

MILLENNIALS, MODULES, AND MEANINGFUL ADVISING

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## Millennials, Modules, and Meaningful Advising 2

### Introduction

Technology integration in the new millennium has changed advising. According to Jones (2002), today's students are wired and are utilizing technology daily. It's not uncommon for today's Millennial students (individuals born between 1982 and 2002) to be instant messaging, text messaging, listening to an iPod, and working on homework all at once (Horn, 2006). With the Millennial Generation entering college, it is potentially a new and exciting opportunity for collegiate advising. To this end, Nutt (2008) explained the National Association of Academic Advising's (NACADA) perspective that, "Advisors must look beyond comfort levels in technology and continually enhance individual skills to meet the needs of students today and in the future. Advisors need to look at how technologies enable them to enhance, not limit or weaken, the quality of the conversation with advisees" (p. 1).

Students change over time, according to Steel (2002), and so does advising. Less than a decade ago, students only attended in-person advising appointments. Advising via email and chat was rare, and now it is a regular component of advising. A decade ago, colleges published catalogs and advisement materials in print format. But, in addition to the digitization of advising materials, advising has also shifted from being primarily prescriptive advising to developmental advising (Steel, 2002). Over a decade ago, according to Steel, advising had a stronger focus on informing students what courses they need to take in order to complete a degree. Advising has now shifted to a developmental approach, explains Nutt (2008), where advisors are teaching

students how to think independently, make decisions, and take charge of their education. Additionally, colleges today have begun to explore additional electronic avenues to reach out to and connect with students. According to Steele (2002), many documents that used to be in print are now found online, and communication with advisors used to be only face to face, but now is done primarily with email. A relatively new technological addition in advising is the integration of Web 2.0 tools such as blogging, social networking, and voice over internet protocol. With the convergence of the developmental advising philosophy, Millennials, and Web 2.0 technologies on campus, college advisors may be wise to ask: *In what ways might technologies support advising and student success?*

## Literature Review

### *Introduction*

In order to better understand the current state of advising Millennials through educational technology, the following bodies of literature have been reviewed: (a) the goals of advising in higher education, (b) who the Millennial students are, and (c) Web 2.0 technology tools currently being used to advise Millennial students in higher education.

### *Positive Higher Education Advising*

NACADA (2005) stated in its core values that, "Advisors are responsible to the students they advise, to the institutional objectives, and to the educational community" (p. 1). Moreover, according to Wagner (2001), "Advisors are to nurture, encourage, inform, and support students during their academic careers"

(p. 1). Advising is not only selecting classes, explained Wagner (2001), instead it is a relationship that is built to support the student through college. To this end, NACADA has formed a clearly defined set of values that are identified through the act of advising and these directly relate to advising goals.

Academic advising goals are typically set by institutions and disseminated to advisors through professional development. At the University of Minnesota Duluth (UMD), the site of this research project, these goals include (a) providing support, (b) helping students reach education goals, (c) assisting students in understanding policies and procedures, (d) notifying students of available resources, (e) encouraging meetings on a regular basis, and (f) developing competencies in online tools (i.e. Academic Progress Audit System, e-Portfolio, Graduation Planner).

Like UMD, institutions across the United States are formally articulating their advising goals. At the University of Pennsylvania, first year advising goals include (a) developing at least one relationship with a professional staff or faculty member on campus, (b) making a successful transition from high school to college, and (c) making a decision of major by the end of the sophomore year. Furthermore, at the University of Wisconsin Eau Claire, advising goals include (a) helping students to define their educational and career goals, (b) explaining academic policies, procedures, and graduation requirements, and (c) choosing appropriate courses to make adequate degree progress. Lastly, at the University of Wisconsin-Milwaukee, advising services (a) assists students to develop realistic educational goals, (b) accurately interpret policies and procedures, and

(c) encourage student extracurricular activity involvement. Developmental and prescriptive advising are both included in the goals identified by each institution.

### *Millennial Generation*

According to Howe (2005), “Every generation is uniquely shaped by its own location in history, and that formative influence has enduring effects” (p. 2).

The Millennial Generation is known for eight key traits that include being perceived as special, sheltered, confident, team-oriented, conventional, pressured, achieving, and multi-tasking (Howe & Strauss, 2003).

