Faculty leaders’ views of successful implementation of interprofessional education: A Case Study

Ghaidaa Najjar *, Frank J. Ascione

University of Michigan, Michigan Center for Interprofessional Education, University of Michigan, 428 Church St, Ann Arbor, MI, 48109, USA

A R T I C L E   I N F O

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A B S T R A C T

The purpose of this qualitative exploratory case study was to investigate faculty leaders’ perceptions of the successful implementation of Interprofessional Education (IPE) at a large, research intensive university. This investigation focused on gathering reflections from a small group of faculty leaders of their impact on the IPE movement. Kotter’s change theory model was utilized as a framework that guided the data analysis. The faculty leaders viewed themselves as functioning in three overlapping activities: unit/profession representative, IPE advocate, and IPE change agent. In these roles, they were able to identify the key forces influencing change at the University of Michigan and recommend successful strategies to facilitate that change. These strategies were ultimately effective because of the significant support from the university administration through its funding for a center for IPE. This center created the structure needed to encourage an efficient communication and networking system to ensure that the faculty-generated strategies would be successfully implemented.

1. Introduction

Effective leadership is essential for promoting academic change, especially in the interprofessional education and practice. The leadership impact is often referred to as the combination of robust faculty involvement in addition to administrative support (e.g. Provost, Deans, Chairs and other administrative officers). Administrative leadership in IPE can be identified relatively easily by the defined positions of the individuals, which should inherently give them the power and influence to manage institutional change. Faculty leadership often emerges through a variety of ways and possess informal institutional power. However, they can gain considerable influence by their actions and the extent that they are legitimized by the administrative leaders of the organization.

A key feature of IPE faculty leaders are their actions as role models and advocates for proper allocation of the necessary resources. Effective leaders can overcome the key barriers of their peers’ negative attitudes and behaviors about collaborative learning. These leaders can also demonstrate the need to shift their loyalties from primarily their own profession to the broader interprofessional perspective that enables better collaboration across university units.

The existing research suggests that faculty leadership is created through a deliberative process of selection, participation, and influence. Identifying the faculty leaders, encouraging their interprofessional orientation and developing their influence requires a socialization process in which they can share ideas with similarly focused faculty from other professions. These exchanges should be frequent and managed by an organizational structure of change to ensure that they occur frequently and have an impact.

One organizational framework that can help in analyzing the impact of faculty leadership on the IPE movement is Kotter’s 8-Step Change Process. The method outlined by Kotter is designed to improve an organization’s ability to change and to increase its chances of success. Kotter’s 8-Step Change Model encompasses 8 interrelated steps: Create a Sense of Urgency, Build a Guiding Coalition, Form a Strategic Vision, Enlist a Volunteer Army, Enable Action by Removing Barriers, Generate Short Term Wins, Sustain Acceleration, and, finally, Institute Change. In describing this process, Kotter emphasizes the grassroots participation of workers as a key factor along with the executive leadership in promoting and implementing change.

Kotter’s framework provides the basis for understanding faculty engagements in the IPE movement, especially that of the early leaders. In this paper, it is used to explore faculty leaders’ perceptions about successful IPE implementation at the University of Michigan.
2. Methods

The University of Michigan (UM) is a research-intensive University with three campuses located in Michigan (Ann Arbor, Dearborn, and Flint). There are 28 schools and colleges located on the three campuses, with 19 in Ann Arbor. Included in this number are 10 health science schools: seven in Ann Arbor (Dentistry, Kinesiology, Medicine, Nursing, Pharmacy, Public Health, and Social Work), two in Flint (Health Sciences and Nursing) and one in Dearborn (Education, Health and Human Services). Total professional student enrollment in these 10 schools is estimated to be more than 5000. UM also has a large multidisciplinary academic health center located in Ann Arbor with more than 1000 in-patients beds and multiple ambulatory clinics throughout the state.

