RESEARCH BRIEF

Nudging Students to Success:
Guiding Students from Application to Graduation

Introduction

Community colleges attract a variety of students with a wide range of motivations and goals. For some, community college offers an affordable path to a four-year degree. For others, it provides job training or career certification. A diverse student population is interspersed among these program paths, with community colleges drawing in large numbers of first generation students, students of a minority ethnic or racial group, or students living in poverty. These groups are historically underrepresented in college as a whole and may have little, if any, guidance on navigating the college experience.

While community college offers an opportunity for diverse groups of students to earn a college degree, the reality is that only a small percentage of students will ever graduate. Even fewer will transfer to a four-year institution and fewer still will earn a bachelor's degree. This is because applying to and attending college is a complex and multifaceted process, and many students need help navigating the process in order to be successful. Additionally, students often encounter obstacles that challenge their ability to persist through college—for example, they may lack guidance and understanding of the process as the first in their family to attend college, be undecided about what career path to pursue, or experience financial hardships or other demands on their time, such as raising a family. Helping students address these challenges can be critical to their success.

Therefore, Northern Virginia Community College (NOVA) is implementing a new advising model that will better address the many challenges faced by students. The new advising model will use many strategies and processes, including the implementation of "nudging" as a tactic for guiding students through the college experience. Widely used in many industries and with great success, nudging has been an effective strategy for guiding individuals to make optimal decisions. The goal of this document is to present the concept of nudging, which will become a critical aspect of NOVA's new advising model.

In This Brief

The goal of this document is to introduce and explain the concept of nudging, which will become a critical aspect of NOVA's new advising model.

- ➤ **Section 1** describes the concept of nudging and its application across industries
- ➤ **Section 2** describes how nudging is used in higher education

As part of the new advising model, NOVA will be enlisting the help of a multitude of staff—including advisors, career counselors, and faculty—to improve the delivery of advising. A forthcoming follow-up to this document will provide faculty and staff with information regarding how nudging will be integrated into NOVA's new advising model.

Section I. Nudge Theory

> "A nudge, as we will use the term, is any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives. Nudges are not mandates. Putting fruit at eye level counts as a nudge. Banning junk food does not."
>
> *-Richard Thaler¸ Nudge: Improving Decisions*
> *about Health, Wealth, and Happiness*

Many economic theories are based on the assumption that human beings are rational actors. More recently, economic theories have started to assume the opposite—human beings are *irrational* actors and, consequently, are influenced greatly by their social interactions, biases, and temptations. As a result, individuals often make imperfect decisions based on these imperfect impulses. In other words, when faced with a choice, people do not always pick the best option.[1] For example, someone who visits a grocery store hungry or in a hurry is more likely to indulge in unhealthy or expensive impulse purchases instead of pausing and taking the time to choose the healthiest or most affordable selections.

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[1] Thaler, Richard H., Sunstein, Cass R. (2008). *Nudge: Improving decisions about health, wealth, and happiness.* New Haven: Yale University Press.

This is where **nudge theory** comes into play. Nudge theory defines nudging as "a subtle intervention, policy, or process design that tips the balance in favor of an optimal decision."[2] In other words, nudge theory posits that individuals can be guided to make better decisions in a non-intrusive way and without compromising individual autonomy. Nudging simply changes the context in which people make decisions—by providing more information, less information, or presenting information in a new way—but does not make the decision for someone. In fact, nudging often goes unnoticed; it is a subtle, indirect act and its influence is typically subconscious. Using the example in the quote box on the previous page, students can be nudged to eat healthier if fruit is presented at eye level in the cafeteria lunch line, although students may not at all realize the influence this has on their choice of what to eat.[3]

Since nudge theory was first defined in the early 1990s, economist Richard Thaler and legal scholar Cass Sunstein further developed and popularized the concept in 2008 with the publication of the joint-authored book *Nudge: Improving Decisions about Health, Wealth, and Happiness.*[4] Since the publication of this book, many industries have adopted nudging as an effective and efficient tactic to improve constituent and consumer behavior. In 2017, Thaler won the Nobel Memorial Prize in Economic Sciences for his work on nudging, a strong testament to its power and widespread applicability across industries.[5]

Why and How is Nudging Used?

If human beings are inherently irrational actors with imperfect impulses, as nudge theory posits, the question then becomes: **How can organizations help people to make better, more informed decisions?** Nudging is an extremely effective answer to this question. Nudging can be implemented on a large scale to reach large numbers of people, but is a non-intrusive and inexpensive intervention. Using the example on the previous page, putting fruit at eye level costs a school no money at all, but can significantly increase the number of students who select healthier options for lunch.