Millennials, according to Lowery (2004), DeBard (2004), and Elam, Stratton & Gibson (2007), are treated by others as if they are a qualitatively different generation than their predecessors. Additionally, Lowery (2004) expressed that helicopter parent syndrome is directly causing children to be sheltered and highly protected. The term helicopter parent comes from the hovering behavior of parents over their children (Howe and Strauss, 2003). Specifically, helicopter parents tend to protect their daughters or sons from harm, complex decision making, failure, and problems causing the child to have a difficult time knowing how to face these realities at college and in the real world (Howe & Strauss, 2005). Millennials, according to Howe and Strauss (2003), have had an intensively scheduled life that requires multi-tasking. It’s not uncommon for Millennial students to be instant messaging en route to volleyball practice, text messaging during a history lecture, listening to an iPod while walking to class, and working on homework all at once (Horn, 2006). Howe &

Strass (2000) further explain that Millennials have been conditioned to multi-task and need to have a schedule in order to be productive.

According to Nicoletti & Merriman (2007), teaching Millennial students should involve visual stimulation, a structured learning environment, active learning, connectivity, and collaboration. Wilson (2004) explains that active learning such as incorporating volunteering, case studies, online readings, and online media clips in the classroom will enhance learning. Wilson (2004) added, “Frequent high-quality student and faculty contact can enhance students’ motivation, involvement, and intellectual commitment, encouraging them to think about their own values and future plans” (p. 660). Teachers, explained Wilson (2004), need to build relationships by getting to know students by name and seeking contact, both inside and outside of the classroom.

#### *Current Practices in Education Technology*

Higher education advising practices have indeed become influenced not only by active learning methods, but also by technology. Specifically, Millennial-friendly Web 2.0 technologies are those that are most frequently being piloted and utilized in higher education advising. Advising technology, according to the Academic Leader (2004), Steele (2002), Multari (2004), Sloan (2005), Helfgof (1995), Wagner (2001), Dahl (2004), and Wilson (2001), is currently in place at higher education institutions or is being explored. As an example, according to the Academic Leader (2004), the Computer Science department at California State University-Dominguez Hills uses an online advisement program that allows students to complete a web-based form with target questions to assess

programmatic understanding. A computer then analyzes the contents of the form, and advisors receive the computer-analyzed report via email to check for student comprehension. Similarly, Sloan (2005) described how Tallahassee Community College has created a progressive advising program for “assisting students in defining their purpose in college, learning to access and use college resources, providing opportunities in career exploration, and encouraging course and degree planning” (p. 660). Furthermore, at the University of Buffalo, advisors can access an online database containing advisees’ admission profiles, academic records, demographic information, housing choices, and course selections (Multari, 2004). Dahl (2004) observed that advisors are starting to form online advising groups, host online chat sessions, and publish advising information on electronic bulletin boards by utilizing online course management systems such Moodle, Blackboard, and WebCT.

In summary, while much is written about developmental advising, the Millennial Generation, and current educational technology practices, there is a comparative scarcity of literature regarding how to use technology for best practices in advising. For this reason, this study proceeds with the question: *How does an online pre-advisement module effect programmatic understanding and advising appointment preparation?*

## Method

### *Setting*

In order to better understand the role of technology-assisted advising for Millennials, this research was conducted at the University of Minnesota Duluth

(UMD) within the College of Education and Human Service Professions (CEHSP). UMD is a public state university at which approximately 11,000 students are enrolled. Within CEHSP, there are approximately 2000 students enrolled. Approximately 7% of the CEHSP population are minority students, and about 67% of the population are female.

### *Participants*

All first semester CEHSP elementary education students were invited to participate in this study. Students enrolled in an Introduction to Elementary Education course were invited in class. Those who were not enrolled in the Introduction to Elementary Education course were invited via email. Students enrolled in the Introduction to Elementary Education class became the experimental group and completed the online pre-advisement module. Students who were not enrolled in Introduction to Elementary Education course became the control group and did not complete the online pre-advisement module. Those enrolled in the Introduction to Elementary Education course did not receive any additional information on programmatic information prior to the module. As neither group received prior programmatic information, both groups were essentially at the same level of knowledge in terms of understanding programmatic information and appointment expectations. The experiment yielded a 71% return rate, as 94 students were invited to participate, and a total of 67 agreed. The experiment's sample included 67 participants, 8 of whom were males and 59 of whom were females.

