

2023

Navigating the Adoption of Interprofessional Education as a Performance Standard in Dietetics Education

Paige Whitney

University of Colorado Colorado Springs, pwhitney@uccs.edu

Mary Ann Kluge

University of Colorado at Colorado Springs, mkluge@uccs.edu

Follow this and additional works at: <https://ecommons.udayton.edu/jde>



Part of the [Dietetics and Clinical Nutrition Commons](#), [Educational Assessment, Evaluation, and Research Commons](#), [Educational Leadership Commons](#), [Food Studies Commons](#), [Higher Education Commons](#), [Other Nutrition Commons](#), and the [Public Health Education and Promotion Commons](#)

Recommended Citation

Whitney, Paige and Kluge, Mary Ann (2023) "Navigating the Adoption of Interprofessional Education as a Performance Standard in Dietetics Education," *Journal of Dietetic Education: Vol. 1: Iss. 1, Article 3*. Available at: <https://ecommons.udayton.edu/jde/vol1/iss1/3>

This Original Research is brought to you for free and open access by the School of Education and Health Sciences at eCommons. It has been accepted for inclusion in Journal of Dietetic Education by an authorized editor of eCommons. For more information, please contact mschlangen1@udayton.edu, ecommons@udayton.edu.

Navigating the Adoption of Interprofessional Education as a Performance Standard in Graduate Dietetics Education

Paige Whitney, University of Colorado at Colorado Springs

Mary Ann Kluge, University of Colorado at Colorado Springs

ABSTRACT

The purpose of this collective case study was to explore the diffusion of interprofessional education (IPE) in response to specific Future Education Model (FEM) Graduate Program accreditation standards and performance indicators. Data were collected via semi-structured interviews with a purposive sample of 12 FEM program directors from geographically diverse US states. Website and document review were triangulated with the interview data, and Rogers' Diffusion of Innovations (DOI) was used as a theoretical framework to add dimension to the study. Three themes emerged from analysis: 1) Accreditation standards are not the driving force of IPE; 2) Program Directors can serve as "IPE Navigators;" and, 3) IPE is possible with supportive partners. This research is timely as the minimum degree requirements to sit for the registration examination for dietitians will be a graduate degree beginning in 2024. This shift has prompted several institutions of higher education to adopt ACEND FEM Graduate Programs. This research shows that having accreditation standards alone may not be enough to diffuse the innovation of IPE, and the gap between perceived value for IPE and how to implement IPE needs to be narrowed by intentional leadership, peer mentoring, and additional resources such as time, templates, toolkits, and training.

Keywords: interprofessional education, accreditation, program directors, nutrition, dietetic

INTRODUCTION

Interprofessional education (IPE) has been recognized as an innovative strategy to help improve population health by training the future workforce to work collaboratively with various types of healthcare disciplines.¹ Operationally defined, IPE occurs when students from two or more professions learn about, from, and with each other to solve complex health problems through curriculum,

simulation, and practice to promote effective collaboration and improve health outcomes.¹ The World Health Organization, CDC, and other health agencies support the adoption and implementation of IPE into institutions of higher education to help stimulate a necessary shift from the current siloed healthcare model to a more collaborative, team-based practice approach commonly referred to as interprofessional collaborative practice

(IPCP).¹⁻⁵ Evidence suggests that the combination of interprofessional education and IPCP can strengthen the current healthcare system by working toward the quadruple aim, a best practice standard that strives to increase patient and client care, improve population health outcomes, reduce the cost of care, and minimize provider burnout.^{1,6,7}

To help diffuse the innovation of IPE and team-based learning, educational experts from various professions came together in 2009 to form the Interprofessional Education Collaborative (IPEC). The mission of IPEC is to work in collaboration with academic institutions to promote, encourage, and support efforts to ensure that future health professionals are ready for interprofessional collaborative practice to improve the safety of individuals and the health of the population.⁵ Knowing that novel ideas such as this take time to adopt and implement, it was important for IPEC to work collaboratively to create shared understanding and mental models around the concepts of IPE. As a result, the collaborative created four core competencies to guide IPE curriculum development across the different disciplines: values and ethics, roles and responsibilities, interprofessional communication, and teams and teamwork. Each of these four core competencies is punctuated with sub-competencies that provide specific and measurable outcomes to further guide the development, implementation, and evaluation of IPE curricula.⁵

Interprofessional Education Accreditation

The purposeful creation of IPEC demonstrates initial efforts to increase IPE implementation into the curriculum of various healthcare professions. However, Zorek and Raehl highlighted that without a mutual mandate for IPE, the healthcare system will be dotted with IPCP ready providers rather than a collective force required to help transform the system.⁸ To answer this call and help unify the implementation of IPE into institutions of

higher education, accrediting bodies from six of the IPE-sponsoring health professions came together to develop the Health Professions Accreditors Collaborative (HPAC) in 2014. In the last nine years, the growth of health professions in the HPAC has paralleled that of IPEC. Today, twenty-three healthcare accrediting organizations are members of the HPAC, including Accreditation Council for Pharmacy Education, Commission on Collegiate Nursing Education, Council on Education for Public Health, American Psychological Association, and Accreditation Council for Education in Nutrition and Dietetics to name a few. The HPACs mission is to stimulate accreditor collaboration to provide consistent guidance to help support institutions to develop, implement, and evaluate IPE learning opportunities to better prepare students in collaborative practice.⁴ As a commitment to the HPAC, all members are required to implement IPE specific accreditation standards to diffuse this innovation and to ensure students increase their understanding of and confidence in interprofessional collaboration.² While there is evidence in the current literature on methods and strategies used to implement IPE into existing health professions curriculum, there is much to be learned about training pre-service professionals on how to work as a team in practice settings to effectively link education to practice.⁹ As Brock et al (2016) states “there is still a significant gap between where we are today and the high functioning teams required for consistently delivering comprehensive, effective, and compassionate care” (p.1).¹⁰