Nudging is also an effective tactic because it can be easily customized to the problem at hand. Legal scholar Cass Sunstein argues that there are many different types of nudging and ways in which nudging can be applied. Moreover, nudging is constantly evolving as a concept and more types of nudges are continually being explored and developed through further research and application.[6]

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[2] (2018). *The Power of the Nudge: Designing Behavioral Interventions for Student Success.* EAB.
[3] Thaler, Richard H., Sunstein, Cass R. (2008). *Nudge: Improving decisions about health, wealth, and happiness.* New Haven: Yale University Press.
[4] Ibid.
[5] Appelbaum, Binyamin. (2017). *Nobel in Economics Is Awarded to Richard Thaler*. The New York Times.
[6] Cass R. Sunstein. (2014). *Nudging: A Very Short Guide*. 37 J. Consumer Pol'y 583.

Of the many types of nudging that have been developed and applied across industries, the list below describes a selection of five major types of nudging:[7]
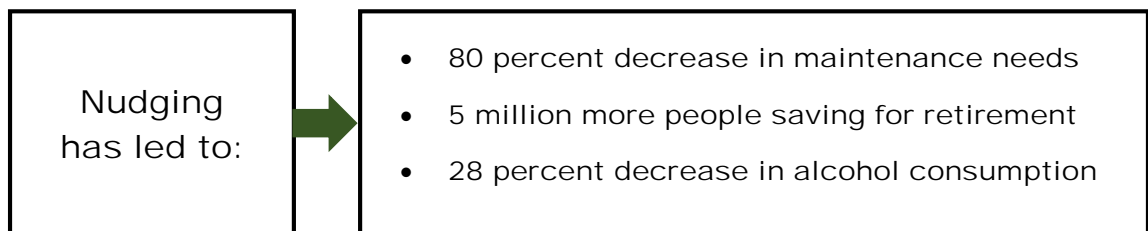
1. **Subtle Suggestions:** Subtle suggestions are indirect actions that change the context in which an individual makes decisions, such as putting fruit at eye level in a cafeteria lunch line. These nudges are typically only subconsciously noticed and processed by the individual. The idea is that individuals are most likely to make the easiest or most convenient decision, so reducing barriers to some choice options can encourage them to act in a way they might not have if it were less convenient.

2. **The Default Option:** The default option refers to the option an organization selects as the one the individual will receive if they make no decision at all. Individuals are more likely to choose the default option over any other option—partly because it is convenient and partly because they infer that the organization intentionally selected the best option as the default. As a result, organizations can nudge individuals to make one particular decision by strategically setting that option as the default.

3. **Social Norming and Misperceptions:** Individuals often make decisions based on what they perceive their peers around them to be doing, regardless of whether they believe it to be in their best interest. As such, a problem occurs when individuals misperceive how others are behaving. A social norming nudge, therefore, is a nudge that either provides information about what the majority of other people are doing, or one that provides information to correct misperceptions about how others are behaving.

4. **Simplification:** In many cases, individuals make imperfect decisions because the decision itself is too complicated. By developing a simplified message to explain a complex process to consumers or constituents, organizations can nudge individuals—both to increase the likelihood they will make a decision at all, as well as increase the likelihood they will make a decision in their best interest.

5. **Direct Reminders:** Since humans are imperfect beings, many factors affect their ability to make timely decisions—including procrastination, forgetfulness, and competing demands on their time. Direct reminders, such as emails, phone calls, and text messages, are effective ways to nudge an individual to complete a task before a deadline. When the message includes a path to take immediate action, such as link to pay a parking ticket online, follow-through increases even more.

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[7] Cass R. Sunstein. (2014). *Nudging: A Very Short Guide*. 37 J. Consumer Pol'y 583.

Examples of Nudging Across Industries

Largely because of its affordability and ease of implementation, nudging has been implemented in many different contexts and industries. Drawing on the first three types of nudging as described on the previous page, the list below provides three examples of the powerful impact nudging has had on human behavior.