### *Procedure*

This study utilized what Patten (2009) called a pre-test, post-test control group design. In order to better understand how an online pre-advisement module effected advising appointment preparation and programmatic understanding, experimental and control groups were assessed on the degree of change between the pre-assessment and post-assessment scores. The degree of change for each group was measured through quantitative analysis of the change between pre-assessment and post-assessment scores. In order to triangulate research findings, this quantitative analysis was supplemented by qualitative analysis of the advising appointments. These methods allowed the researcher to quantitatively and qualitatively assess: (a) student knowledge prior to completing the module or attending the appointment, (b) knowledge after completing the module or appointment, and (c) observations of student performance and preparedness as they interacted in face-to-face appointments (see Appendix A). As Johnson and Onwuegbuzie (2004) recommend, information was gathered on both sides of the quantitative and qualitative spectrum to provide a complete picture of the effect of integrating an online pre-advisement module into the advisement process (Johnson & Onwuegbuzie, 2004).

### *Module*

To assist with advising, an online informational module was developed for the elementary education students using Moodle, a free, open-source, web-based course management system. This module was created to support

students in understanding UMD program requirements and to help students prepare for face-to-face advising appointments. The module included the following topics: (a) getting to know the university, (b) learning how to navigate Moodle, (c) understanding the roles of advising, (d) comprehending degree requirements, (e) learning how to read the university Academic Progress Audit System (APAS) Report, (f) reviewing registration expectations, (g) completing a graduation plan, and (e) meeting other students through chat and discussion dialogue.

### *Experimental Group*

The study was introduced to students in the Introduction to Elementary Education course. During class time, students who were participating in the study completed the consent form (see Appendix C). After consulting, students first completed an online pre-assessment, in order to assess current programmatic knowledge. Secondly, students then completed the online pre-advisement module. Thirdly, after the module was completed, students took an online post-assessment to assess the knowledge gained through completing the module. The students then scheduled an appointment to meet with their advisor for required semester academic advisement.

During the advising appointment, students were observed for comprehension of items addressed in the pre-assessment and post-assessment (see Appendix D). In these, a scorecard was utilized to ensure all students were observed equally (see Appendix B). The scorecard included (a) student understanding of application to the program requirements, (b) student knowledge

of registration process, (c) student comprehension of UMD advising tools, and (d) student preparedness with materials (i.e. APAS report, program worksheet, and graduation plan). The document also measured developmental consideration such as (a) confidence level of understanding requirements, (b) transition into college, (c) personal expectations, (d) level of campus involvement, and (e) individual goals. In addition to the above observations, the researcher noted the time allocated to prescriptive advising and developmental advising for each participant.

### *Control Group*

Students who were not enrolled in the Introduction to Elementary Education course were invited via email to participate in the study. They were given background of the study and were sent an electronic consent form (see Appendix E). After submitting the consent form, they were directed to schedule a spring advisement appointment. When the participants arrived for their advising appointment, they were instructed to complete a written pre-assessment, attend the meeting, and then complete a written post-assessment (see Appendix A). During the appointment, the advisor observed and recorded the items addressed in the pre-assessment and post-assessment, with the same process used for the experimental group. The control group did not have access to the online pre-advisement module during the study.

### Results

The study was designed to assess how an online pre-advisement module effects student appointment preparedness and programmatic understanding.

Two hypotheses were tested in this study. The first hypothesis was that participants who completed the online pre-advisement module would be more prepared for advising appointments, and therefore had more time available for developmental advising. The second hypothesis was that through the influence of the treatment, participants would gain knowledge and increase their pre-assessment to post-assessment score.

#### *Prescriptive and Developmental Advising*

Time allocated to prescriptive and developmental advising during the one-on-one appointments was analyzed. Table 1 demonstrates that the participants in the experimental group appeared to have learned the programmatic advising information while completing the online pre-advisement module, whereas the participants in the control group learned the programmatic advising information during the one-on-one advising appointment. Participants who completed the pre-advisement module prior to the advising appointment demonstrated better understanding of the degree requirements, advising tools, application to program requirements, and arrived prepared with the appropriate documents (i.e. graduation plan, program checklist, and APAS Report).

