

EDUCATION AND EMPLOYMENT RESEARCH CENTER

Communication,
Collaboration, Connection:
How Faculty and Advisors
Work Together in IT Programs
at Ivy Tech Community College

Sam Scovill, Danette Coughlan, Renee Edwards, and Michelle Van Noy

SEPTEMBER 2023



School of Management and Labor Relations



EDUCATION AND EMPLOYMENT RESEARCH CENTER

Communication,
Collaboration, Connection:
How Faculty and Advisors
Work Together in IT Programs
at Ivy Tech Community College

Sam Scovill, Danette Coughlan, Renee Edwards, and Michelle Van Noy

SEPTEMBER 2023

About

Sam Scovill is a researcher at the Education and Employment Research at Rutgers University.

Danette Coughlan is the department chair at the School of Information Technology at Ivy Tech Community College, Evansville, IN.

Renee Edwards is the assistant director of program implementation at the Heldrich Center for Workforce Development at Rutgers University.

Michelle Van Noy is the director of the Education and Employment Research Center at Rutgers University.

Acknowledgments

The authors would like to thank the many people who contributed to this paper. We appreciate the research partnership with William Worden, Matthew Cloud, and Danette Coughlan of Ivy Tech, who are exceptional research collaborators. We appreciate the experiences and perspectives of the Ivy Tech faculty and advisors who generously shared their views through participation in surveys and interviews. We would also like to thank Elizabeth Meza for her thoughtful comments and feedback on the paper. At EERC, Victoria Coty and Tracy Cangiano skillfully provided research support through various phases of the project, Angel Butts of The Word Angel, LLC provided excellent editorial assistance, and Jade Zack provided graphic design. The authors are solely responsible for any errors.

This material is based upon work supported by the National Science Foundation under Grant No. 180143.

Contents

Introduction	1
Background	2
Ivy Tech Community College	4
Data & Methods	5
Findings	6
Conclusions & Recommendations	12
Methodological Appendix	14
Ivy Tech Faculty Collaboration	14
SoIT Faculty and Advisor Interview Data	14
Advisor Survey Data	14
Faculty Survey Data	15
References	16

Introduction

Community college students rely on information they receive from their educational institution to guide their education and career decision-making. While students use a variety of sources of institutional information when making decisions about educational paths and ultimately their careers, higher education faculty and advisors serve a critical information provision role for students. According to D'Amico et al. (2019), two of the three most prevalent sources of information for career decision-making by community college students are instructors and advisors. Similarly, in research on community college information technology students, over half relied on advisors or instructors when making decisions about their program or career (Scovill, Peterson, Edwards, & Van Noy, 2023). On-campus relationships also act as important information sources for community college students regarding policies and procedures (Rucks-Ahidiana & Bork, 2020). Given the importance of these relationships to students, how colleges structure the way faculty and advisors work together to guide students in their decision-making can be a crucial element in their success. This paper examines the working relationship between faculty and advisors providing guidance to students in the information technology programs at Ivy Tech Community College.

Background

Advising is an essential experience for students during their time in higher education. Institutional-based resources are an important source of information for students when they are making decisions about their programs (D'Amico et al., 2019; Rucks-Ahidiana & Bork, 2020; Kopko et al., 2018). In their study of the use of institutional-based resources, Kopko et al. (2018) found that students frequently focused on their experiences using both academic and career advising at their community college; other resources included course planning software, program maps, course catalogues, and the college website. Another study found that faculty advising can both increase persistence in education as well as boost student grades (Williamson, Goosen, & Gonzalez, 2014). These findings echo those of Karp (2011), who posited that significant relationships between faculty and students could impact persistence because they can lead to a sense of belonging that, in turn, helps students become more secure with their college environment. This also can increase a student's willingness to seek out information related to their education (Karp, 2011).

For STEM students, specifically, faculty mentoring can help students choose their majors and help support them so that they remain in a STEM field (Figueroa et al., 2017). However, according to DeAngelo et al. (2016), the teaching loads and high faculty-student ratios at community colleges make it challenging for faculty to take on mentoring roles. One solution to this dilemma is for the institution to signal to faculty members that such mentorship is a priority by providing release time to allow them to turn their attention to that important role (Petrucci & Rivera-Figuero, 2022). Alternatively, Walla Walla Community College signals its dedication to advising by providing advising certification to faculty (Center for Community College Student Engagement, 2018).