Interprofessional teaching at UM had been sporadically occurring for many years, but the University formally (e.g. the Provost Office and the Health Science School Deans) committed to the IPE movement by creating the UM Center for Interprofessional Education in late 2014 and early 2015 (referred to as the “Center”). The Center operates under five strategic goals that are designed to meet key measures of success (Table 1) in the first five years of the program (2015–2020). At the beginning, the Center’s leadership adopted the Kotter’s Change Process. The progression through the 8 step process is described in Table 2 and Fig. 1. The successful achievement of the original five-year goals has been recognized by the Health Science Schools Deans and the Provost Office, resulting in renewal of funding for the Center.

Three research sub-questions were used to explore faculty leaders’ perceptions of their efforts in developing successful IPE program at the University of Michigan:

1. What were the faculty members’ perceptions of their roles and behaviors as IPE leaders?
2. What factors influenced their roles and actions?
3. What possible strategies did they endorse to support successful IPE implementation?

The faculty interview was partially based on data from a theoretically grounded case study performed as part of a PhD research project. Qualitative methods were selected to allow an intense exploration of perceptions and attitudes and a case study design was chosen because of its utility for examining complex processes within bounded systems.

Purposeful sampling was used in the study to select participants who would represent the leaders or “Champions” in the UM IPE movement. Factors considered were the faculty member’s previous experiences in IPE, involvement in the IPE initiative at UM, representation of their own disciplines, and the administrative roles within their own units. A “pool” of faculty leaders who met these criteria was created by identifying individuals involved in two overlapping Center leadership networks. One network was the IPE Center’s Executive Committee and the other was the Interprofessional Leaders Fellows (IPL). The latter was an 18-month fellowship program in which faculty applied and were selected by their Health Science School Deans) committed to the IPE movement by

Table 1
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<thead>
<tr>
<th>Original 5-Year Goals</th>
<th>Measures of Success</th>
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<tr>
<td>1. Create a Collaborative Culture</td>
<td>The number of faculty involved in various Center activities (e.g. teaching, committees, faculty development, scholarship) increased from 76 faculty in year 1–326 in year 5. Student attendance in IPE opportunities increased from 859 to 3098 during the same time period. All 10 health science schools were involved formally through their representatives to the Center Executive Committee and their faculty.</td>
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<tr>
<td>2. Cultivate a Core Curriculum</td>
<td>The number of IPE curricular opportunities increased from 5 in year 1–35 in year 5. All health science schools offered at least one IPE opportunity to their students with five reporting reaching 100% of the students. Three schools that underwent accreditation had their IPE activities approved.</td>
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<tr>
<td>3. Develop Faculty to Teach in Innovative Environments</td>
<td>An 18-month leadership program (The Interprofessional Leadership Fellows) was implemented in year 1. Four cohorts have completed the program (168 individuals) and most (92%) have transitioned into participation in one of the various Center’s activities (see Goal #1). Other faculty development activities include Health Professions Day, various workshops, and an individualized mentoring program. The result is that 155 faculty were involved in IPE teaching activities in year 5 compared to 16 in year 1.</td>
</tr>
<tr>
<td>4. Create a Unique Body of Knowledge</td>
<td>A research initiative was developed from the beginning, supported by a pilot grant program. During the 5 year period, 31 grants were provided to faculty teams (179 faculty total) worth $675,000. Presentations and scientific exchange was promoted through Center sponsored gatherings such as HPE day and travel grants to attend regional, national, and international meetings. These efforts indirectly resulted in at least 144 IPE publications by 245 faculty during the first 5 years of the program.</td>
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<tr>
<td>5. Become a National/ International Leader in IPE</td>
<td>Several faculty have won external awards for their research. The Center engages in strategic partnerships with regional (MIPERC), national (Big Ten IPE Alliance), and international (Global Forum on the Innovation with the Health Professions) groups.</td>
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The measures of success were identified at the beginning of the five-year strategic plan. Year 1 was the 2015-16 academic year while year 5 was the 2019–2020 academic year.