Interprofessional Education in Nutrition and Dietetics

According to the CDC, six out of 10 adults is living with a chronic condition; many of which are caused by lifestyle risk factors such as poor nutrition, lack of physical activity, high stress levels, loneliness, and substance abuse.¹¹ This rise in complex health conditions highlights the need for healthcare providers to help prevent

Table 1. ACEND Competencies and Interprofessional Education Performance Indicators

ACEND Competencies	IPE Performance Indicators
5.2 Applies principles of organization management.	5.2.10: Understands and respects roles and responsibilities of inter professional team members
7.2 Uses effective communication, collaboration and advocacy skills.	7.2.2: Works with and facilitates intraprofessional and interprofessional collaboration.

and treat these conditions. Nutrition and dietetics are critical in both the prevention and treatment space.¹² Moreover, nutrition and dietetics has been actively engaged in promoting and strengthening IPE since 2016 when the profession became a member of IPEC and the Accreditation Council for Education in Nutrition and Dietetics (ACEND) became a new member of HPAC.

These inductions aligned with a comprehensive, multiphase environmental scan performed by ACEND beginning in 2012 to inform and develop future education needs and competencies of nutrition practitioners including registered dietitians (RD) and nutrition and dietetic technicians (NDTR). This assessment process highlighted that future RDs, a profession projected to grow by 7% by 2029,¹³ should be master's prepared rather than the current bachelor's degree requirement. Therefore, beginning in January 2024, the minimum degree requirement to sit for the registration examination for dietitians will be a graduate degree. As a result, ACEND developed and piloted the 2017 Future Education Model Accreditation Standards for Graduate Degree Programs, which have now been updated in the 2022 version.¹⁴

In addition to transitioning to a master's prepared profession, another primary gap identified in the in-depth ACEND needs assessment was that the 2012 Accreditation Standards lacked focus on interprofessional education.¹⁵ Therefore, ACEND strategically included specific IPE performance indicators in the 2017 piloted FEM Graduate Program Accreditation Standards to address this gap. These performance indicators have been maintained in the updated 2022 version of the

FEM Graduate Program Standards and are displayed in Table 1, ACEND Competencies and IPE Performance Indicators. This table highlights the competencies and performance indicators specific to IPE that were created to help address the lack of focus identified in the 2012 Accreditation Standards and to reinforce the profession's commitment to IPE.

Accreditation Standards for healthcare education are used as a guideline to ensure the quality of education given the diversity of higher education institutions, the students they serve, and the resources each institution or program has available.⁸ Although a strong push for interprofessional education (IPE) accreditation standards has started in the US, little research has been done to understand to what extent these policies influence the adoption and implementation of IPE through the lens of program directors, specifically in dietetics education.

Therefore, the purpose of this study was to explore the extent to which program directors of FEM Graduate Programs were motivated to implement and diffuse interprofessional education as a result of the newly created FEM IPE performance indicators. The following research questions were designed to accomplish this purpose:

RQ1: How effective do program directors perceive the IPE performance indicators to be on the adoption and implementation of IPE in accredited FEM programs?

RQ2: What factors have contributed to the diffusion of IPE as an innovation?

Table 2. Diffusion of Innovations Adopter Categories

Category	Percent	Adopter Category Descriptions
Innovators	2.5%	Individuals that launch new ideas and are driven by creating newness which can lead them outside of social circles. These individuals control financial resources, deal well with uncertainty, and act as the gatekeeper to continuously introduce new ideas into a social system.
Early Adopters	13.5%	These individuals are respected by their social circles and are recognized as opinion leaders in a group. Therefore, these individuals help decrease uncertainty of others and often act as a role model to help promote the innovation.
Early Majority	34%	The early majority are vital to the diffusion of an innovation based on their ability to connect the early and late adopters of a social system. These individuals deliberate for some time prior to accepting or rejecting an innovation and are less likely to advocate for an intervention when compared to the early adopters.
Late Majority	34%	These individuals are skeptical of innovations and typically adopt because of necessary financial pressures or the persuasion of peers. These individuals tend to adopt innovations after the average member of a social network has adopted.
Lagers	16%	These individuals are identified by their traditional nature and resistance to change. They have a long innovation-decision process and approach innovations with caution.

Table 2 describes specific characteristics of each adopter category and the estimated percent of a social system that typically makes up each category based on Rogers' Diffusion of Innovations Theory.¹⁹

Given the variability of institutions implementing the FEM Graduate Program, the critical role RDs play within healthcare teams, and the innovation of IPE, it is important to understand the extent to which the newly implemented IPE performance indicators have influenced FEM program directors to focus on the development and implementation of IPE initiatives. This research is timely given the intentional efforts of ACEND to advance the profession of nutrition and dietetics and work to increase the collective readiness for collaboration in the future workforce.