> **A Subtle Suggestion:** The most famous and widely used example of the power of nudging hails from the men's room at Schipol Airport in Amsterdam, where images of insects were etched into the porcelain near the drain of each urinal. By subtly nudging men to aim at a particular spot, the airport saw dramatic results— **spillage dropped by 80 percent, leading to huge savings in maintenance costs.**[8]

> **Resetting the Default Option:** In 2012, the UK government suggested employers create a default option for pension enrollment—specifically, changing the default to automatic enrollment. Individuals would be automatically placed in a pension plan upon hire, and would have to specifically opt-out if they did not wish to participate. By selecting enrollment as the default option, the government nudged constituents to save for retirement. **As a result, participation in pension plans rose from 2.7 million people in 2012 to 7.7 million in 2016.**[9]

> **Correcting Misperceptions:** Nudge theory suggests that people are likely to act in the way they believe their peers to be acting. For example, college students tend to believe their peers are consuming more alcohol than they really are which, in turn, influences their own decision to consume alcohol. The University of Arizona created a campaign to show that the real percentage of students consuming alcohol is quite low. **As a result, the number of students consuming five or more drinks in a single sitting fell by 28 percent.**[10]

Nudging has led to:	• **80 percent decrease in maintenance needs** • **5 million more people saving for retirement** • **28 percent decrease in alcohol consumption**

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[8] Krulwich, Robert. (2009). *There's a Fly in My Urinal.* Krulwich Wonders: Robert Krulwich On Science. National Public Radio (NPR). Retrieved at: https://www.npr.org/templates/story/story.php?storyId=121310977

[9] Chu, Ben. (2017). *What is 'nudge theory' and why should we care? Explaining Richard Thaler's Nobel economics prize-winning concept.* The Independent.

[10] Yi, Anne. (2017). *It won a Nobel Prize—but what does nudging mean for your students?* Student Success Insights Blog. EAB. Retrieved at: https://www.eab.com/blogs/student-success-insights/2017/12/nudging

Section II. Nudging in Higher Education

"When his (Thaler's) book 'Nudge' first came out, I was really taken with the idea—if it works in so many different areas, why wouldn't it work in higher education?"[11]

-Colleen Carmean, Associate Vice Chancellor for Academic Innovation at the University of Washington Tacoma

Nudge theory was developed and popularized nearly a decade ago. Since then, many organizations across a multitude of industries—including government, marketing, and public health—have implemented nudging on a large scale. These organizations have achieved significant, positive changes in human behavior as a result of nudging. However, despite the widespread success of nudging across industries, higher education administrators have only recently joined the conversation and started to think strategically about how nudging can be used on college campuses to help students to succeed.

The Status Quo in Higher Education

The process of applying to, attending, and graduating from college is time-consuming, multifaceted, and complex. Consequently, students drop off at every stage of the process. For example, while 93 percent of high school students indicate an intention to attend college, only 70 percent actually enroll.[12] (Figure 1, following page) Some of these students never submit an application, while others apply and are accepted, but do not matriculate. Research suggests that the drop off may be even higher for underrepresented student populations. One study found that between 20 and 30 percent of low-income students from urban areas were admitted to at least one college, but did not enroll anywhere.[13]

The drop off from enrollment to graduation is even larger for community college students. In fact, only 29 percent of full-time community college students will graduate within three years of first enrolling.[14] (Figure 1, following page) As mentioned above, this percentage may be even lower for underrepresented student populations who may need additional guidance and support to successfully navigate the college experience.

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[11] Long, Katherine. (2017). 'Nudges' are helping UW Tacoma students graduate on time. The Seattle Times.
[12] (2016). Nudging for Success: Using behavioral science to improve the postsecondary student journey. Ideads42.
[13] Castleman, B.L. and Page, L.C. (2014). *Summer Nudging: Can Personalized Text Messages and Peer Mentor Outreach Increase College Going Among Low-Income High School Graduates?* EdPolicy Works.
[14] (2016). Nudging for Success: Using behavioral science to improve the postsecondary student journey. Ideads42.

Figure 1. Enrollment and Graduation Rates of College Students
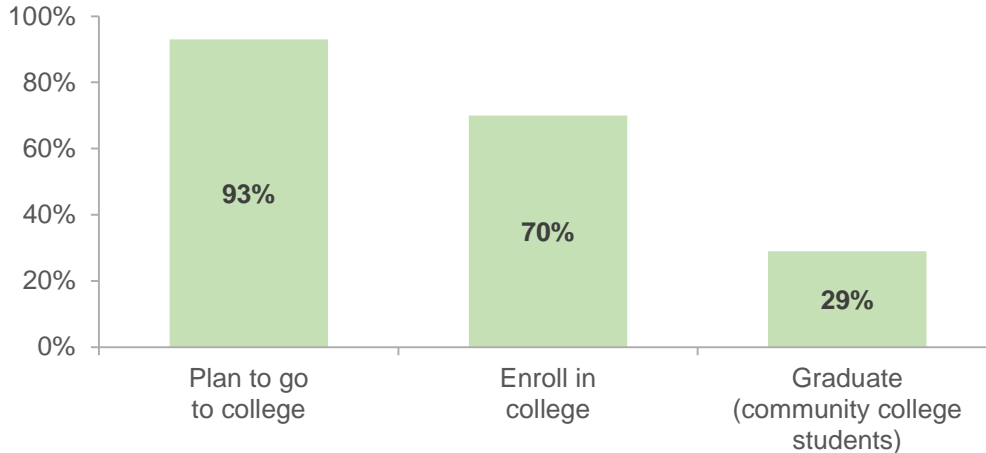
Source: National Center for Education Statistics (NCES)