The faculty interviews occurred for three consecutive weeks in March 2017. This was a strategic time in the evolution of the UM IPE movement. About three years had passed since the creation of the formal IPE movement in late 2014 and early 2015 and the activities had progressed through step 6 in the Kotter change model (Table 2 and Fig. 1). Thus, the faculty respondents were able to reflect on the significant IPE change activities that had already occurred but could also discuss what was needed for the changes to be successfully implemented. The faculty experiences were matched with relevant data about the general Center activities that was documented from the formal beginning (2015) to the current time (2020).

3. Study sample

The selection process of the study participants targeted a designated pool of 44 faculty leaders, consisting of the 16 members of the EC at the Center upon creation was charged with developing a five-year strategic plan that included the five goals shown in the table. The Center has been re-funded for the immediate future. a

The measures of success were identified at the beginning of the five-year strategic plan. Year 1 was the 2015-16 academic year while year 5 was the 2019–2020 academic year.

Source: University of Michigan Center for Interprofessional Education website, especially the section on annual reports and on the Center structure.
3

The UM change process using the kotter process.

<table>
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<th>Step</th>
<th>UM Center Activity</th>
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<tr>
<td>1. Create a Sense of Urgency</td>
<td>The sense of urgency was created in 2012 after a group of senior faculty from the UM Health Science Schools attended the inaugural Interprofessional Education Collaborative Institute. Those faculty created a grassroots movement at the UM including urging the Health Science Deans to create a formal IPE movement.</td>
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<tr>
<td>2. Build a Guiding Coalition</td>
<td>The Provost and the Health Science School Deans committed to the IPE movement by creating the UM Center for Interprofessional Education in 2015 (pre-creation preparations occurred in 2014). The Center is advised by an Executive Committee (EC) of appointed representatives from each of the health science schools. Faculty also joined through subcommittees (curriculum, faculty development and students). Other faculty leaders were created through an 18 month Interprofessional Leadership (IPL) Fellows’ program. Faculty involved in these activities formed the “Guiding Coalition” responsible for implementing IPE change at UM.</td>
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<tr>
<td>3. Form a Strategic Vision</td>
<td>The Center membership approved five strategic goals that were later endorsed by the Deans and Provost. Five-year measures of success were set for each of these goals along with annual review (See Table 1 for more details).</td>
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<tr>
<td>4. Enlist a Volunteer Army</td>
<td>Various strategies were developed to recruit more faculty to participate in the IPE movement. These opportunities included serving on the Center committees, teaching IPE opportunities or engaging in IPE related research programs.</td>
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<td>5. Enable Action by Removing Barriers</td>
<td>Center staff and the faculty members started identifying and removing barriers which would likely slow down or stop the IPE movement. This group also identified key facilitators to change.</td>
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<td>6. Generate (and Celebrate) Short Term Wins</td>
<td>Quick “wins” were created and recognized. Examples were the creation of an “IPE Scheduling Window,” the formation of an effective Faculty Development program, an awards program to recognize exceptional performance in IPE, and a standardized criteria for offering IPE opportunities.</td>
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<tr>
<td>7. Sustain Acceleration</td>
<td>Momentum toward change was demonstrated through the existence of a large amount of teaching opportunities (35 offerings in 2019–2020), a sizable group of faculty participants (currently over 300) and a substantial number of health science students (presently over 3000) involved.</td>
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<tr>
<td>8. Institute Change</td>
<td>Partial institutional change has occurred. Five of the health science schools reported exposing 100% of their students to IPE principles. Several of the schools reported satisfactorily meeting their disciplines’ IPE accreditation standards. Full institutional change will occur when all health science schools report full IPE exposure of their students and there are an adequate number of IPE activities are the practice sites.</td>
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4. Results

The three sub-research questions guided the themes’ identifications. They were faculty perceptions of their multiple roles, the factors that influenced their roles, and their suggested effective strategies for successful IPE implementation (Table 4). These themes are discussed in the upcoming sections. Where appropriate, the respondent’s position as a faculty administrator was noted in the narratives to gain an additional insight on their leadership perspective. The small sample of respondents prevented identifying any substantial differences in the responses between faculty and faculty administrators. The schools they represented could not be shared due to a confidentiality agreement.