METHODOLOGY

Qualitative collective case study design was selected to guide this research. A collective case study approach is used when the same research questions, from several research sites or multiple programs within a single site are warranted.^{16,17} The analysis of multiple sources of data from multiple sites increases the depth and breadth of the problem under study.¹⁶⁻¹⁸

In this collective case study, each institution functioned as a bound case, allowing for cross case comparison to better understand the adoption of IPE in FEM Graduate Programs. All 12 sites under investigation share common accreditation standards; however, it was assumed that how these standards are interpreted and the context in which they are implemented may vary.

Theoretical Framework

Rogers' Diffusion of Innovations (DOI) is a theoretical framework that helps explain how an innovative idea, concept, or product is adopted over time.¹⁹ This specific study explored how IPE, an innovative concept, is diffused into nutrition and dietetic FEM Graduate Programs. IPE is not new; however, within the last ten years IPE has become a focus and priority of academics, researchers, and policy makers both nationally and internationally.²⁰ This deliberate promotion qualifies IPE as an innovation according to Rogers and therefore, DOI was applied as a

Table 3. Summary of Study Programs

Study ID	IPE	Time Zone	Setting	Size	Public/Private
1	Developing	Central	Urban	Small	Private
2	Developing	Mountain	Rural	Mid	Public
3	Thriving	Eastern	Urban	Large	Private
4	Developing	Central	Rural	Mid	private
5	Developing	Eastern	Urban	Large	Public
6	Developing	Eastern	Urban	Large	Public
7	Thriving	Eastern	Rural	Small	Private
8	Developing	Mountain	Urban	Mid	Public
9	Thriving	Eastern	Urban	Mid	Private
10	Thriving	Eastern	Urban	Large	Public
11	Developing	Mountain	Urban	Large	Public
12	Thriving	Eastern	Urban	Small	Private

Table 3 provides a summary of the study sample. The following cut points were used to distinguish between institution size: small <5,000 students; mid 5,001-14,999; large > 15,000

theoretical framework for this study. The theory highlights five perceived attributes of innovation that are important to consider when understanding rates of adoption: relative advantage, compatibility, complexity, trialability, and observability. Adopter categories, used to describe patterns of adoption, group individuals along a bell curve based on the time it takes them to process the information, develop attitudes towards the innovation, and decide whether or not to adopt an idea. These adopter categories are innovators, early adopters, early majority, late majority, and laggards. Table 2, Diffusion of Innovations Adopter Categories, describes specific characteristics and an estimated percent of a social system that typically makes up each category. The DOI framework identifies diffusion as a social process which makes it an appropriate theory to use to better understand the effectiveness of an education policy.

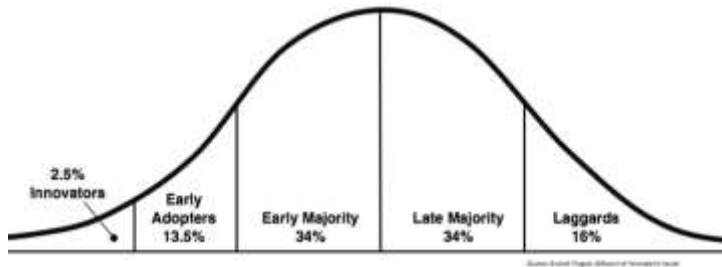
Data Collection

Sample

A purposive sample of program directors from current ACEND Future Education Model (FEM) graduate cohorts, or those programs that are transitioning to the FEM Graduate Program were invited to participate. Program directors were selected because they: 1) are responsible for maintaining program accreditation; 2) are familiar with the accreditation standards including competencies and specific performance indicators; 3) will have worked to develop and map curriculum to meet accreditation standards; 4) can provide insight into the adoption and implementation process of IPE. A total of forty program directors' emails were acquired from the ACEND publicly available FEM accreditation list and individually emailed to participate in the current study. Initially, 9 program directors agreed to participate. Additional follow up emails sent to program directors in geographic regions that were less represented resulted in 3 additional participants. Overall, a 30% response rate was

Table 4. Interview Protocol

1. Tell me a little about (insert university name), your department, and your role
 - a. Program, department, college, university
2. Briefly describe your institutions transition to the Future Graduate Model
 - a. Cohort, year, impression of the new curriculum
3. It is my understanding that in 2017 ACEND implemented IPE standards and/or performance indicators for all their programs. Is this correct?
4. In your opinion, how have the accreditation standards influenced the adoption and implementation of IPE into your FG program, if at all?
5. Using this graphic as a guide, where would you place yourself on this bell curve with respect to IPE adoption in your college? Where would you put your program on the bell curve overall? (annotate via zoom)



6. What factors have contributed to where you are on this bell curve? (WHY)
 - a. Internal vs. external motivation
7. In your opinion, what, if any, advantage does implementing IPE into the curriculum have?
 - a. Relative advantage
8. How consistent, if at all, are the core competencies of IPE with the values of your program/department/college/discipline?
 - a. Compatibility
9. Tell me about your experience implementing IPE into the program- both didactically and in practice.
 - a. Complexity (difficulty/ ease) and triability (how many iterations?)
10. In your opinion, what, if any, tangible results have been seen in students and/or faculty as a result of the IPE accreditation standards?
 - a. Observability
11. On a scale from 1-10, how much to you personally value IPE? How would you rank your program's perceived value in IPE?

recorded with participants from 10 different states in the US. Table 3, Summary of Study Programs, illustrates the study sample, and provides insight into the type and size of school each FEM program included in this study.