Colleges vary significantly in how their faculty operate as advisors, employing various advising models. According to Raskin (1979) there is no best advising system, and it is up to each institution to specify how faculty will advise students. In 2011, a national survey from the National Academic Advising Association (NACADA) found that most institutions do not use a specific advising model; rather, the model chosen by institutions tends to be related to its size (Ledwith, 2014; National Academic Advising Association, 2011). According to the survey, large institutions often use a "self-contained" model, while other institutions such as private colleges are more likely to use a "shared split model" (Ledwith, 2014; National Academic Advising Association, 2011). The "shared split model" is a more collaborative one whereby faculty and advisors work together to advise students. In the "self-contained" model, faculty appear to be less involved in advisement; instead, students rely on centrally located professional advisors (Ledwith, 2014). In some schools, advising responsibilities are built into faculty contracts (Center for Community College Student Engagement, 2018). Full-time faculty are more likely than part-time faculty to take on advising, whether formal or informal, as part of their role (Center for Community College Student Engagement, 2018).

In a 2018 study, the Center for Community College Student Engagement provides examples of different models for advising. At one school advising is required for each student to register, and students are only advised by faculty members in their programs of study. At Community College of Philadelphia, faculty assist with drop-in

advising because the school has full-time advisors to engage with students. Walla Walla Community College takes a collaborative approach between faculty and advisors to support students whereby students work with professional advisors prior to choosing a pathway, at which point they become paired with a faculty advisor (Center for Community College Student Engagement, 2018).

Students at community colleges suffer when faculty are overburdened – when heavy teaching loads pair with high advising loads (Center for Community College Student Engagement, 2018). This dilemma points to the need for approaches that better support students by leveraging the advising and mentoring strengths of both faculty and academic advisors. Faculty offer particular expertise in the areas of discipline and course content while advisors offer special knowledge of things like transfer requirements, educational pathways, and other procedures (Williamson et al., 2014). By working together, faculty and advisors can combine their unique perspectives to advise a student more fully and holistically.

Despite the importance of both faculty and advisors in guiding students, traditional approaches to advising have not always been clear about how they are to work together. For example, according to the NACADA 2011 survey, advisors within some institutions advise undecided and exploratory students whereas faculty provide guidance on degree information. Each has a distinct role, but it is not clear how they may (or may not) work collaboratively to support students under this "shared split model" of advising (National Academic Advising Association, 2011). Some community colleges have begun to change their approach to advising to promote communication between advisors and faculty with the goal of ensuring that everyone has accurate and up-to-date information on programs and programmatic requirements. These efforts often take place in the context of customizing advising to broad fields of study, a practice commonly integrated into reform efforts such as guided pathways.

To understand how faculty and advisors can work together in the context of a particular field of study, this paper examines how Ivy Tech's School of Information Technology (SoIT) found ways to cultivate communication between advisors and faculty members on various campuses. Despite differences in campus sizes, regions, student supports, and local employment opportunities, these stakeholders at Ivy Tech were able to engage students in information technology programs, guiding them through their education and career paths.¹ In what follows we will describe the Ivy Tech Community College context, present our data and methods, and then present our findings on how Ivy Tech's School of IT advisors and faculty collaborated to support students.

This paper is part of a larger NSF-funded project on student decision-making in the Schools of IT (SoIT) at Ivy Tech Community College. We provide contextual information to inform Ivy Tech as well as practitioners in general about practices at SoIT and how they impact and inform student decision-making in SoIT programs.

Ivy Tech Community College

Ivy Tech is the only community college in the state of Indiana, but its programming is offered across 19 campuses throughout the state.² Vocational Technical College was created by the Indiana General Assembly in 1963 to provide workforce education to those who chose not to complete school at a traditional college or university. The Ivy Tech regions were chosen to coincide with Purdue University and Indiana University (IU) campus locations for co-location purposes. The original plan was for Ivy Tech courses to be delivered in existing public education and business structures, but as interest in the college's programming grew, so did its need for its own physical campus (Gaus, 1990). Now known as Ivy Tech Community College, the institution has become the largest statewide community college system in the United States to be accredited as a single entity (Ivy Tech Community College, n.d.).

While Ivy Tech remains the statewide community college in Indiana, its many campus designations have changed over the years. In 2016, a new president allowed each campus to focus more fully on engagement with its local community (Holden, 2017).³ This restructuring also introduced categories or campus designations: *C*-1, *C*-2, and C-3. These campus designations were based on service area population, employment base, enrollment, and completion rates and reflected the levels of funding, budget, and staffing awarded to campuses. C-1 campuses roughly translated to larger campuses, C-2 to mid-sized campuses, and C-3 to smaller campuses (Holden, 2017). C-2 or C-3 campuses could grow into C-1 or C-2 designations, respectively, as they served their communities and increased enrollment and completion rates (Holden, 2017). During our data collection, there were 8 C-1 campuses, 5 C-2 campuses, and 5 C-3 campuses. Throughout the paper we refer to campuses by their campus designation rather than by campus name to highlight campus-size contrasts and to ensure anonymity to our research participants.