5. Theme 1: leadership role

The faculty described their different roles in the IPE implementation process in three subthemes: representing of their unit/profession, advocating for IPE within the University, and acting as an IPE change agent, especially within their units. These subthemes overlapped, yet were separate enough to be identified as distinct aspects of the faculty leader’s perceived role.

5.1. Subtheme 1.1: representative

These faculty were invited to participate in Center activities because they represented one of the UM health science schools involved in IPE. As one of the faculty administrators stated, “Now we are getting with the IPE leadership training and more faculty are aware and actively involved.” Another faculty administrator from a different unit explained that faculty representation of their units has to be voluntary, “I think we’re trying to start a parade and hope that people join the parade. We can’t just do this by mandate or force.” Faculty were self-motivated to be involved in IPE movement by representing their units. One faculty noted that “I am delighted to be a part of all of this. And I truly believe that we’re going to continue to accomplish great things.”

5.2. Subtheme 1.2: advocate

The faculty recognized the necessity to shift their uniprofessional loyalties to a broader interprofessional perspective that enabled better collaboration across university units. Advocates supported ways to especially promote IPE to their students, faculty and administrators. One faculty administrator described the advocacy role as:

“Making sure that our yqurfaculty knows about the opportunities that are there, inviting faculty to be involved in the kinds of events and experiences that are afforded everyone in the health sciences schools to learn more about IPE, such as the Health Professions Education Day and other kinds of activities that are afforded our faculty.”

5.3. Subtheme 1.3: change agent

The faculty perceived their role as change agents as taking some responsibility for implementing IPE, especially within their units. One faculty administrator exemplified the change agent role by stating, “I guess that’s part of how I’m becoming a change agent is then actually just making IPE as just part of our normal curriculum instead of like I said just sort of an add-on activity.”
6. Theme 2: negative influences

Although the barriers to successful implementation of IPE programs are well known,9,27-29 it was important to identify the negative influences most prominent at the University of Michigan. These negative influences were divided into three subthemes: general resistance to change, the undervaluing of IPE activities, and implementation challenges.

6.1. Subtheme 2.1: general resistance to change

Faculty recognized that some of the opposition to the IPE movement was simply the natural resistance to change at UM. One key reason noted by a faculty administrator was the UM culture of unit independence:

“We have never done it this way and in fact, that’s why I say at the end of the day, this is so much more of a cultural change than it is anything else. Most people buy into the idea. Most physicians or social workers, pharmacists, they understand. Yeah, we need to learn together so we can work together. But when you’re doing it in a university like this, where the seven schools have been independent

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<tr>
<th>Department/Unit</th>
<th>Category</th>
<th>Position</th>
<th>Campus</th>
<th>Gender</th>
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<tbody>
<tr>
<td>Social Work</td>
<td>Administrator</td>
<td>Associate Dean</td>
<td>Ann Arbor</td>
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<td>Physical Therapy</td>
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Fig. 1. Use of Kotter’s 8-step change process by the UM center for interprofessional education (2014–2020).
from each other forever ... Then all of a sudden you put them together. The question is how, what kind of, where is that scale going to go towards centralization versus the original model of decentralization?”

6.2. Subtheme 2.2: undervalue of IPE activities

Faculty believed that the development of IPE programming was of lower priority to the University administration than other efforts, especially research and scholarship. One faculty stated that “school’s interests are in research, so it’s very difficult.”

6.3. Subtheme 2.3: implementation challenges

The faculty noted that logistical integration of IPE into the existing, uniprofessional curricula was a significant challenge. In many of the schools, the professional curricula is already packed and relatively rigid. The IPE classes required the various health science schools work together to integrate the way they manage their students. One faculty stated: “Because we have many curriculum committees, it needs to be integrated in some way into the school, in that vein so whatever is coming from the larger initiative to be able to funnel through all of those different curriculum committees or something a little more streamlined to our main one.”