The status quo suggests that all colleges—and community colleges in particular—continue to struggle with student success. Colleges frequently strategize on solutions and implement new interventions to improve success rates. While many interventions have been successful at incrementally improving academic outcomes, they are often expensive, complex, and timely to implement on a large scale. The question then becomes—**what else can colleges do to effectively, efficiently, and more affordably help students to succeed?**

Nudging as a Solution

Nudging is the logical next step for higher education administrators. As students progress through college, they encounter a large number of complex processes that require them to make informed decisions, from deciding where to apply to college and filling out complicated financial aid forms to choosing a program of study and enrolling in the appropriate coursework. As nudge theory posits, it is extremely likely students will be prone to mistakes at every step—such as forgetting to submit a financial aid form on time or missing other deadlines.

Nudging can help guide students in a variety of ways, but nudge theory suggests that nudging is most effective at targeting decisions that are complex, difficult to understand, and/or do not inherently offer feedback or guidance on the choices an individual makes.[15] For example, the financial aid process can be daunting for students—it requires students to process complex financial information and meet multiple deadlines, and students rarely, if ever, receive feedback on whether they filled out a form correctly. In this case, a

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[15] Thaler, Richard H., Sunstein, Cass R. (2008). *Nudge: Improving decisions about health, wealth, and happiness.* New Haven: Yale University Press.

college could use **direct reminder nudges** to remind students about deadlines, **simplification nudges** to make confusing aspects of the process more easily understood, or **norming nudges** to share the message of how other students have successfully used financial aid to finance their college degree.

To summarize, nudging can be used as an effective and efficient tactic at all stages of the college experience, but can be most useful in areas that involve complex processes, a lack of feedback on choices, and approaching deadlines. **For example, students may benefit from a nudge to remind them to:**

➢ Submit an application for admission

➢ Apply for financial aid

➢ Take placement exams

➢ Attend orientation

➢ Schedule a meeting with an advisor

➢ Register for coursework, including developmental courses

➢ Declare a program or major

➢ Identify a four-year transfer school

➢ Apply for graduation

Best Practices for Nudging Students

Of the many types of nudging that can be applied in higher education (see *Types of Nudging* in Section 1), the most popular and perhaps most effective nudges have been **direct reminders**, often combined with **simplification**. With more and more students using smartphone devices as their primary communication medium, old methods of communicating, such as email or direct mail, are increasingly less likely to reach students. Therefore, many colleges and universities are nudging students through text message campaigns. These campaigns have been used to encourage students to take action on an outstanding task, such as applying for financial aid.[16]

While nudging is still new to higher education, a few best practices have emerged from colleges who have recently implemented text message campaigns on a large scale. Examples provided are specific to text message campaigns, but the best practices are generally applicable to other types of nudging as well.[17]

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[16] (2018). *The Power of the Nudge: Designing Behavioral Interventions for Student Success.* EAB.
[17] Kathman, Brian. (2017). *Three Texting Tips to Nudge Incoming HigherEd Students to Success.* Getting Smart.

1. **Personalize the Message:** Research suggests that students are more likely to read and act on text message nudges if they are personalized.[18] This is because it gives the appearance of being intentional instead of a spam message. Personalizing messages can be as simple as including the student's first name as a greeting. More complex forms of personalization can include details specific to the student, such as an acknowledgement of that specific student's application status or the contact information for that student's dedicated advisor or counselor (instead of generic contact information for an Advising Center).

   - **Example:** "Hi Daniel! We noticed you haven't submitted your application for financial aid yet. Don't forget the deadline is June 30th! If you have any questions, please don't hesitate to contact your financial aid advisor, Brian Smith, at [contact information]."

2. **Simplify the Process:** One goal of a nudge is to provide information that is simpler for students to understand than the larger, more complex process. By repackaging complex processes into more digestible pieces, students can better understand what they need to accomplish next.[19] For example, instead of providing students with a complicated roadmap of when to take four semesters worth of courses, remind students before their first semester to meet with an advisor to discuss their academic path or enroll in any developmental courses. By simplifying, students are more likely to act.