Table 1  
*Appointment Time Content*

Appointment Time Content	Control Group	Experimental Group
Developmental Advising Minutes	6	13
Prescriptive Advising Minutes	15	7

*Pre-Assessment and Post-Assessment*

Knowledge gained from completing the pre-advisement online module and the one-on-one advisement appointment was analyzed. Table 2 displays the pre-assessment and post-assessment score difference between the experimental and control groups. The control group came into the appointment with a 76% on the pre-assessment, indicating that participants needed more guidance on understanding the programmatic information. In contrast, the experimental group completed the module and completed the post-assessment with a 97%, indicating that the participants understood the programmatic information.

Pre-assessment scores revealed that both groups demonstrated comparable levels of programmatic knowledge. Whether the students completed the module to learn the programmatic information or learned the programmatic information during the advising appointment, both groups increased the post-assessment score to 94% and 97%. The changes in scores demonstrate the amount of knowledge the participants gained from the treatment described in Appendix A.

Table 2  
*Change in Pre-Assessment & Post Assessment Scores*

Pre-Assessment & Post-Assessment Scores	Control Group (%)	Experimental Group (%)
Pre-Assessment Scores	76	77
Post-Assessment Scores	94	97

### *Appointment Observation*

During the one-on-one advising appointment, participants were observed for the understanding of program requirements, registration, advising tools, and appointment expectations through the use of a score card (see Appendix B). The experimental group demonstrated understanding of: (a) admission to the program requirements by knowing the required program grade-point-average, volunteer hour expectations, and the Praxis I exam requirements; (b) registration system by showing registration process and showing how to utilize class search feature; (c) degree requirements evident by completed graduation plan; (d) appointment expectations by coming with graduation plan completed and courses planned appropriately; and (e) advising tools by completing the graduation plan and printing the APAS Report (see Appendices B & D). Areas that the experimental group demonstrated incomplete understanding included (a) where to locate the volunteer supervisor assessment form for volunteer hours, (b) how to read the APAS Report, and (c) when to take the Praxis I exam.

The control group demonstrated an absence of understanding regarding the basic programmatic information prior to the appointment. During the appointment, participants were informed of degree requirements, application to the program requirements, advising tools, and the registration system. Based on assessment scores, participants in the control group needed more prescriptive advising during the one-on-one advising appointment. Control group participants came with incomplete or incorrect graduation plans, did not bring the requested

materials as stated in the email, and lacked basic programmatic understanding. The lack of appointment preparedness and programmatic understanding was addressed during the appointment, and approximately 15 minutes of 20 minutes was spent explaining the advising documents (i.e. APAS Report, Program Worksheet, and Graduation Plan) and programmatic information, leaving less time for developmental advising.

*Observation Analysis: Understanding Program Requirements*

Understanding the program requirements for admission to the program is another key component of advising. Table 3 demonstrates that participants in the experimental group demonstrated more knowledge of the GPA requirements, required volunteer hours, required recommendation form, and the Praxis I standardized licensure exam, compared to the control group.

Table 3

*Observation Analysis: Understanding Programmatic Information*

Criteria Observed	Control Group (%)	Experimental Group (%)
Students knew they needed to maintain at least a 2.7 cumulative GPA and major GPA.	57	82
Students knew they needed to volunteer or work with children a minimum of 60 hours.	52	82
Students knew where to go online to obtain the required recommendation form.	43	68
Students knew where to go online to obtain the required recommendation form.	47	57

*Observation Analysis: Understanding Registration Process*

Compared to the control group, participants in the experimental group demonstrated during advising appointments a better understanding of how to

setup an appointment, how to use the registration system, and how to apply the 30-60-90 roadmap criteria then did their control group peers. Table 4 displays the difference in the percentage of participants of each of the observed criteria.