7. Theme 3: positive influences

Enablers for a successful IPE movement have been noted elsewhere, but several key influences for UM were noted by the respondents. The most prominent were accreditation pressure and institutional leadership support.

7.1. Subtheme 3.1: accreditation pressure

The increasing pressure from accreditors for IPE-related activities in each profession’s curriculum was viewed as a significant external positive influence. One faculty administrator noted that:

“We started talking about it probably in 2012, actually before the IPE Center came together because of our awareness of what was happening with accreditation standards and how they were evolving, not only in our own profession but with other units on campus and their accreditation standards.”

A faculty respondent reinforced this view by stating, “I think that when accreditation agencies come out in all the professions and say, we expect this and we expect that, people pay attention. Then they at least have to do it.”

7.2. Subtheme 3.2: institutional leadership support

The faculty recognized the positive value of support from the University administration (e.g., the Deans and Provost). The substantial financial investment to create and operate a Center for Interprofessional Education was a significant symbol of support. A faculty respondent acknowledged this support in the following statement:

“I think a lot of that has come from the senior administration and leadership. So I do not think it is hard for us to implement when there is a commitment from the top, and there is from our Dean. There is from our Associate Dean, and there is from our faculty that are very invested in this area of our curriculum.”

Another positive factor was the favorable administrative structure approved for the development of the IPE initiative. The creation of a Center for IPE resulted in a formal organizational configuration that allowed the faculty to work together to achieve the goals needed for a sustainable program. The faculty believed that this structure produced effective means for them to interact with their peers to resolve the multiple issues that occurred during the successful implementation of the IPE program. As noted by one of the faculty:

“I think one of the big things the Center can do is to make sure that we are all moving forward on the same train at the same time, or maybe not the same time but at least that we have the same vision and that we’re on the same path to a similar destination.”

8. Theme 4: endorsed implementation strategies

The faculty identified several strategies that they thought would support successful implementation of IPE at the University. These strategies are described in the following paragraphs.

8.1. Subtheme 4.1: promoting cultural change

The faculty recognized that the IPE efforts needed to be integrated into the existing structure of each academic unit for successful change to occur. As a faculty administrator noted, “I think we’ve taken some steps that are important but not sufficient. It has to eventually be baked in.” One of the faculty suggested tying the IPE movement to the scholarship and research mission at UM: “making it part of the research avenue. Yeah, absolutely. Because that’s what drives us here.”

8.2. Subtheme 4.2: demonstration of value

The faculty believed that demonstrating the value of IPE should include providing evidence of its worth to the academic unit, documenting its impact, and relating it to the University of Michigan’s mission of scholarship and innovation. One of the faculty emphasized this approach in the following statement:

“Evidence and the knowledge we create helps us make the case for and justify what we’re doing or not. Or saying, this isn’t working. We need to go do something different. We need to. That’s our goal as a university especially a research intensive university.”
8.3. Subtheme 4.3: effective communication

Participants thought that effective communication across units was a critical element for successful IPE implementation. Having an open forum was needed to effectively exchange ideas and develop successful strategies as part of a larger group. One faculty administrator noted the importance of this strategy by stating:

“I think the first thing is you’ve got to be having the discussion. You’ve got to be having the right conversations in your bodies, in your decision-making bodies. So, you have to have had presentations about the progress of the IPE initiative in your curriculum committee. You have to have these discussions regularly.

A faculty respondent reinforced this belief: “I think open communication has probably been our best strategy.” Another endorsed the value of the Center as a vital hub for increasing collaboration and communication by stating, “When you think about how big our institution is, how easy it would be, if we didn’t have that support there, for people to get kind of back in their silos”.