² At the time of our data collection there were 18 campuses.

The Ivy Tech Community College State Board of Trustees appointed Dr. Susan Ellspermann, former Lt. Governor of Indiana, as president of Ivy Tech Community College in May 2016. She began the position on July 1, 2016 (Ober, 2016). Before her tenure, the college had attempted to cut costs by consolidating executive posts between campuses. Dr. Ellspermann reinstated individual executive positions to each region.

Data & Methods

This paper brings together data collected from various stakeholders at Ivy Tech's School of Information Technology (SoIT). We present data from interviews with SoIT chairs and faculty conducted internally by Ivy Tech faculty members beginning in Fall 2019 through early summer 2020 (N=41), data from a survey distributed to SoIT advisors and completed in the summer of 2022 (N=17), and data from a survey of SoIT faculty members completed in Spring 2021 (N=27). These data points represent snapshots in time as well as differing perspectives on campus practices at SoIT. The longitudinal element of this data reveals changes in campus practices over time. For a more detailed description of data and methods, see the Methodological Appendix.

Based on the findings from the 2011 NACADA National Survey, we expected campus designation would impact advising practices due to the differential distribution of resources and thus create variance in the student experience across campuses. However, what we found was that both the challenges students faced and the ways in which they were advised were quite similar across campuses. In what follows, we first explain, from the perspective of advisors and faculty, SoIT students' most common misconceptions and questions. We then detail how advising practices in Ivy Tech's SoIT have shifted over time and how collaboration and communication have increased. We conclude with a discussion of how on-campus events can increase lines of collaboration and communication and other suggestions for practice.

Findings

Across campuses, faculty and advisors provided guidance to students on all the programs that fall under the umbrella of IT, helping to dispel students' confusion about what a computer science degree really is.

During interviews, faculty and advisors were asked what questions they commonly received from students and what misperceptions students had about their programs. One of the advising challenges both faculty and advisors faced was confusion among students about what computer science is and what other programmatic options were available. They said many students—especially those who had just graduated from high school—came to SoIT believing they were interested in computer science only to find out that high school computer science courses are not necessarily aligned with a computer science degree. They believed it was the responsibility of faculty and advisors to guide those students to a program that would be a better fit for their skills and interests. According to one advisor,

I think they [students] think of [computer science] as more of a general type of degree. There's a misunderstanding what that degree is, and it's usually they're actually wanting something else after we talk a little bit more and get more into detail.

Faculty and advisors asked questions and gathered more information from the students to help guide them onto a pathway. One faculty member explained,

It's more of a statement – "well, I want to work with computers." So, then it's like, "okay, so like, what do you like to do with computers?" And I'll just get a good overview. A lot will say, "well, I like to play video games." Or "I helped my brother build a computer a couple of years ago." "Oh, okay. So, what was that experience like when you were building it?" So really just digging down to, "what is it [that you like] about computers?" Sometimes it's, "oh, I want to work with computers because it's the future." "Yep, you're 100 percent right about that, but we need to try and kind of narrow that down a little bit."

There are many programmatic options within SoIT, so faculty and advisors need to remain up-to-date relative to program requirements help students navigate them. Another faculty member said many students do not necessarily know what some of the program options are:

Students often do not know anything about our majors. Many have heard of computer science and IT support; more are now familiar with cybersecurity and software development. Most do not know our Informatics AAS is interdisciplinary. Very few people know what server administration is.

Within SoIT, there are currently eight different programs, which makes it difficult for students to understand which might be the best fit for their skills and goals. Advising, then, is incredibly important. Faculty and advisors

can help students navigate these various pathways, but they must work together so everyone is on the same page with regard to every program option and its requirements.

Advisors and faculty provided distinct, but often overlapping and related, information to students; this makes communication key to ensuring that students receive consistent and accurate information.

During the early interviews with faculty and advisors in 2019, respondents on some campuses mentioned that faculty supplemented the information that advisors provided to students about programs and careers. For example, on one campus, faculty stepped in to help students figure out which programmatic pathway would be the best fit for their skills and interests. Advisors and faculty members covered different types of information needs for students: advisors tended to provide more academic-related advice to students whereas faculty tended to be the go-to for career advice given their experience in the field. Full-time faculty, and especially department chairs, did the heavy lifting for the advising of students, much of which occurred in the classroom.