Data sources

Interviews. This study was approved by the Institutional Review Board, IBR Protocol 2021-154 and all participants electronically consented prior to qualitative interviews. The interview protocol Table 4, Interview Protocol, was created using primarily open-ended questions intended to get at the why and how

participants adopted IPE. Questions were formulated to elicit the five perceived attributes of innovation and included if/how accreditation standards may have influenced adoption and implementation, where program directors would put themselves and their program on the Diffusion of Innovations Curve, and what factors contributed to this placement. Participants were also asked to rank their own personal value for IPE on a scale of 1-10 and provide rationale.

All participants were interviewed virtually via Zoom and interviews ranged from 30-50 minutes. Each interview was recorded both via Zoom and a handheld recorder. Once the data

were gathered, each recording was uploaded and transcribed initially using Otter AI, and then reviewed and corrected to ensure transcripts were ready for analysis.

Website and Document Review. In addition to interviews, FEM Graduate Program and institutional websites of the 12 participants were analyzed to add depth and breadth to each additional case and to better understand the adoption and implementation of IPE at each institution.²¹ More specifically, language, visuals, and videos associated with each institution and FEM programs were analyzed and triangulated with interview data to add credibility and confidence to the findings.²² Institutional data such as: size, location, and funding model, mission, and vision statements of the institutions were also recorded. In a few cases, program directors voluntarily submitted documents, syllabi, articles, and curriculum maps to better understand IPE at each institution. These documents were added into the analysis process; however, only 6 of the 12 programs shared additional documents. In addition, FEM Graduate Program description, program goals, and additional links connected to the program's main webpage were also analyzed.

Data Analysis

Thematic synthesis was used to help generate salient meaning within and between cases. Data were coded data line by line to generate descriptive themes, and then the theoretical framework was applied to develop analytical themes.²³ These steps were performed in an iterative and ongoing process for each case, and then applied to compare data across cases. The initial codes were inserted into an Excel spreadsheet and given a brief definition to generate a code book. To further reduce the data, a constant comparison method was performed to aggregate the individual codes, iteratively develop more substantiated categories of meaning, and create descriptive themes.^{16,23} Once the data were consolidated, Rogers' diffusion attributes were used as a lens to view the data deductively and to finalize analytical themes.¹⁹

After the interviews were analyzed, program websites and documents were analyzed for each case using the same inductive and deductive approach, and a detailed memo based on the ideas and concepts that emerged from the case was generated.²⁴ Three analytical themes emerged from this analysis: 1) Accreditation standards alone are not the driving force for IPE; 2) Program Directors can be powerful "IPE Navigators"; and 3) IPE is possible due to supportive partners. Finally, analysis of interviews, websites, and documents was triangulated to help understand how and why FEM IPE accreditation standards were adopted, to add dimension and trustworthiness to the findings, and to highlight consistent factors that influence the diffusion of IPE as an innovation.^{16,24} This analysis is presented as a Collective Case Vignette in the Findings section.

Trustworthiness

Several strategies were used to increase the trustworthiness of data analysis. Strategies included: the analysis of multiple data sources to provide rich triangulation; saturation of the data to create rich descriptions of the case; and consideration of the lead researcher's personal position and biases.^{16,25,26} In addition, another qualitative researcher performed interrater reliability, discussing any discrepancies in codes and themes until agreement was achieved. Further, participants were contacted to ensure interpretations were accurate, a process called member checking.^{16,26}

FINDINGS

This section presents the findings first as a Collective Case Vignette, a writing convention common in cross case comparison research.^{17,22} This narrative contains results of the triangulation of data from the three sources collected for this study. The vignette is followed then by a more in-depth description of the three themes that emerged from the interview analysis.

Collective Case Vignette

Interprofessional education adoption and implementation exists on a continuum as described by Future Education Model (FEM) graduate program directors. Many programs have brought disciplines together for years, while others assume the clinical rotation experience with preceptors is educating and training students in collaboration. Regardless of how central IPE is to the program, many FEM Graduate Program directors indicated that IPE performance indicators specifically have not motivated programs to alter the adoption or implementation IPE. Rather, alternative factors were perceived by program directors to impact, positively or negatively, the diffusion of IPE. These factors include the power and passion of program directors and partner support for collaboration.

Many FEM program directors perceived themselves to be innovators (25%) or early adopters (41%) of IPE; thus, acting as catalysts to push forward and advocate for an inclusive and collaborative learning environment with various IPE learning opportunities. As such, they have been assigned the moniker “IPE Navigators” in this analysis. In addition, 75% of the program directors perceived that they as individuals were earlier to adopt IPE when compared to their institution. Figure 1, Program Director and Institutional Diffusion Distribution, provides valuable insight into how program directors perceive themselves and their institutions with respect to the adoption and implementation of IPE.