8.4. Subtheme 4.4: expanding faculty support

The faculty recognized the need to expand significantly beyond themselves for successful IPE implementation. A key strategy was making other faculty understand the value of IPE and help them get the skills necessary to become effective educators in this effort. As one of the faculty administrators explained:

“We need faculty to buy into the fact that if you work in teams and research or in clinical care that it just doesn’t happen automatically. You’ve got to train teams too.”

The faculty also recommended creating more appropriate incentives/rewards for IPE activities. One faculty administrator suggested altering tenure and promotion process as a way of rewarding faculty by stating “I think we need to have some sort of faculty acknowledgement, reward compensation (in) tenure promotion.” Many faculty voiced the importance of acknowledging their IPE work with rewards and incentives. As one faculty noted:

“I think reward or compensation and acknowledgement. I think those are probably the top two things. I think if people are acknowledged and rewarded, or compensated for what they’re doing. More people are going to do it.”

8.5. Subtheme 4.5 building strong logistical support

The faculty endorsed the building of a strong logistical support structure (e.g., proper classroom scheduling, recruitment of students from other units) in order to allow educators to focus on the complex teaching tasks needed for IPE. A faculty administrator notes an example of such support:

“I think our experience is that you need to have some administrative upfront work done to make room for a student to be able to take a class. So, for example, you’ve got to move classes around in a way so that your students have time to take classes in other units as an example, and we encourage that through our electives.”

9. Discussion

The study results reinforce previous research findings about the critical role that faculty leadership plays in ensuring the success of the IPE movement. Faculty leadership cannot be successful without concurrent, structured support from the university administration.” In this case study, significant resources were allocated by the Health Science School Deans and Provost to create and staff a Center for Interprofessional Education. The Center created an organizational structure and a five-year plan approved by the university administration to enable successful implementation of IPE (Table 1). The use of an organized model of change (Kotter’s 8-Step Change Model) served as a tool for faculty leaders to assert their influence (Table 2 and Fig. 1). Faculty were critical from the beginning, creating the “Sense of Urgency” needed to start the process. Once the Center was approved by the Deans and the Provost, a group of faculty were recruited to “Build the Guiding Coalition” needed to work across the organization to accomplish the changes required for successful IPE integration. The study sample was selected from this “Guiding Coalition” group.

The faculty included in this “Guiding Coalition” group described their leadership role as involving three overlapping functions: unit/profession representative, IPE advocate, and IPE change agent. The unit/profession representative role was constant throughout their involvements and characterized the “uniprofessional” perspectives of the faculty. However, the role expanded to the necessary “interprofessional” perspective needed for the IPE movement through their functions as IPE advocates and change agents within their unit.

The faculty leadership role was aided by the IPE Center’s administrative structure (managed by an executive committee of representatives from each academic unit) because it produced a forum for effective communication and networking. This structure allowed for the creation of a favorable environment for the next step of the Kotter Process, “Forming a Strategic Vision.” In this case study, the vision was operationalized into a set of five-year goals (Tables 1 and 2). The faculty leaders perceived the Center to be the essential structure in this process because it allowed them to interact with their peers in an efficient manner, which is necessary for the development of a successful IPE movement.

The faculty leaders’ impact was most important in Steps 4-6 in the Kotter’s change model, which focuses on the transition of the organization from its initial plans to sustained change. The faculty leaders influenced the change process in these steps by identifying the key influences of the movement, suggesting plausible strategies to address those influences, and creating a series of “Quick Wins” to accelerate the movement toward institutional change (Table 2 and Fig. 1).

During the IPE implementation process, the faculty leaders validated that the same positive and negative influences affecting successful integration of IPE elsewhere were occurring at the University of Michigan. However, they prioritized the importance of those factors at UM and described how they uniquely applied to this environment. This perspective allowed for the creation of strategies that were the most likely to be effective in implementing the IPE program at this university.