Table 4

*Observation Analysis: Understanding Registration Process*

Criteria Observed	Control Group (%)	Experimental Group (%)
Students knew how to setup an appointment	65	95
Students knew how to use the registration system	65	73
Students followed the 30-60-90 roadmap criteria	43	80

*Observation Analysis: Understanding UMD Advising Tools*

Table 5 demonstrates the participants' understanding of advising tools that were utilized during advising appointments. The UMD Graduation Plan tool is an electronic web-based software program that allows students to plan all four years of coursework in a real-time integrated database that reflects course availability. Participants in the experimental group more accurately planned the degree requirements into the Graduation Plan, knew where to locate the APAS Report, and knew how to read the APAS Report that did their peers in the control group. Whereas, 53% of the control group participants lacked the understanding on how to accurately plan in Graduation Planner and 57% of the control group participants lacked knowledge of how to read the APAS report, in contrast 86% of the control group participants did know where to locate the APAS Report.

Table 5

*Observation Analysis: Understanding Advising Tools*

Criteria Observed (%)	Control Group	Experimental Group
Students accurately planned degree requirements into the Graduation Plan	47	62
Students knew where to locate the APAS Report	86	89
Students knew how to read the APAS Report	43	59

*Observation Analysis: Understanding Degree Requirements*

Understanding of the degree requirements, as shown in table 6, was consistent across participants in both the control group and the experimental group. Participants understood the course prerequisites. The participants understood which lower division courses needed to be completed prior to the upper division courses. Both the control group and the experimental group expressed confusion regarding when they would qualify for application to the program. The findings suggest that participants misunderstood what courses needed to be complete prior to admission to the program, even though courses were planned accurately in most cases.

Table 6

*Observation Analysis: Understanding Degree Requirements*

Criteria Observed	Control Group (%)	Experimental Group (%)
Students knew course pre-requisites	75	75
Students knew what courses needed to be completed prior to admission into the program	56	56

*Observation Analysis: Advising Appointment Documents*

Table 7 displays the documents that were brought to the advising appointment. Experimental group participants, who completed the module, were more likely to bring a copy of the Graduation Plan, whereas students in the control group were more likely to bring a copy of the program worksheet. The difference between the experimental and control group is that 62% of experimental group brought a more complete and accurate graduation plan than the control group. Students who understood the Graduation Plan tool relied more on Graduation Plan and less on the program worksheet.

Table 7

*Observation Analysis: Understanding Registration Process*

Criteria Observed	Control Group (%)	Experimental Group (%)
Students brought a copy of the Graduation Plan	68	93
Students brought a paper copy of the program worksheet	91	60

## Limitations

The limitations of the study include a homogenous group of only elementary education first semester students. This population was chosen because the researcher also serves as the first year elementary education advisor. Additionally, the elementary education major is a tightly structured program with important deadlines, strict course sequencing, and required practicum hours within each semester. The pre-assessment and post-assessment were given in the same sitting which could have caused students to memorize the correct answers, therefore increasing scores from the pre-assessment to post-assessment. The pre-assessment did not give the students

the answers after each question; students simply answered the questions and moved on. Therefore in order to know the correct answer, a student would have to complete the pre-advisement module or have a lucky guess. Previous knowledge of the elementary education program may have increased the average of the pre-assessment.

### Discussion and Conclusion

In light of these findings, advisors may be wise to utilize online pre-advisement modules, in support of prescriptive and developmental advising success. According to Prensky (2001), Millennials are wired, meaning they have been exposed to a digitalized world since birth. Specifically, Prensky (2001) states, today's average college grads have spend less than 5,000 hours of their lives reading a book, but over 10,000 hours playing video games, 20,000 hours of watching television, 200,000 emails and instant messages sent and received, over 10,000 hours talking on a cell phone, and have seen over 500,000 commercials (p. 1). Further, Prensky (2001), presents this generation of students as the digital natives due to the staggering amount of time spent being digitally connected (Prensky, 2001).

The evolution of technology has been greatly shaped by the Millennial Generation (Howe & Strauss, 2003). Due to the digital expectations of the Millennials, the web development community has continually provided new and exciting opportunities for digital connectivity. In 2001, the dot-com boom, known as Web 1.0, began to pave the way for a society influenced by the use of the internet (Flew, 2008). The development of websites and e-mail communication

grew prevalent (Flew, 2008). According to O'Reilly (2005), Web 2.0 includes (a) collaboration, (b) information sharing, and (c) social networking integration with the World Wide Web.