One advisor mentioned using a tool called Indiana Career Explorer, which helps students look at potential careers they might pursue:

[When advising students], we'll also talk about the Indiana Career Explorer – or ICE, for short – we'll go over their results from that, and again, just in general, talk about their likes, dislikes, and interests. And then just really put into perspective, "What do you see yourself doing in the next five or seven years?" Then, "Fast forward to 20 years. Is this something that you can see yourself retiring through?" So, we kind of take it step by step, stage by stage in life. It's kind of hard because we're living here in the moment, but we do have a lot of futuristic thinkers out there that like to think, "okay, retirement" – which is a wonderful thing to think about.

So, while students typically are referred to faculty or career coaches to discuss career options, advisors also have a role in guiding students through this process. ICE is one example of a tool that can help advisors when they are tasked with supporting students in deciding on a particular program pathway. Such information sources are critical for students at different decision-making points.

Over time, advising in Ivy Tech's SoIT has transitioned from a hand-off model to a more collaborative advising practice whereby faculty and advisors work together throughout a student's enrollment.

Integral to Ivy Tech's SoIT is a requirement that faculty dedicate eight hours per week to student advising. This practice has been vital to advising for as long as our research partners have been at Ivy Tech (over 20 years). Around the time the first interviews were occurring in 2019, the advising model was in transition. The new advising model, which was introduced at Ivy Tech in Spring 2018, had new requirements that increased faculty and advisor collaboration and communication. Advisors were assigned by program area, which resulted in

Five advisors said they rarely advised students on careers, and four said they advised on careers once or twice per semester. By contrast, 14 advisors said that they advised on academics 1 to more than 4 times per semester.

IT-specific advisors. Another change was that after students' first meeting with an advisor, they were assigned a faculty advisor to work with based on their program of study. The new model also had requirements that increased faculty and advisor collaboration; for example, advisors were required to attend department meetings and also have ongoing meetings with faculty and leadership. According to the messaging from Ivy Tech Central, faculty and advisors had unique and overlapping roles to fill to support students.

Prior to the 2018 transition, the school had a hand-off method of advising students whereby an advisor would start working with a student, then a faculty member would take over advising sometime after (typically after 15 credits). It was apparent from the interview data that within the SoIT, much of the advising work tended to fall on each campus's department chair. Many campuses were beginning to transition to more collaborative advising between faculty members and advisors at the time of the interviews, with more faculty – beyond the chair – taking on some advising responsibilities, especially relative to pathways/careers. Students typically went to advisors for academic-related questions and were referred to faculty and career centers for more specific pathway/career-related questions. Advising happened occasionally during special on-campus advising events and, in the classroom, and for online students, many campuses had a remote contact infrastructure for advising that included exchanging emails with students as well as phone and online advising appointments.

In 2021, faculty acknowledged that advising practices had changed over the previous few years and noted an increase in faculty advising opportunities and responsibilities. One faculty member explained that students were seen by the advising center and simultaneously assigned a faculty advisor. Because of this, the responsibility fell on faculty to create a full academic plan for all students who did not have one in place with the advising center.

Students also appeared to be seeing faculty advisors sooner in their academic careers than they had under the hand-off method. Instead of seeing them after the 15-credit hand-off, 61 percent of faculty said students are seeing them at 0–12 credits. About a third of faculty (32%) said that they started seeing students for advising at 13–24 credits, and only two (7%) said that they did not see students until 25–60 credits. Most faculty (81%) said they advised students on academics and careers both inside and outside of the classroom.

Another transition the Ivy Tech schools were making at the time of the interviews was having specific advisors assigned to SoIT. At this time, there was also increased collaboration between faculty and advisors. Of advisors surveyed, 63 percent said that advisors and faculty worked together to advise students from the start of their academic career through graduation. Another 25 percent described a different collaborative form of advising whereby advisors worked with students for a period (e.g., the first year) and then faculty and advisors worked together to advise the student through graduation—so rather than a hand-off, there was a transition to collaborative advising. Every advisor surveyed said they worked closely with faculty to advise students and tended to advise students more on academics than on careers. They referred students to career professionals (e.g., career coaches and faculty) for career advice.

The new advising model and the pandemic increased collaboration between faculty and advisors over time.