   - **Example:** "Hi Carla! Your placement exam results indicate you have been placed in developmental math level 3. We recommend you enroll in developmental math level 3 this semester in order to stay on track toward graduation. If you have any other questions on which courses to take, please don't hesitate to contact your first-year advisor, Dana Jones, at [contact information]."

3. **Elicit a Response:** Research also shows that a text message nudge that elicits a response can achieve better results.[20] One college found that only six percent of contacted students ultimately registered for courses when they received a text message that did not require them to respond (Approach #1, on the following page). Conversely, when the college switched to a text message nudge that elicited a response (Approach #2, on the following page), 70 percent of students registered for courses. This may be because some students responded to the text with their frustrations—such as not be able to get into the course they needed—

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[18] (2017). Three Texting Tips to Nudge Incoming HigherEd Students to Success. Getting Smart.
[19] Ibid.
[20] Ibid.

and the college was able to put them in contact with the relevant staff member who could help them to proceed.[21]

Approach #1	Approach #2
"UCF Registration Reminder: The deadline to add classes is Today, Friday, January 13. To register, please visit my.ucf.edu."	"This is the UCF registrar. We notice you haven't registered. If you're planning on returning, reply Y. If you're not planning on returning, reply N."

4. **Strategically Deliver the Message:** Students should be nudged only when they still have sufficient time to act, including time to meet with an advisor if more information or guidance is needed to make a decision. Some colleges have found a staggered approach of nudges at various intervals to be effective.[22] This means one nudge might be sent out several weeks before a deadline, with additional nudges sent at subsequent dates to students who still have not completed the task. Using the example of federal financial aid:

- **Nudge #1:** Sent to all students three months before the deadline to remind them to apply for financial aid, including a link to the financial aid website.

- **Nudge #2:** Sent to students who have not yet filed for financial aid one month before the deadline, including contact information for financial aid counselors and a link to the financial aid website.

- **Nudge #3:** Sent to students who have not yet filed for financial aid one week before the deadline, emphasizing the importance of financial aid for financing tuition, and includes contact information for financial aid office and a link to the financial aid website.

The Tipping Point

Moving forward, higher education administrators will need to be conscious of the amount of nudging in which they engage and how students are reacting to nudges. Some researchers note there may be a point at which students are being nudged *too much*. One problem this can create is a student who becomes dependent on nudges to be reminded to act at key milestones. The other problem this can create is a student who simply tunes out nudges because they happen too frequently. Unfortunately, nudging is too new to higher education to provide enough empirical evidence regarding where, when, and how this tipping point may occur, so colleges can only be conscious of the potential ramifications of a system that nudges students too often.

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[21] (2018). *The Power of the Nudge: Designing Behavioral Interventions for Student Success.* EAB.
[22] Summer Nudging. Minnesota Office of Higher Education.

Conclusion

Nudging is a powerful tool, and one that has been proven successful in many contexts and industries. A simple nudge has encouraged individuals to exercise more, eat healthier, sign up for more comprehensive insurance, vote in elections, and even aim better in public restrooms. Moreover, these positive changes to human behavior have been the result of a tactic that is non-intrusive, low-cost, and easily implemented on a large scale. The contribution of nudge theory to the field of behavioral economics won Richard Thaler the 2017 Nobel Economics Prize, a strong testament to the power, ease of use, and widespread applicability of nudging.

Given its far-reaching success in other industries, it comes as no surprise that nudging has started to make its mark on college campuses. Colleges are nudging students to remind them to submit applications, take placement exams, enroll in courses, schedule meetings with academic advisors, and declare majors. When implemented within a larger advising system, nudges can strategically guide students through the entire college process—from application all the way to graduation. Colleges that have incorporated nudging into advising practices have begun to see changes in the way students behave and, thus, gains in student success.

Therefore, NOVA's new advising model will incorporate nudging as a key component of the new strategy for advising students. The goal of nudging is to increase the number of touch points and identify problems before they impact a student's ability to succeed. Over time, NOVA hopes nudging—and the new advising model as a whole—will improve graduation rates and make NOVA students even more competitive in today's workforce.

Suggested Reading List

- ➢ Thaler, Richard H. and Sunstein, Cass R. (2008). *Nudge: Improving Decisions about Health, Wealth, and Happiness*. New Haven: Yale University Press.
- ➢ (2016). *Nudging for Success: Using behavioral science to improve the postsecondary student journey.* Ideads42.