This continuum of perspectives illustrates programs that are thriving and those that are developing as it relates to IPE (Table 3). The rigorous review of interview and website data revealed that five of the 12 programs had an enthusiastic program director and specifically mentioned IPE on the website, thus warranting “thriving program” identification. All thriving

Figure 1. Program Director and Institutional Diffusion Distribution



Figure 1 illustrates how program directors identify themselves and their institutions on the IPE Diffusion of Innovations bell curve.

programs had some similar characteristics such as being located on the east coast, at mostly privately funded intuitions in urban settings, with student populations that ranged from 1,700 to 50,000. In addition, these programs were located either in a college of health sciences with additional partners or at small liberal arts institutions. In contrast, the remaining seven programs did not have IPE specific language on their website, regardless of how passionate the program directors were. Given this disconnect, these programs were identified as “developing programs.” These programs were more likely to be located at mid to large public universities with a stronger community focus in their curriculum compared to the thriving programs which had a stronger clinical focus. In addition, several of the program directors identified difficulty making IPE a priority given the complexity of their role. The late majority adopters (n=2) shared their limited understanding of how to better implement IPE due to both institutional and personal barriers.

Analytical Themes

To further elucidate this study’s findings, the three analytical themes that emerged from interview analysis are described in depth below and supported by representative quotes. Participants are identified with an

identification number and their self-identified DOI adopter category to provide context.

Theme 1: Accreditation Standards Are Not the Driving Force Behind Recognizing IPE as a Critical Curricular Component

Most program directors indicated that the inclusion of specific IPE performance indicators in the FEM were not a driving force in the adoption or implementation of IPE. Several program directors indicated that their team has been engaging with other disciplines for years prior to the FEM transition, while others were simply continuing without intentionally embedding IPE in curricula. This is highlighted by participant 7, an early adopter:

So honestly, those interprofessional opportunities were here. I mean, that's just what we do. It's so important to understand what others are doing. So, I'm not doing anything differently than I would have done. It's just that it maps to this performance indicator.

In addition, program directors pointed out that the IPE specific performance indicators are left up to interpretation with vague language allowing for flexibility and/or creativity for those who understand IPE but make implementation difficult for those who are not as familiar with the concepts of IPE. Participant 5, an early adopter, felt like “a lot (of these) are so open to interpretation, there's not going to be one impact.” While Participant 9, an early majority adopter, expressed this sentiment:

I really feel like what we need is for the Academy to work with the professional organizations and organizations of other disciplines, and create, like, some kind of a toolkit or some kind of at least template resources that we could be working off of because the truth is, most of us are not experts in interdisciplinary education.

It is also important to mention that most programs mapped IPE to student clinical and capstone projects which are evaluated primarily by preceptors and not faculty members. Participant 11, a self-identified late majority adopter, indicated that their current program “did it (IPE) naturally” in clinicals but their response, in its entirety, seems to express some confusion with understanding what IPE is and how to ensure that IPE competencies are being addressed in the curriculum, “I'm not probably as familiar with IPE as some others. Like, I understand the concept. But, you know, how do we intentionally do it without it just happening naturally, when students are in the hospitals?”

To summarize, these quotes from various categories of adopters highlights that the IPE performance indicators alone do not appear to be driving the extent to which IPE is adopted or implemented in these FEM programs. In addition, vague performance indicator language used in the accreditation standards leaves the IPE standards up to interpretation; therefore, decreasing a shared understanding and vision by program directors about IPE. It is important to note that this lack of consistency may increase the complexity of adoption and implementation, especially for those program directors with limited IPE experience.

Theme 2: Program Directors are “IPE Navigators”

It is clear that program directors are in the position of power to navigate and advocate for IPE given their role in the FEM accreditation process. As such, many program directors perceived themselves as innovators or early adopters of IPE. As self-identified change agents, these individuals also had personal or professional interprofessional experience; were connected within their institutional and outer community; were committed to advocating for IPE; and were more likely to have IPE as a core value of their program. In comparison, those program directors that had little clinical experience, were new or unconnected to the program, and grappling

with competing priorities in their job were less likely to advocate for IPE being a central part of the student learning experience. Participant 12, who identified as an innovator of IPE, indicated that “Maybe it's my age, and maybe it's what I've seen in hospitals, maybe it's the care that some of my loved ones received, or my parents...I just want the best care not only for my mom, but every other person.” Participant 4 also supported this position, stating:

You know, having previous collaborations has made me more comfortable moving forward with interprofessional education. And I also think that having been at the university for 10 years, and (being) from this area, I have lots of contacts within school systems and kind of some different types of professions, and I can see the value of what they can teach our students.

These personal and professional experiences appear to play a role in the confidence and commitment these program directors have for adopting and strategically implementing IPE into the curriculum. Moreover, program directors with a stronger IPE focus appear to make connections and develop relationships with a variety of stakeholders to increase mutual respect and collaboration. In addition to interprofessional experience and being a stakeholder connector, those program directors who are enthusiastic, committed, and felt a responsibility to prepare students to advocate for themselves and their profession through collaboration were more likely to have multiple levels of IPE strategically imbedded in their programs to emphasize team-based learning. This sense of commitment and responsibility was highlighted by participant 10 who identified as an IPE innovator:

I think it's still our responsibility to educate them on how to do it (IPE) well. Because I mean, yeah, it may not be a

multiple-choice question on the RD (registered dietitian) exam but it's going to be part of their professional expectations when they're in the real-world setting, so we can't ignore it.

In stark contrast to this statement, however, participant 1 who identified as an early adopter, illustrates that there are several competing priorities as a program director when deciding how to effectively train future registered dietitians (RDs):

So, my tendency is to say (I value IPE as a) 5 (out of 10). Right, it's important, but that's not going to be on their registered dietitian (RD) exam. So, the important things are, how to run a TPN and how to do a tube feeding, or how to extend a recipe, or whatever they must do. Those things are going to be on the RD exam. So those first and foremost are always in our head.