The major solution to the challenges campuses have faced with advising has been to work on strategies to create a united front among faculty and advisors within an advising system that enhances that collaboration. During the 2019 interviews, there were some clear patterns and practices regarding how faculty and advisors were beginning to work together to advise students. Respondents on some, but not all, campuses mentioned having IT-specific advisors, and at least five campuses were still using the "hand-off" method. A staff member on one campus explained that there was an emphasis on faculty and advisors working together to advise students, but that cooperation did not always work or fully come together. That respondent, along with others, mentioned communication challenges. Some participants expressed dissatisfaction with the level of communication between SoIT faculty and advisors, and some called for more open lines of communication.

In follow-up surveys of faculty (in 2021) and advisors (in 2022), we observe an increase in communication and collaboration. Our follow-up surveys indicate that by 2022, only one campus was still using the hand-off method. All schools were taking a more collaborative approach. Fully 100 percent of advisors said they were working collaboratively with faculty to advise students. The reported impetus for this shift was a move to more constant (often virtual) communication throughout the pandemic.

The 2021 faculty survey focused specifically on how the relationship between faculty and advisors had changed since the start of the pandemic. Fourteen of the twenty-six faculty (54%) said that their work with advisors had changed since the beginning of the pandemic. Twenty-one (81%) said that they had attended meetings with advisors since the start of the pandemic, with fourteen (54%) describing these as regular meetings. Nine faculty members (35%) said that the number of meetings had increased since the start of the pandemic.

Faculty and advising staff had to change the way they worked together to effectively advise and support students during the pandemic. Nearly a quarter of faculty respondents said that student needs were different after the start of the pandemic. Some faculty respondents (12%) said that the issues students discuss with advisors had changed, and one faculty respondent noted that students shared different information than they used to. A couple of faculty members reported communication changed for other reasons, with one citing the move to virtual meetings and another explaining that there were fewer informal meetings with advising staff.

Communication between faculty and advisors sometimes took the form of faculty coaching IT-specific advisors on how the various SoIT programs operate and what sorts of classes students should pair.

Faculty also explained that they coached advisors on programmatic requirements and on how students should pair courses together as they registered for classes. This type of coaching had been continuous over the years with changes that have occurred. On many campuses, in 2019, advisors were beginning to better understand common student questions and had growing awareness of IT programs. This was largely in part because of intentional communication between faculty and advisors. When asked about how awareness has changed one faculty member explained,

Because we've talked, and we continue to talk, and we continue to develop a relationship together where we have a better understanding of what is going on between – because we have a tendency to silo ourselves. And by us communicating like that, we're able to come out of our silo a little bit, and say, "Oh, yeah, I could see where you would have trouble grasping that without knowing why we do this, and, vice versa, why they need to do this." "Oh, I can get that." So, you get a better working relationship when you start to communicate really well with them. And that's what I loved about [an advisor] is, when she first took over, she was like, "Can I come talk to you?" And I'm like, "Shoot, yes, let's talk about it." And we've had a good relationship ever since.

This faculty member highlights how faculty and advisors can sometimes operate independently of one another in their "silos." This type of division was not conducive to relationship building, but increased communication with a new advising staff member led to improved outcomes.

As of the most recent round of surveys, faculty and advisors across all campuses reported meeting to discuss SoIT programs; however, how often they met and how this communication occurred varied. Respondents on most campuses indicated that faculty and advisors met at least once per year, while those on two campuses indicated the two groups met less often at their schools. In 2021, one faculty member said the SoIT-specific advisor on their campus met with a representative of their department every other week. Some advisors and faculty members communicated via email, others via in-person or virtual meetings.

Although communication types varied, respondents indicated the structure of their communications were similar: Faculty spoke with, coached, and supported advisors (especially recent hires) to get them up to speed with or inform them of changes to the SoIT programs. Aside from more structured information-dissemination meetings, advisors sometimes attended events or other meetings about the SoIT programs. One advisor discussed attending staff, faculty, and advisory board meetings to stay up-to-date with changes and get insider knowledge about SoIT programs. In 2019, faculty and advisors discussed the need for more communication, and in 2021 and 2022, this increase in communication was evident. In 2021, half of our faculty respondents reported that advisors had more knowledge of the IT programs than they had previously, and this was attributed to more communication between faculty and advisors.

On-campus events provided an opportunity for connection between faculty, advisors, and students.

Another way to enhance collaboration, communication, and connection between faculty, advisors, and students is for campuses to hold on-campus advising events. These types of events have the potential to increase a student's informational network by giving them an opportunity to meet more informally with faculty and advisors. Below we explain some of the advising events that SoIT campuses held to increase student engagement with advisors and faculty.