As Millennials are entering college with technology in hand, advisors are increasingly exploring the intersection of technology and advising. Revisiting Nutt's (2008) encouragement, "Advisors must look beyond comfort levels in technology and continually enhance individual skills to meet the needs of students today and in the future. Advisors need to look at how technologies enable them to enhance, not limit or weaken, the quality of the conversation with advisees (p. 1)."

As technology has evolved so too has advising. Advising 1.0 may be thought of as the centuries-old commitment to face-to-face advising. Advising 2.0 developed as students began entering the doors of colleges across the world presenting a new set of digital expectations. Advisors responded by converting paper-based materials, such as catalogs, program planning sheets, policies, and procedures, into an electronic form of delivery, known as the website. To extend this analogy, advising 3.0 may then be emerging in the field of advising.

Advisors are integrating (a) video chat, (b) social networking, (c) blogging, (d) asynchronous, threaded discussion posts, (e) web videos, (f) electronic advising folders, and (g) electronic graduation planning. A relatively new area of Advising 3.0 is the integration of course management systems (i.e. Moodle, WebVista, WebCT, WebX, Blackboard) into academic advising.

Results of this advising 3.0 experiment confirmed the hypotheses that the integration of a pre-advisement module prior to face-to-face advising appointments would increase student knowledge of programmatic information and appointment preparedness. These hypotheses were confirmed through a triangulation of quantitative and qualitative data.

The findings, as noted in table 2, suggest that participants who completed the module online gained the programmatic knowledge with a percentage gain of approximately 20% between the pre-assessment and post-assessment. Additionally, participants who did not complete the pre-advisement module had an 18% gain between the pre-assessment and post-assessment score. This positive and essentially equivalent gain between pre-assessment and post-assessment scores suggests that the programmatic information learned online is just as effective as delivering that information during an in-person advising appointment.

Based upon the findings that participants who completed the module and did the homework ahead of time came to the appointment with a greater programmatic understanding, colleges may wisely invest in online modules that serve as advising tools in order to enhance face-to-face developmental advising conversations that include (a) involvement opportunities, (b) academic expectations, (c) campus resources, (d) degree planning, and (e) getting to know the student personally. In a world of multiple, conflicting opportunities and commitments, when participants did the homework ahead of time through an online advising module, conversations were deeper and more meaningful.

According to NACADA (2005), an ideal advising appointment consists of a combination of both prescriptive and developmental advising. Students need to be able to feel confident in understanding the programmatic information, but also feel a connection with the advisor such connections are typically constructed during face-to-face advising appointments. The findings suggest that when a student completed the pre-advisement module prior to the advising appointment there was more time available for developmental advising conversations during the appointment. Specifically, the students who completed the module prior to the face-to-face advising appointment averaged 13 minutes of developmental advising and 7 minutes of prescriptive advising, during the 20 minute advising appointment. Whereas, the students who did not complete the module averaged 15 minutes of prescriptive advising and 6 minutes of developmental advising, during the 20 minute advising appointment.

Results suggest that the participants who completed the online pre-advisement module prior to the face-to-face advising appointment had a better understanding of the programmatic information which in turn led to the students having the ability to apply it. For example, almost ninety percent of students understood where to find the APAS report, but 60% of the experimental group participants knew how to read the APAS report compared to roughly 40% of the control group. When students interactively learned the information independently they were more likely to have an understanding to explain and apply it.

Furthermore, this online pre-advisement module enabled advising appointments to include more time for developmental advising. Those who

complete the pre-advisement module (a) better understood programmatic information, (b) came more prepared to advising appointments, and (c) had more meaningful face-to-face advising appointments. By having students do homework prior to the appointment by completing a web-based module, the face-to-face appointments become more developmentally meaningful for the student who wants to make a connection and for the advisor who wants to build a relationship. The module simply addresses the programmatic information in an online format, while the developmental component needs to continue to be completed in a one-on-one face-to-face advising appointment.

While technology integration into advising is a step in the right direction, it is important to remember that face-to-face advising appointments are still important in the advising process. During the face-to-face advising appointments students are able to connect with a staff or faculty member who cares about their success and clarify individual questions. On the other hand, advisors are able to (a) assess for programmatic fit, (b) observe behavior, (c) recommend involvement opportunities, (d) ensure adequate academic progress, (e) strategize for academic success, and (f) build relationships.