These statements illustrate the dynamic and critical role program directors can play to navigate, either by promoting or diminishing, IPE efforts to provide students with tangible experiences that facilitate their competence and confidence in collaboration. The program directors with personal and professional collaborative experience, who are connected to the campus and community, and those who are committed to IPE were found to have IPE at the center of the dietetics program and were positive IPE Navigators.

Theme 3: Partner Support for Collaboration

Each of participants mentioned partner support for collaboration as a factor that could either promote or stymie programs from adopting and implementing IPE. Overall, the majority of participants valued IPE regardless of their adopter category. Although there was a high perceived value of IPE, much of the implementation depended on the access to a variety of supportive partners at the program, institutional, community, and clinical levels.

This overarching theme is further examined by understanding in what settings supportive partners may exist, and the perspectives of the different self-identified adopters.

Students and faculty were identified as active partners that influence the adoption and implementation of IPE. For example, participant 3, an innovator, stated: “I think it is important to educate the students, and to say, here's the point of what you're doing, because they need to know, ‘why am I doing this?’” Sustained faculty energy and involvement was also identified as a key factor in the diffusion of IPE efforts as identified by participant 1, an early adopter who said, “I think the more important factor is that there's like a stable interest over time of faculty members and that its being carried forward.”

In addition to students and faculty, the other disciplines that are present on campus were also identified as important supportive partners to help foster a culture of collaboration. As mentioned by early majority participant 9, “I think the fact that there are so many health professions represented (here) in and of itself is helpful, because there's just more breadth of representation.” In contrast, participant 2, a self-identified late majority adopter, spoke about the challenges of accessing learning partners based on the college she was affiliated with:

I guess my knowledge of interprofessional education, it's not much; like, I understand that there is value for students and different healthcare professionals to be working together in a classroom, but I feel like there's such a challenge here at the university for making that happen just because of the way we are set up. I'm having a hard time figuring it out. Sometimes it's even the physical barriers that can make it challenging. Yes, I value it (IPE) as a 10 but we are doing it like at 0 at the university.

In addition to partners on campus, community and clinical partners were also identified as

influential in the adoption and implementation of IPE. Participant 4, an early adopter, highlights:

I feel like, especially in our rural area where you don't want to necessarily overwhelm the dieticians who are here, you want to expand and see what we can pull from other disciplines if they can learn this in a different way. I think that's beneficial not just to nutrition.

In contrast, participant 11, a late majority adopter, shared a conversation had with a clinical preceptor team that illustrates how oftentimes partners may not be supportive or compatible in helping to achieve IPE goals:

I happened to talk to our clinical preceptors, like, an hour ago and asked, “Do you actively practice this interprofessional collaboration, whatever it is, practice? Or is it just naturally part of your job? Like, have you made any efforts?” And - they said basically, No.

In summary, the majority of participants valued IPE; however, implementation can be largely reflected in the level of support for collaboration by partners and their environments. Interprofessional education requires resources and will look different in a variety of settings due to variable school size, the structure, and access to partners. The participants indicated that a variety of stakeholders can act as supportive partners, but without a shared understanding, vision, expectations, and resources, partners can be more challenging than supportive in the diffusion of IPE.

DISCUSSION

The healthcare landscape is becoming more complex, requiring intentional steps towards a harmonized, shared collaborative vision to improve population health.² In efforts to nudge the healthcare system closer to collaborative practice, IPE accreditation

standards and competencies have been implemented into the education of many health professions.⁸ Although impact is implied, little research has been done to understand the extent to which IPE specific accreditation standards have influenced the adoption and implementation of collaboration in the turbulent and varied environment of higher education.⁸ As a contribution to the literature, this study explored the perceptions of FEM program directors and found that IPE performance indicators alone may not drive the diffusion of IPE. Rather, enthusiastic program directors who have experience, skills, and passion with IPE and the ability to link with supportive partners are central to the diffusion of IPE as an innovation.

Findings from this study echo and add to Zorek and Raehl's accreditation research in addition to specific Nutrition and Dietetic recommendations cited in Davis and Affenito.^{8,12} This study corroborated that a common language, shared vision, creativity, and committed partners are essential to facilitate the adoption of IPE, while also highlighting the great variability and systematic influence encountered in the implementation of this innovation.^{8,12} Although accreditation standards and competency based education aim to ensure quality of education in health professions, institutions of higher education and IPE opportunities specifically, are not always equitable and may benefit by identifying an IPE Navigator to develop creative opportunities to support team-based learning.²⁷

Coined and operationally defined through the analysis of this study, IPE Navigators are program directors who serve as change agents that bridge the gap between policy and implementation. These navigators perceive that IPE has a relative advantage over a siloed approach to health and take action to move the initiative forward using social channels. The role of IPE Navigators will be especially important to support newly implemented FEM Graduate Programs to help diffuse best practice examples of IPE. These roles are

especially critical in programs that are launching in settings with atypical and non-traditional practice partners, and those with a strong community nutrition focus compared to clinical practice priorities.²⁸ These vital programs will require a higher level of creativity and consistency to advocate and effectively diffuse sustainable IPE approaches to positively impact the collaborative capacity of future nutrition and dietetic professionals.¹²

In addition to IPE Navigators, this study highlights the importance of supportive collaborative partners at various levels as a key factor to diffusion. Consistent with IPE adoption literature in other disciplines, these novel ideas take time to effectively implement and evolve over time.²⁸ As seen in this study, the program directors' high perceived value for IPE was oftentimes stymied by personal and environmental factors which impeded the diffusion of IPE opportunities.^{8,9,12,20,29} This study reinforced the need for students, faculty, community partners, and clinical preceptors to share a common understanding, vision, and commitment to collaboration to make it successful. Without supportive collaborators at a variety of levels, the complexity of IPE increases and can reduce the rate of diffusion and implementation of effective IPE opportunities for students, clients, and populations.