One event faculty and advisors reported was successful was a casual "donuts and coffee with advisors" session. Another campus held a pop-in registration event with prizes and food and an "arena-like" atmosphere. This

made the registration experience more fun and helped students feel more supported in the process. Staff at one campus explained that in the past, they held an event that was not well attended, but they were thinking about doing more events in the future such as a pre-semester pizza party. Another campus reported having an activities coordinator who had organized events such as hack-a-thons and career skills workshops. Events on other campuses included in-classroom advising events and an event where advisors ordered pizza for students and provided space for them to ask questions about courses, registration, and more.

With the onset of the COVID-19 pandemic in 2020, on-campus life came to a halt, and activities were moved to virtual spaces. However, with many institutions returning to in-person instruction, campuses now have the opportunity to resume hosting events to support students. Advising events can provide opportunities for students to ask questions and get to know their faculty and advisors in a less formal atmosphere than the classroom or a formal advising appointment. Events that center around food seem particularly popular and successful.

Conclusions & Recommendations

Students come to faculty and advisors for guidance and information regarding their programmatic and career decisions. They often are confused about what the term "computer science" entails and know little about the many programmatic options available to them within Ivy Tech's SoIT. Faculty and advisors work together to support students in their decision-making process, but how that looks has changed over time. In 2019, there was a hand-off method between advisors and faculty, but that model gradually shifted to one that involves faculty and advisors working collaboratively to advise students. This new model was supported by an increase in collaboration and communication during the course of the pandemic. Out of necessity to support students, faculty and advisors had to communicate more. In what follows, we provide recommendations for campus advising practices.

Whenever possible, assign advisors to specialized areas/majors. If advisors are assigned to specific fields, like IT or nursing for example, then they can learn all the requirements for those specific fields of study and associated pathways rather than operate with a general understanding of all fields of study and potential pathways. Our data show that students need guidance on the many different subfields within IT, and specialized IT advisors are needed to learn these specializations and help guide students on the right pathway.

Regular and consistent communication between faculty and advisors is imperative to provide accurate and updated information to students. Our data suggest that regular meetings between faculty and advisors are important, and that even ad hoc meetings are sufficient for faculty and advisors to help them get on the same page about programmatic changes and requirements.

Clarifying the roles of both the advisor and faculty member is important to address students' diverse needs. Since students go to faculty and advisors for various kinds of information, a system where faculty and advisors work together helps to ensure that students will get both their programmatic and career information needs met. Our data demonstrate that students do not all share the same knowledge about program possibilities and may be at different transition points when they enroll in a program. Therefore, students who come to faculty or advisors knowing what they would like to major in need to be advised differently than students who are undecided. This means it is important to establish the roles and responsibilities of the IT advisor and faculty advisor in the light of each student's particular position and level of program knowledge.

Events combining faculty and advisors can increase students' ability to seek information and build institutional networks. Departments should hold on-campus events to promote connections between faculty and advisors and to help students build their institutional networks. This will help students understand who they can connect with for information when they are making programmatic and career decisions. Events of this type will also continue to build faculty-advisor relationships and increase collaboration and communication.

As colleges work to build systems that better prepare students for progression along pathways to careers, these strategies can help strengthen their transitions. The advising resources available to students can be important

sources information to help them navigate their initial entry into the IT field, their selection of a particular IT field, and their transition to the workplace or further education. The model for advising at Ivy Tech may offer a helpful approach for other colleges and their technical programs to consider in terms of defining advisory roles and finding ways to support the development of staff in these roles. Further research is needed to better document the ways that this type of advising model can impact students and their pathways. However, the findings from this research suggest that this model can be a useful way for colleges to structure the advising support they provide to technical students in navigating their program and career options.

Methodological Appendix

Ivy Tech Faculty Collaboration

Three Ivy Tech IT faculty members were integral to the data collection for this paper and the project in general. Their involvement was most impactful in conducting the site visits to various campuses across the state to interview IT faculty and chairs. All three had participated in leadership capacities on state-level program committees for SoIT. Because of this, they had relationships with advisors and other Ivy Tech faculty and a granular understanding of the eight SoIT programs. All were also instrumental in shaping the ever-changing curricula and policies and served as information conduits to EERC researchers. ⁵

SoIT Faculty and Advisor Interview Data

Three research faculty members interviewed SoIT faculty and advisors on six campuses to cover the college's (then) eighteen campuses from September 2019 through early summer 2020. Initial contacts were made with the local program/department chairs who identified the campus SoIT advisor(s). Interviewees were asked to volunteer for approximately 45-minute interviews. Just over half of the interviews were conducted in person during site visits. After the onset of the COVID-19 pandemic, the remaining interviews were conducted via Zoom. Interviews were recorded either with a handheld recorder or through Zoom and later transcribed by research assistants or Otter.ai transcription software. Templates were populated by several researchers from the Education & Employment Research Center (EERC) and the three faculty, using the transcriptions/notes.⁶