As one example of advising 3.0, this study identified measurable benefits to those who completed the online pre-advisement module prior to face-to-face advising appointments. As the current generations and future generations continue to present new technological needs to the field of advising, it is important for advisors to remember, like Nutt (2008) stated, "Advisors need to

look at how technologies enable them to enhance, not limit or weaken, the quality of the conversation with advisees.”

#### Considerations for Future Research

In future research, it may be helpful to collect data from a demographically diverse sample including students in a variety of majors or colleges. This study was designed to work with a targeted population and to potentially spread out across additional majors. With the elementary education population either taking or not taking the course Introduction to Elementary Education this was the factor that divided the students into the control and experimental group. The students randomly decided whether or not to take the course Introduction to Elementary education during their first semester, but a true random sample may bring richer data.

Appendix

Appendix A

*Experimental Design*

	Experimental Group	Control Group
Pre-Assessment	Complete the 10 question pre-assessment in Moodle	Complete a written 10 question pre-assessment
Treatment	Complete the online pre-advisement module	Attend the advising appointment
Post-Assessment	Complete the 10 question post-assessment completing immediately following the module in Moodle	Complete a written 10 question post-assessment immediately following the appointment
Observation	During the one-on-one in person advising appointment	During the one-on-one in person advising appointment

Appendix B

*Appointment Observation Form*

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Student ID:** \_\_\_\_\_ **Completed Module:** Y / N

**Prescriptive Advising:** \_\_\_\_\_ **Minutes (approx)**

***Understands Application to the Program Requirements:***

2.7 Required Major, Lower Division and Cumulative GPA

60 Volunteer Hours

understands How to Register for Praxis Test and When to Take

(Planned by end of 1<sup>st</sup> year)

Minimum of 3 assessment forms

***Understands Registration Process:***

knows how to setup an appointment

understands how to register

understands credits in order to stay on track with major requirements (30-60-90)

***Understands UMD Advising Tools (APAS and Graduation Planner):***

completed Graduation Planner correctly (notes, course sequencing, etc)

can locate, read, and explain the APAS Report

Posted on the Discussion Forum

Posted on the Question Forum

***Understands Degree Requirements:***

Understands what courses to take when

Knows what classes need to be done prior to blocks

***Understands appointment responsibility:***

Brought a copy of Graduation Planner

Brought a copy of the program worksheet

Declared Specialization (comm. arts lit, math, science, social studies)

**Developmental Advising:** \_\_\_\_\_ **Minutes (approx.)**

How's life and semester going

How feeling, in terms of understanding requirements

How has your transition into college been going

Student knows their expectations (get assessment form, when and how to take

Praxis, how to use graduation planner, and what resources to seek out)

Knows on campus resources and involvement opportunities

Developed Individual Goals

Any Concerns

\_\_\_\_\_  
Other \_\_\_\_\_

Additional Information:

\_\_\_\_\_  
\_\_\_\_\_  
Advising Hold Removed: Y / N

## Appendix C

### *Consent Form*

#### **CONSENT FORM** Academic Advising Module

You are invited to be in a research study of an Academic Advising Module. You were selected as a possible participant because you are a first semester Elementary Education major. Please read this form and ask any questions you may have before choosing to be in the study.

This study is being conducted by: Lisa Kittelson, Academic Advisor CEHSP Student Affairs and Masters of Education student

#### **Background Information:**

The purpose of this study is to increase the effectiveness of academic advisement through the use of an online module. Specifically, this study will explore whether or not the use of the online module actually does enhance student understanding of procedures such as creating a program plan, registration for courses, reading the academic progress report, etc.

The research question for this study is: How does an online module affect student performance during advising appointments?

#### **Procedures:**

If you agree to be in this study, you need to do the following:  
(1) Complete a pre-test assessment, (2) complete the Elementary Education Module, (3) complete a post-test assessment, and (4) attend a registration meeting with Lisa Kittelson.

**Risks and Benefits of being in the Study**

Participation in this study carries little to no risk.