The current qualitative study illuminated key recommendations to help narrow the gap between perceived value of IPE and the diffusion of IPE. The lived experiences of program directors highlighted that intentional leadership and preceptor training, peer mentoring, and additional resources such as time, templates, and toolkits could help support the diffusion of IPE in FEM Graduate Programs. Providing IPE training and resources to program directors and preceptors were identified as important first steps to help support IPE in programs transitioning to the FEM program. By leveraging the current critical mass of those program directors who perceive themselves as IPE innovators and early adopters, ACEND, and other professional

accrediting bodies, may consider creating an IPE Navigator peer mentoring program. Identifying IPE Navigators in FEM Graduate Programs, and among complementary disciplines, could provide opportunities for educators to work together as a committed group of change agents to take strategic next steps to nudge the national healthcare system closer to a more collaborative practice and improving population health.²

Finally, this study identified the need to increase the specificity of the IPE accreditation standards as identified by Zorek and Raehl and highlighted in the dental hygiene literature.^{8,30} To increase awareness and understanding of IPE it is recommended that ACEND develop a specific IPE competency with performance indicators representing all four Interprofessional Education Collaborative (IPEC) core competencies including: values and ethics, roles and responsibilities, interprofessional communication, and teams and teamwork. In addition, adding IPE based competency questions to the RD exam could help motivate resistant programs to prioritize IPE. Given the transition of RD education requirements, this is an optimal time to invest efforts into IPE to develop and train collaborative-ready registered dietitians who advocate for the importance of their profession in both community and clinical settings.

Limitations

This study is not without limitations. Often, collective case studies are large scale studies with a long duration of observability over multiple years.²² This study had a relatively small sample size, 11/12 female participants (which leaves the male and non-binary voices underrepresented in this study), and a shortened timeline which may have compromised depth of understanding. In addition, since the recruitment email mentioned the researcher's interest in interprofessional education, those program directors who were confident with IPE or interested in the topic may have responded while those with less confidence or interest may not have. Moreover, it is important to note

that in qualitative research the interviewer is viewed as an independent variable.¹⁶ The interviewer in this case was an emerging qualitative researcher and therefore may not have been able to extract the depth of data an experienced researcher would have. It could also be the case that participants may have noted the interviewer's bias toward IPE in tone of voice and probing questions used, thus potentially influencing the way they responded to questions.

CONCLUSION

Findings from the current collective case study show that while specific IPE performance indicators alone have not impacted the adoption and implementation of IPE in FEM Graduate Programs, many program directors have served as IPE Navigators to engage supportive partners to effectively diffuse IPE as an innovation. With an increase in IPE and more intentional collaboration with supportive partners, FEM Graduate Programs will be able to advocate the important professional role of registered dietitians, increase their collective identity as a profession, and work collaboratively with other disciplines to improve population health.^{12,31}

CONFLICT OF INTEREST STATEMENT

The authors report no conflicts of interest.

REFERENCES

1. World Health Organization (WHO). Framework for action on interprofessional education & collaborative practice. *WHO*. 2010. <https://www.who.int/publications/i/item/framework-for-action-on-interprofessional-education-collaborative-practice>
2. Cox M, Blouin AS, Cuff P, Paniagua M, Phillips S, Vlasses PH. The role of accreditation in achieving the quadruple aim. *NAM Perspectives*. 2017;7(10). doi: 10.31478/201710a.
3. Center for Disease Control and Prevention (CDC). Public Health and Health Care Collaboration: The Workforce Perspective. Published December 12, 2018. Accessed June 21, 2021. <https://www.cdc.gov/csels/dsepd/strategic-workforce-activities/ph-healthcare-collaboration.html>.