Advisor Survey Data

IT Advisors were surveyed during the summer of 2022. We received 17 responses to the survey for a response rate of 54 percent. One of our faculty research partners was instrumental in the collection of this survey data with both the identification of the sample as well as survey administration. Our faculty partner reached out to the chairs/Deans at several campuses to identify the SoIT advisors. She also requested information at a statewide Directors of Advising meeting held in June 2022. She reached out to a couple of directors that she knew were not at that particular meeting, but overall, the directors tended to reach out to her directly. We launched the survey on July 13, 2022, and sent it to 31 advisors from 19 campuses and 3 sites. From June to July, we received one message that the email was undeliverable because that advisor had left their post at Ivy Tech. The survey

Faculty from Ivy Tech were chosen to conduct the campus review interviews based a number of factors. One faculty member had been the primary administrator for a previous Department of Labor TAACCCT grant for the college and the School of IT (SoIT) and had worked with the external evaluator, the EERC. The other two faculty had served as department chairs on their respective campuses and implemented the TAACCCT grant locally. This work on the TAACCCT grant motivated the faculty to want to get more involved in the research process to understand what issues were facing Ivy Tech IT students.

Research faculty and EERC researchers collaborated to create the interview protocol and a template for mapping the themes expected to emerge during the analysis of the qualitative data. These templates would also function to make the response data comparable across campuses, regardless of factors such as campus designation, SoIT student population, programs offered locally, etc.

asked questions about the participants' roles, their experience with advising both in general and on their specific campus, how many students they advised every semester both in IT and beyond, and to select the advising model that best applied to their campus. They were also asked about their collaboration with faculty members and what they advised students on (academics vs. career), as well as several questions about how the COVID-19 pandemic impacted students and the advising experience. Data from the survey were cleaned and analyzed by EERC researchers using Stata statistical software.

Faculty Survey Data

Ivy Tech IT faculty were surveyed during the spring of 2021. We received 27 responses for a response rate of about 51 percent. The same research partner who worked with us on the campus review interviews and the advisor survey also helped us conduct this survey. She had access to a list of full-time IT faculty created by the statewide program chairs. We sent the survey to 53 faculty members from 18 campuses and 1 site on May 10, 2021. Follow-up emails were sent to faculty periodically to remind them to take the survey. The survey had questions on faculty members' role and how advising worked on their campus, as well as whether it had changed recently and, if so, what those changes looked like. We asked questions about the faculty advising role, when they typically began to see students, what they advised students about (e.g., taking 8 versus 16-week courses). They were asked about the time they had to dedicate to advising and whether they thought they had enough time to effectively advise students. The survey asked about teaching responsibilities and then concluded with questions about students' experiences with the COVID-19 pandemic. These data were then cleaned and analyzed using Stata statistical software.

References

- Carlstrom, A. H., & Miller, M. A. (Eds.). (2013). 2011 NACADA national survey of academic advising (Monograph No. 25). Manhattan, KS: National Academic Advising Association. Retrieved from https://nacada.ksu.edu/Resources/Clearinghouse/View-Articles/2011-NACADA-National-Survey.aspx
- Center for Community College Student Engagement. (2018). Show me the way: The power of advising in community colleges. Austin, TX: The University of Texas at Austin, College of Education, Department of Educational Leadership and Policy, Program in Higher Education Leadership.
- D'Amico, M. M., Gonzalez Canche, M. S., Rios-Aguilar, C., & Salas, S. (2019). An exploration of college and career alignment for community college students. *The Review of Higher Education, 43*(1), 53–83. https://doi.org/10.1353/rhe.2019.0090
- DeAngelo, L., Mason, J., & Winters, D. (2016). Faculty engagement in mentoring undergraduate students: How institutional environments regulate and promote extra-role behavior. *Innovation in Higher Education*, 41(4), 317–332. https://doi.org/10.1007/s10755-015-9350-7
- Figueroa, T., Cobian, K. P., Hurtado, S., & Eagen, K. (2017, March). *Trends & pathways for STEM major aspirants:*A look at national data [PowerPoint Presentation]. Understanding Interventions. https://slidetodoc.com/trends-pathways-for-stem-major-aspirants-a-look/
- Gaus, L.S. (1990). Ivy Tech: The First Twenty-Five Years. The Ivy Tech Foundation.
- Holden, M. (2017, June 20). Ellspermann shakes up Ivy Tech's structure to reward growing campuses. *Journal & Courier*. https://www.jconline.com/story/news/college/2017/06/20/ivy-tech-president-put-community-back-into-community-college/411999001/
- Ivy Tech Community College. (n.d.). *About Ivy Tech*. Retrieved February 22, 2023, from https://www.ivytech.edu/about-ivy-tech/
- Karp, M. M. (2011). Toward a new understanding of non-academic support: Four mechanisms encouraging positive student outcomes in the community college [CCRC Working Paper No. 28]. New York: Community College Research Center, Teacher's College, Columbia University.
- Kopko, E., Ramos, M., & Karp, M. (2018). Why do some community college students use institutional resources differently than others in program selection and planning? [CCRC Working Paper No. 101]. New York: Community College Research Center, Teacher's College, Columbia University.
- Ledwith, K. (2014). Academic advising and career services: A collaborative approach. *New Directions for Student Services*, *148*, 49–63.