The benefits to participation are:

- Learning about your degree requirements
- Introduction to the Course Management System used throughout education coursework
- Meeting other Elementary Education Students
- Completing your 4 year graduation plan
- Learning more about the University of MN Duluth and the College of Education & Human Service Professions

**Confidentiality:**

The records of this study will be kept private. In any sort of report published, the researcher will not include any information that will make it possible to identify a subject. Research records will be stored securely and only the researcher will have access to the records.

**Voluntary Nature of the Study:**

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

**Contacts and Questions:**

The researcher conducting this study is: Lisa Kittelson. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact the researcher in Bohannon Hall 120, by calling 218-726-7667, or emailing lkittels@d.umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

***You will be given a copy of this information to keep for your records.***

**Statement of Consent:**

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Signature of Investigator: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix D

*Pre-Assessment & Post- Assessment Questions*

Question	Pre-Assessment Questions	Purpose
1	What does the check mark plus "IP" mean on in your liberal education requirements on your APAS Report?	Assesses knowledge of using advising tools, specifically APAS report.
2	How many semester credits should you take each semester to maintain adequate progress toward degree completion?	Assesses knowledge of staying on track towards 4 year graduation, setting individual goals, university 30-60-90 policy.
3	When should you have your Praxis I test completed?	Assesses knowledge of application to program requirements.
4	What is the minimum cumulative GPA required for admission into the Elementary Education program?	Assesses knowledge of program requirements.
5	How many hours do you need to spend working/volunteering with children in order to get into the blocks?	Assesses knowledge of application to program requirements
6	Your volunteer/work hours only count when you have a supervisor complete the assessment form found within the block application.	Assesses knowledge of application to program requirements
7	What do you need to bring to your registration appointment?	Assesses students understanding of the role of advising and responsibility of being prepared
8	Every semester you are required to enter your health insurance information when registering.	Assesses knowledge of using registration system
9	Where do you go to take care of your AMR (Advisor Meeting Required) hold?	Assesses knowledge of systematic university policies
10	The sooner you make your registration appointment the better.	Assesses students understanding of the role of advising

## Appendix E

### Consent Form: Academic Advising Module

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Please read the below consent form and choose if you would like to participate in the study. The study is a brief pre assessment, the registration appointment and a brief post assessment. The study is intended to help me understand (as your advisor), if the advising appointments are providing you a good experience and you are gaining the necessary information to be a successful student at UMD.

The study is in association with your mandatory advising appointment, therefore you will need to complete any additional steps on your own time.

You are invited to be in a research study of an Academic Advising Module. You were selected as a possible participant because you are not enrolled in Eled 1010-Introduction to Elementary Education. Please read this form and ask any questions you may have before choosing to be in the study.

This study is being conducted by: Lisa Kittelson, Academic Advisor CEHSP Student Affairs and Masters of Education student

#### Background Information:

The purpose of this study is to increase the effectiveness of academic advisement through the use of an online module. Specifically, this study will explore whether or not the use of the online module actually does enhance student understanding of procedures such as creating a program plan, registration for courses, reading the academic progress report, etc. Students not enrolled in Eled 1010-Introduction to Elementary Education will be the control group to see what impact only advising appointments have on learning and retaining the information.

The research question for this study is: How does an online module affect student performance during advising appointments?

#### Procedures:

If you agree to be in this study, you need to do the following:  
(1) Complete a pre assessment, (2) attend a registration meeting with Lisa Kittelson (3) Complete a post assessment.

#### Risks and Benefits of being in the Study

Participation in this study carries little to no risk.

The benefits to participation are:

- Learning about your degree requirements
- Learning more about the University of MN Duluth and the College of Education & Human Service Professions
- Meeting your advisor
- Creating a plan for registration next semester

Confidentiality:

The records of this study will be kept private. In any sort of report published, the researcher will not include any information that will make it possible to identify a subject. Research records will be stored securely and only the researcher will have access to the records.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is: Lisa Kittelson. You may ask any questions you have now. If you have questions later, you are encouraged to contact the researcher in Bohannon Hall 120, by calling 218-726-7667, or emailing lkittels@d.umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

You will be given a copy of this information to keep for your records.

QUESTION: I have read the above information. I have emailed any questions I may have and....

- I consent to participate in the study
- I do not want to participate in the study

Submit your responses

Prepared by: Lisa Kittelson  
Thank you!

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