30 Whitney and Kluge • *Journal of Dietetic Education* • Vol. 1, Issue 1 (2023)

4. Health Professions Accreditors Collaborative (HPAC). Health professions accreditors collaborative members. Accessed June 21, 2021. <https://healthprofessionsaccreditors.org/members/>.
5. Interprofessional education collaborative (IPEC). Core Competencies for Interprofessional Collaborative Practice: 2016 Update. Accessed June 15, 2021. <https://ipecc.memberclicks.net/assets/2016-Update.pdf>.
6. Grymonpre RE, Bainbridge L, Nasmith L, Baker C. Development of accreditation standards for interprofessional education: A Canadian case study. *Hum Resour Health*. 2021;19(1):12. doi: 10.1186/s12960-020-00551-2.
7. Bodenheimer T, MD, Sinsky C, MD. From triple to quadruple aim: Care of the patient requires care of the provider. *Ann. Fam. Med.* 2014;12(6):573-576. doi: 10.1370/afm.1713.
8. Zorek J, Raehl C. Interprofessional education accreditation standards in the USA: A comparative analysis. *J. Interprof. Care*. 2013;27(2):123-130. doi: 10.3109/13561820.2012.718295.
9. Schot E, Tummers L, Noordegraaf M. Working on working together. A systematic review on how healthcare professionals contribute to interprofessional collaboration. *J of Interprof Care*. 2019;34(3):332. doi: 10.1080/13561820.2019.1636007.
10. Suiter SV, Davidson HA, McCaw M, Fenelon K-F. Interprofessional education in community health contexts: Preparing a collaborative practice-ready workforce. *Pedagogy Health Promot*. 2015;1(1):37-46. doi: [10.1177/2373379914561470](https://doi.org/10.1177/2373379914561470)
11. Center for Disease Control and Prevention (CDC). Chronic disease in America. Published May 6, 2022. Accessed June 7, 2022. <https://www.cdc.gov/chronicdisease/resources/infographic/chronic-diseases.htm>.
12. Davis A, Affenito S. Interprofessional education to create and sustain high-performance teams to support our transforming health care system and future educational model: How nutrition and dietetics can “weigh-in”. *J Acad Nutr and Diet*. 2016;117(12):1871-1876. doi: 10.1016/j.jand.2016.10.021.
13. Bureau of Labor Statistics, U. S. Department of Labor. Occupational outlook handbook, dietitians and nutritionists. Published September 30, 2022. Accessed on October 22, 2022 <https://www.bls.gov/ooh/healthcare/dietitians-and-nutritionists.htm>.
14. The Accreditation Council for Education in Nutrition and Dietetics (ACEND). ACEND Accreditation standard for nutrition and dietetics graduate degrees program (GP) in nutrition and dietetics. Published November 1, 2021. Accessed October 1, 2022 <https://www.eatrightpro.org/-/media/eatrightpro-files/acend/fem-2022/fem-graduate-reformat.pdf?la=en&hash=B6EC9DE14313A95B819F1899EE970563F92AD251>
15. Academy of Nutrition and Dietetics. Rationale for future education preparation of nutrition and dietetics practitioners. Published August 2018. Accessed May 28, 2021. <https://www.eatrightpro.org/-/media/eatrightpro-files/acend/rationalefutureeducationnutritiondieteticspractitioners/executivesummary.pdf?la=en&hash=5598839D0EB912F028ADE06F0B822519F02CF551>.
16. Creswell J. *Qualitative inquiry & research design: Choosing among five approaches*. 3rd ed. Thousand Oaks, CA: SAGE; 2013.
17. Stake R. *The art of case study research*. Thousand Oaks, CA: SAGE; 1995.
18. Mills A, Durepos G, Wiebe E. *Encyclopedia of case study research*. Thousand Oaks, CA: SAGE Publications, Inc.;2010. <https://dx.doi.org/10.4135/9781412957397>
19. Rogers E. *Diffusion of innovations*. 6th ed. New York, Free Press; 2003.
20. Reeves S, Tassone M, Parker K, Wagner SJ, Simmons B. Interprofessional education: An overview of key developments in the past three decades. *Work*. 2012;41(3):233-245. doi: 10.3233/WOR-2012-1298.
21. Yin RK. *Case study research*. Vol 5. 3. ed. Thousand Oaks, CA: Sage; 2003.
22. Miles MB, Huberman AM, Saldaña J. *Qualitative data analysis: A methods sourcebook*. Third ed. Thousand Oaks, CA. SAGE Publications, Inc.; 2014.
23. Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*. 2008;8(1):45. <https://www.ncbi.nlm.nih.gov/pubmed/18616818>. doi: 10.1186/1471-2288-8-45.
24. Hatch JA. *Doing qualitative data in education settings*. State University of New York Press; 2002.
25. Guest G, Bunce A, Johnson L. How many interviews are enough? *Field Methods*. 2006;18(1):59-82. doi: 10.1177/1525822X05279903.
26. Lincoln Y, Guba E. *Naturalistic inquiry*. Newbury Park, CA: SAGE; 1985.
27. Young GQ. Implementing competency-based interprofessional education in historically black colleges and universities. *J. Nurse Pract*. 2022;18(8):886. <https://search.proquest.com/docview/2715105226> . doi: 10.1016/j.nurpra.2022.03.001.
28. Harris M, Phillips L, ..., Scott J,... An innovative interprofessional curricular model for diverse

partners who team up to support behavior change in individuals with chronic disease. *J. Interprof Care*. 2021;35(3):468-471.

29. Barker KK, Bosco C, Oandasan IF. Factors in implementing interprofessional education and collaborative practice initiatives: Findings from key informant interviews. *J. Interprof Care*. 2005;19(S1):166-176.
<https://www.tandfonline.com/doi/abs/10.1080/13561820500082974>. doi: 10.1080/13561820500082974.
30. Furgeson D, Inglehart MR. Interprofessional education in dental hygiene programs and CODA standards: Dental hygiene program directors' perspectives. *J. Dent. Hyg.* 2017;91(2):6-14.
<https://www.ncbi.nlm.nih.gov/pubmed/29118251>.
31. Eliot KA, L'Horset AM, Gibson K, Petrosky S. Interprofessional education and collaborative practice in nutrition and dietetics 2020: An update. *J Acad Nutr Diets*. 2021;121(4):637,644-643,646. doi: 10.1016/j.jand.2020.08.01