A number of strategies were suggested (Theme 4 in Table 4), which can be elaborated upon by using the micro, meso, and macro change framework. The micro level strategies were directed toward expanding support for individual faculty to participate in Center activities (Subtheme 4.4 in Table 4). This approach was desirable for the creation of the “Volunteer Army” needed to assist the change process (Table 2 and Fig. 1). The faculty leaders suggested creating incentives for IPE engagement and developing faculty-training programs, which was similar to tactics endorsed by other researchers. These suggestions were implemented and proved successful in recruiting the volunteer army (Tables 1 and 2).

The meso level strategies were directed toward facilitating the transformation of groups of faculty from a uniprofessional perspective to the interprofessional one. The key tactic suggested was ensuring effective communication among faculty, an approach recommended by previous researchers (Subtheme 4.3 in Table 4). The Center administrative structure and its various activities to promote faculty...
interaction and networking were considered necessary to ensure that this strategy would be implemented. Another useful plan was building a strong logistical support system (Subtheme 4.5 in Table 4) that allowed faculty to focus on the complex tasks of teaching in an IPE environment.46

The faculty leaders suggested several helpful macro level strategies that were directed toward institutional change, which was consistent with the recommendations of other researchers.27,29-31,44 One (Subtheme 4.1 in Table 4) focused toward promoting cultural change within each unit. This approach was accomplished through increasing the set of advocates in the unit, including students. In addition, more IPE instructions were integrated within the unit’s traditional curriculum (Table 2). Another strategy was directed toward demonstrating the value of IPE (Subtheme 4.2 in Table 4). This goal was accomplished through a Center sponsored pilot grant program to promote faculty scholarship (Table 1).

The faculty leaders were successful in achieving the objectives described in steps 4-6 of the Kotter’s 8-Steps Change Model. A volunteer army was created (step 4). Barriers were identified (step 5) and addressed through a set of strategies designed to affect changes at the micro, meso, and macro levels. The result was the celebration of a set of “Quick Wins” (step 6) needed to sustain the acceleration for change (Tables 1-2 and Fig. 1).

The faculty led successes in step 4-6 of the Kotter’s 8-Steps Change Model created significant momentum for change (step 7) and, ultimately, institutional sustainability (step 8). During this change process, the Center achieved most of its 5-year goals (Table 1). These successes enabled a re-funding of the Center by the Deans and Provost after its initial 5-year grant ended in mid-2020.

10. Limitations

Like similar investigations of this nature, this research contains a number of limitations. This is a small study conducted at one research-intensive institution in the United States, so there may be restrictions on the applicability to other institutions or countries. Another potential limitation of this study was the sample size of 19 selected faculty leaders. Although qualitative research requires fewer participants to address research questions adequately compared with quantitative research,39 this small sample may not fully reflect the full range of perspectives on the faculty leaders’ role in successful implementation of IPE. However, one indicator of sample size adequacy in qualitative research was the attainment of data saturation.25 Although a sample size of 16 would have been sufficient to achieve data saturation,45 an additional 3 faculty were added. Another indicator was the purposeful sampling method used, which guaranteed that over 50% of the subjects were members of the Center Executive Committee and thus were charged by their Deans to lead the IPE movement.

While the data gathering process has numerous strengths, it also has certain weaknesses. The interviews solicited the perceptions of the respondents that could be considered an indirect reflection of what had actually occurred.46,47 However, much of what the respondents reported was matched roughly and triangulated by the various documents describing the Center activities from its beginning, which adds to the validity of their observations and perceptions.48

11. Conclusion

This exploratory case study has provided further insight into the role and impact of faculty leadership in the IPE movement, especially when complemented with sufficient organizational support by the university administration. There are several key findings about faculty leadership in this case study that may be helpful to others who are trying to maximize faculty influence in managing their IPE movement. They are described below:

1. The university administration (e.g., Deans and Provost) must be committed to the IPE movement.46 This commitment was demonstrated in this case study by the level of funding provided by the Deans and the Provost to create the Center and their subsequent agreement on the five-year goals established by the staff and faculty. The commitment allowed for significant expansion of the faculty grassroots effort necessary for institutional change.