- National Academic Advising Association. (2011). *NACADA national survey of academic advising*. Retrieved from http://www.nacada.ksu.edu/Resources/Clearinghouse/View-Articles/2011-NACADA-National-Survey.aspx
- Ober, A. (2016, May 19). Ellspermann pick a work force play. *Inside Indiana Business*. https://www.insideindianabusiness.com/articles/ellspermann-to-take-helm-at-ivy-tech
- Petrucci, C., & Rivera-Figuero, A. (2022). STEM faculty mentoring and advising at an urban Hispanic-serving community college. *Community College Journal of Research and Practice*. https://doi.org/10.1080/106689 26.2022.2056549
- Raskin, M. (1979). Critical issue: Faculty advising [Issues and Trends in American Education]. *Peabody Journal of Education*, 56(2).
- Rucks-Ahidiana, Z., & Bork, R. H. (2020). How relationships support and inform the transition to community college. *Research in Higher Education*, 61(5), 588–602. https://doi.org/10.1007/s11162-020-09601-z
- Scovill, S., Peterson, E., Edwards, R. & Van Noy, M. (2023). *Community, computer, and campus: Information sources for community college student decision-making about IT programs and careers.* Piscataway, NJ: Education and Employment Research Center.
- Williamson, L. V., Goosen, R. A., & Gonzalez, Jr., G. F. (2014, Fall). Faculty advising to support student learning. *Journal of Developmental Education*, 38(1), 20.

About

The Education and Employment Research Center

Rutgers' Education and Employment Research Center (EERC) is housed within the School of Management and Labor Relations. EERC conducts research and evaluation on programs and policies at the intersection of education and employment. Our work strives to improve policy and practice so that institutions may provide educational programs and pathways that ensure individuals obtain the education needed for success in the workplace, and employers have a skilled workforce to meet their human resource needs. For more information on our mission and current research, visit smlr.rutgers.edu/eerc.

EERC Areas of Focus

Community College Innovation



Student Choices and Pathways



STEM and Technician Education



Noncredit Education and Non-Degree Credentials



Education and Labor Market Connections



Rutgers' School of Management and Labor Relations

Rutgers' School of Management and Labor Relations (SMLR) is the leading source of expertise on the world of work, building effective and sustainable organizations, and the changing employment relationship. The school is comprised of two departments—one focused on all aspects of strategic human resource management and the other dedicated to the social science specialties related to labor studies and employment relations. In addition, SMLR provides many continuing education and certificate programs taught by world-class researchers and expert practitioners. For more information, visit smlr.rutgers.edu.

National Science Foundation

The U.S. National Science Foundation (NSF) is an independent federal agency that supports fundamental research and education across all fields of science and engineering. In Fiscal Year 2022, its budget is \$8.8 billion. NSF funds research in all 50 states through grants to nearly 2,000 colleges, universities and other institutions. Each year, NSF receives more than 50,000 competitive proposals for funding and makes about 12,000 new funding awards.

With a focus on two-year Institutions of Higher Education (IHEs), the Advanced Technological Education (ATE) program supports the education of technicians for the high-technology fields that drive our nation's economy. The program involves partnerships between academic institutions (grades 7-12, IHEs), industry, and economic development agencies to promote improvement in the education of science and engineering technicians at the undergraduate and secondary institution school levels. The ATE program supports curriculum development; professional development of college faculty and secondary school teachers; career pathways; and other activities.





Rutgers Education and Employment Research Center

Janice H. Levin Building
94 Rockafeller Road
Piscataway, New Jersey 0885
smlr.rutgers.edu/eerc | Email: eerc@smlr.rutgers.edu

