
Yahoo provides a robust instant messaging client (YIM) that can be downloaded and installed or used through a web browser supporting java. YIM is a mature product and has been in existence since 1998.

This product is free, yet it does require registering a User ID and password with Yahoo. YIM features include video conferencing, audio support, chat rooms (for conferencing with large student groups), as well as file sharing (instant transfer). The product does not support collaboration tools such as whiteboards and real-time document editing.

For mobility support, the yahoo client can be installed on iOS devices and Android devices.

WebEx Meetings
The WebEx Meetings product is full-featured collaborative software product designed for

video conferencing. Created in 1995, WebEx is a web-based software product (no client installation) that is owned by Cisco Systems.

This product is a subscription based service with plans starting at $24 a month that can support only 8 users. WebEx Meetings offers a free trial (unlimited meetings) lasting 14 days that can host up to 3 people per meeting. The product supports many features including audio, video (two-way), whiteboards, screen sharing, group polling, chat, file sharing (PowerPoints and other documents), and collaboration (Word and other documents). Many academic institutions have a site license that educators may leverage to conduct virtual office hours or lectures.

The WebEx Meetings mobile product supports iOS, Android, Windows Phone, and BlackBerry devices.

Blackboard IM
The instant messaging (formerly known as Pronto) features are an optional portion of the popular Blackboard course management technology. Blackboard requires a separate account to be created in order to utilize the IM system. However, if the Blackboard product suite is adopted by the institution, the IM software will synchronize with the course room enrollment records and populate itself with the student names.

Blackboard is provided by many universities and no additional costs are incurred by the instructors in order to use the IM system. Much like yahoo, the Blackboard IM system is client software that must be installed. The software must be launched in order to run and is independent of any web browser. Blackboard IM can run on Windows or Mac OS system.   This product supports features such as conferencing (termed "group chat"), audio, video, as well as collaborative tools such as whiteboards, PowerPoint (and other file types) display for lecturing, and screen sharing.   Perhaps one of this tool's most useful features is the one-click "Office Hours" button that allows the educator to conduct virtual office hours.

The Blackboard software suite includes Mobile Learn and Blackboard Collaborate that support a more limited functionality on mobile devices such as Android and iOS.

Other Virtual Office Hours Tools
There are a number of other tools available that will support virtual office hours and student advising. GotoMeeting, Skype, Facebook, Zoom, Adobe Connect, and Facetime (iOS/Mac OS only) are just some of a more extensive list of products. Institutional support for these products will vary with each academic environment. Student acceptance and utilization of these products will vary as well.

The global market for video conferencing services is projected by GIA, Inc. (2015) to reach $2.9 billion (USD) by 2020. The healthcare and education sectors are large components of this demand for services. In some markets the demand is mitigated by the

availability of high capacity data networks. However, the general trend is an increasing demand for this type of service. Relatedly, the demand for mobile video conferencing and collaboration is on the increase as well.

Additional Benefits of Virtual Technologies for Advising
Most of the online collaboration tools provide a chat history. Some chat logs such as Google Hangouts are saved online and synchronized between sessions so they are not subject to loss in the event of a hardware failure.   Chat logs ensure there is both an advising record and exact recall of the advising session and discussion. For the non-Google Hangouts software systems, the chat logs can be saved locally on the educators' devices.

Another benefit of these virtual technologies is the video log. Video recordings provide an exact record of the interaction between the educator and the student. Most modern virtual teleconferencing software systems support inexpensive web-cams with relative ease of setup and use.

Conclusion
The demand for the time and attention of academics is only growing. Educators must provide advising and student contact while maintaining their research agenda and performing institutional service and responsibilities. The research literature indicates that job burnout among educators is an increasing problem and the role of advising has expanded beyond merely academic counseling and assisting the students with course selection.

In this paper, several technology tools were discussed. These tools can assist educators with conducting virtual office hours when the advisor is away presenting papers or performing institutional service. These tools range in cost, complexity and functionality. Some tools such as Yahoo Messenger and Google Hangouts are free but are limited in collaborative features. Other tools such as the Blackboard suite come at a higher cost but offer a wide range of functionality and integration into the institution's student information system.

References
ASHE. The Future of the Field. (2010). ASHE Higher Education Report, 35(6), 105-117.
Allen, J. M., Smith, C. L., & Muehleck, J. K. (2013). What Kinds of Advising Are
        Important to Community College Pre- and Posttransfer Students?. *Community
        College Review*, *41*(4), 330-345. doi:10.1177/0091552113505320
Baka, L. (2015). The effects of job demands on mental and physical health in the group
        of police officers. Testing the mediating role of job burnout. *Studia Psychologica,
        57*(4).
Bolman, L. G., & Deal, T. E. (1991). Leadership and management effectiveness: A multi-
        frame, multi-sector analysis. *Human Resource Management, 30*(4), 509.
Braun, J., & Zolfagharian, M. (2016). Student Participation in Academic Advising:

Propensity, Behavior, Attribution and Satisfaction. *Research in Higher Education*, 1-22.

Corts, D.P., Lounsbury, J.W., Saudargas, J.W., Tatum, R.A., & E. Holly. (2000). Assessing undergraduate satisfaction with an academic department: A method and case study. *College Student Journal, 34*(3), 399-408.

Crookston, B.B. (1972). A developmental view of advising as teaching. *Journal of College Student Personnel, 13*(1), 12-17.

Friedman, I.A., & Farber, B.A. (1992). Professional self-concept as a predictor of teacher burnout. *Journal of Education Research*, *86*(1), 28–35.

GIA - Global Industry Analysts Inc. (2015, March). Video conferencing services – A global strategic business report. Retrieved June 2, 2015 from: http://www.strategyr.com/pressMCP-8007.asp

Hale, M. D., Graham, D. L., & Johnson, D. M. (2009). Are students more satisfied with academic advising when there is congruence between current and preferred advising styles? *College Student Journal*, *43*(2), 313-324.

Jordan, P. (2000). Advising college students in the 21st century. *NACADA Journal, 20*(2), 21-30.

Light, R.J. (2001). *Making the most of college: Students speak their minds.* Cambridge, MA: Harvard University Press.

Low, L. (2000). *Are College Students Satisfied? A National Analysis of Changing Expectations. New Agenda Series*. USA Group. Inc. Indianapolis, IN. Retrieved from: http://www.learningoutcomeassessment.org/documents/SSI-AreCollegeStudentsSatisfied.pdf

McClellan, J. L. (2011). Beyond student learning outcomes: developing comprehensive, strategic assessment plans for advising programmes. *Journal Of Higher Education Policy & Management*, *33*(6), 641-652. doi:10.1080/1360080X.2011.621190.

McGill, C. M. (2016). "Cultivating Ways of Thinking": The Developmental Teaching Perspective in Academic Advising. *New Horizons in Adult Education and Human Resource Development, 28*(1), 50-54.

Noel-Levitz, Inc. (2006). *Five-year trend study: National student satisfaction report*. Iowa City, IA: Author.

Sangganjanavanich, V.F., & Balkin, R.S.. (2013, April) Burnout and job satisfaction among counselor educators. *Journal of Humanistic Counseling, 52*(1), 67-79.

Strayhorn, T. L. (2015). Reframing academic advising for student success: From advisor to cultural navigator. *The Journal of the National Academic Advising Association, 35*(1), 56-63.

Tinto, V. (2002). *Enhancing student persistence: Connecting the dots.* (Wisconsin Center for the Advancement of Postsecondary Education).

Yi, Z. (2016, April). An Overlooked Population in Community College: International Students' (In)Validation Experiences With Academic Advising. *Community College Review, 44*(2), 153-170.