2. Faculty leadership is critical to any successful IPE movement, but they need to be selected and nurtured carefully to have an impact. In this case, faculty were appointed by their Deans for the Center’s Executive Committee and had representatives from all 10 of the health science schools. Thus, they were accountable to represent their units and professions to provide appropriate feedback, which created the necessary level of empowerment and influence needed for change to occur.51,52,53,54 They formed the basis for the “Guiding Coalition” needed to successfully manage the Kotter’s model steps integral to intuitional change (Table 2).

3. Faculty leaders need to have a communication process that enables efficient information exchange and the development of effective strategies for the IPE movement. One of the most important functions of the Center was the creation of forums in which IPE ideas were proposed, debated, and translated into meaningful actions. These “safe” or “neutral” forums were executive committee meetings, meetings of various subcommittees and various annual retreats. These actions created the socialization process needed for interprofessional thinking to develop and allowed the members to create an IPE perspective along with their uniprofessional one.1,30,34

Future research should examine the impact of different institutional environments on faculty perceptions about how to be engaged in a successful IPE movement. For example, an institution that is not as research intensive as the University of Michigan may have a different level of faculty involvement. The use of different theoretical models (e.g., Diffusion of Innovation, Transformative Learning) may provide additional insight on how faculty roles and responsibilities evolve.50-52 Equally important is the impact of external factors such as the evolving IPE accreditation standards would have on faculty behavior. Employing a variety of different evaluation methodologies (e.g., large scale surveys, direct observations, interviews with multiple groups including administrators and students) may shed more insight to the types of faculty involvement needed for successful implementation of IPE.

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Original Study Interview Questions22

Demographic Questions:

1. How many total years of experience do you have as a faculty member?
2. How long have you been a faculty member at University of Michigan?
3. What is your unit organizational structure and characteristics?
4. According to the director of IPE center, the current IPE initiative efforts formally started in 2012 and the IPE center formally in January 2015. When do you recall the beginning of your participation in IPE initiative?
5. Are you participating in any IPE courses? If so, what are the courses and for how long have you participated in them?
6. What have led you to be involved in IPE initiative?
7. What training or professional development have you undertaken to make you an effective educator/administrator in IPE initiative?

The Center of Interprofessional Education stated the approach to IPE “By carefully aligning and integrating the needs and interests of health professions education with collaborative practice, the center is working to transform the way we prepare University of Michigan students. We plan to achieve our goals through curriculum development, clinical innovation and evaluative research. Our goal is to ensure that every eligible student enrolled in one of our nine Health Sciences Schools located in UM-Ann Arbor or our satellite campuses (UM-Dearborn or UM-Flint) will gain the necessary knowledge and skills to become effective members of the collaborative health care teams of the future”.

Interview Questions

1. Based on your understanding of the goals of IPE how do you perceive the effectiveness of IPE implementation in your school/unit?
2. Regarding effective IPE implementation, what are your experiences within your school/unit?
3. What specific challenges have you encountered within your school/unit during IPE implementation?
4. What are your experiences when attempting to mitigate challenges with IPE implementation in your school/unit?
5. In your opinion, what will it take for your school/unit to make the IPE initiative sustainable?
6. From your experience, what faculty attitudes and behavior are needed to support effective and sustainable IPE initiative in your school/unit?
7. In your opinion, what administrators’ attitudes and behavior are needed to support effective and sustainable IPE initiative in your school/unit?
8. Based on your perception of your school/unit, what factors may contribute to other faculty buy in and commitment to IPE implementation and sustainability?
9. What role should IPE center play in ensuring the sustainability of IPE initiative goals within your school/unit?
10. What are your thoughts about the effective role of a centralized unit such as IPE center to accomplish IPE initiative’s mission in each school/unit?
11. How do you perceive your role as a change agent within your school/unit to accomplish the vision of IPE?
12. What are the challenges that may hinder your ability in implementing the appropriate change within your school/unit?
13. What are your thoughts about the progress of IPE implementation so far within your school/unit?

References