When the Master Becomes the Student: Adviser Development through Graduate Advising

Alison J Kerr, University of Tulsa

Alison Kerr is a graduate student at The University of Tulsa. She is pursuing a doctoral degree in Industrial-Organizational Psychology. Her research interests include training development and evaluation as explored across a variety of academic disciplines and organizational settings. She is currently assisting on a number of training projects aimed at developing engineering students on relevant non-technical professional skills including ethical practice and presentation.

Dr. Bradley J. Brummel, University of Tulsa

Dr. Brummel is an Associate Professor of Industrial/Organizational Psychology at The University of Tulsa. He received his PhD from the University of Illinois at Urbana-Champaign. He conducts research on training and development with a specific focus on professional development, ethics, and coaching.

Mr. Bret Austin Arnold, University of Tulsa

Bret is a doctoral student of Industrial and Organizational Psychology at the University of Tulsa. His recent projects concern how personality shapes team-related behaviors and the degree to which antecedents of workplace burnout differ across cultures. Most recently, Bret has joined the University of Tulsa’s cross-disciplinary STEM ProDev team. The team has recently designed and piloted a training program that develops the professional soft-skills of graduate engineering students.

Dr. Michael W. Keller, University of Tulsa

Michael Keller is an associate professor of mechanical engineering at the university of tulsa. His research and teaching interests are in solid mechanics, both experimental and theoretical, and materials science.
When the Master Becomes the Student: Advisor Development through Graduate Advising

Introduction

What does it take to be an effective advisor to graduate students? Is the student the only one who learns, grows and develops, or does the advisor continue to develop through their experience as well? In order to be contributing members of a field, graduate students need to learn and develop in areas beyond just the core technical competencies of their field. Opportunities for achieving this development exist throughout their graduate studies, but students do not always recognize or understand how to use these opportunities. To productively steer student development, some responsibility falls on the student’s academic advisor to guide and support the student growth processes. Traditionally, when considering the relationship between student and advisor, researchers have almost exclusively focused on examining the development of the student [1][2][3][4] or assessing the student’s satisfaction with their advisor’s mentoring [5]. The recognition that professional development of graduate students is central to the creation of a diverse and flexible workforce has generated several new training frameworks. These programs attempt to enhance the interaction of the advisor with the graduate student, which has the potential to alter long-standing behaviors. This paper focuses on the faculty advisor role in supporting graduate student professional development and examines the perspective and related growth and development that the advisor might also experience through this role.

The authors have recently completed a pilot year of a professional development program created for graduate students in science and engineering fields. This program creates a structure for students seeking to strengthen their professional competencies while they are also gaining field-specific knowledge and skills through their academic programs. Through this program, students work closely with their advisor to assess their current abilities and then create personal development plans. While the student is the focus of the program, the execution of this program depends heavily on the participation of the students’ advisors for support and guidance. This program also encourages the advisor to also take an active role in the assessment of their own skills and development in order to better facilitate the student’s progress.

This paper presents the results of an in-depth case study of an advisor engaged in mentoring a cohort of engineering graduate students through the pilot year of a professional development program. This study includes interviews conducted with both the advisor and the participating students to assess the advisor role from both perspectives. Thematic analysis was used to explore and categorize responses. Findings from the interviews with the advisor are presented to highlight the advisor’s reasons for engaging in these activities as well as accounts of the advisor’s hurdles, set-backs, development, and realized achievements. Additional interviews with students are presented to provide a more perspective on the impact of the advisor’s experiential growth.

The professional development program

For the last two years, the authors have been working to create a professional development program for graduate students in science and engineering at a small private Midwest university.
Graduate students self-select into this program. With this program, we offer a series of information sessions at the beginning of a semester as well as speak with faculty advisors about the program to encourage their students to participate. If students are interested, they are asked to sign up for the program and to provide contact information. The first full year of the program was considered the pilot year and had 12 students who participated in at least some part of the program.

Once a student expresses interest, the student is asked to provide the name of their research advisor as well as select several of their peers to fill out a review of their professional competencies. We call this review a “discovery review” as it focuses on helping students begin to think about their skills and abilities related to nine professional competencies selected for this program. This review also provides students a method to seek feedback from others about their professional reputation. Competencies include oral communication, written communication, planning, problem solving, creativity, leadership, teamwork, cultural adaptability, and conflict management. The discovery review is an online form that we send to the student, their advisor, and the selected peers. Reviewers provide ratings between one and nine for each competency based on how they think the student compares to different descriptions provided for the rating levels. Reviewers also have an opportunity, and are encouraged, to provide written feedback for each competency.

Once the reviews are complete, the student participates in a series of feedback and goal setting meetings with their advisor which are facilitated by a member of the research team. It is during these meetings that the student and advisor go over the discovery report ratings and feedback and conclude by selecting two to three competencies to focus on developing over a decided time period (e.g. the semester or academic year). After these facilitated meetings, the advisor and the student can choose to continue to meet and discuss the professional development process, but the meetings are no longer formally facilitated. After the allotted time period, an official check-in meeting is scheduled and students and advisor may choose to continue to focus on the same competencies, develop a new plan, or start another discovery review process to see what has developed and what might be a next focus.

**Research questions**

After completing the pilot year, several aspects of the program stood out. First, we found that the program more heavily dependent on advisor participation than anticipated. Because many of the research team are advisors themselves, it was primarily their students that were participating in the program. This meant these advisors were both facilitating the program and participating from an advisor perspective. Unfortunately, we also found that a number of the students who initially expressed interest did not fully participate. Examining these cases, we found that these students either had advisors who were not part of the research team or their advisors were uncertain about the role they were being asked to take on with respect to their students’ professional development pursuits. This led us to attempt to improve our understanding of the advisor perspective and role in the program.
Our main research questions were:

1. Why would advisors choose to take on this role as primary support in advising their student’s professional development?
2. In what ways did the advisor feel prepared for the role?
3. In what ways did they feel unprepared for the role?

Additionally, after preparing this program with faculty input and then conducting it for a full year, we began to ascertain from the faculty that they felt they were also learning more about professional development and coaching. Therefore, for this paper we also focused on exploring the research question:

4. How does supporting graduate student development also impact advisor development?

Methods

A single case study on the advisor who was most involved with the program was chosen as the approach to obtain additional understanding of the advisor role. The advisor was identified as having the greatest number of active student participants and the most frequent interactions with students and program facilitators. This method is an intrinsic case study because the purpose was to examine a single advisor’s experience and perspective rather than to create theory on broad advisor professional development roles or to compare differing perspectives of more or less engaged advisors [8][9]. A single subject of study is appropriate in this case because the advisor’s unique experience is the subject of study.

A total of four interviews were conducted as part of this case study. One interview was conducted with the advisor. This advisor is a tenured male faculty member in the engineering department at a small Midwestern university. Then, three advisees who had participated in the pilot year of the professional development program were interviewed. The criteria for student selection included that the students needed to have been active participants in the pilot program and currently still enrolled in their graduate studies as the university. Two students were male and the third was female. All students were engineering graduate students who had been advised by the advisor for at least one year.

Interview procedure

The interviews were conducted as semi-structured interviews using a guide of pre-generated questions, but allowing for the interview discussion and topics to emerge naturally as well. The advisor interview was conducted first. Interviews with students were scheduled after the interview with the advisor. The students were contacted via e-mail and asked to participate in in-person interviews. All interviews were conducted by the same researcher and were audio recorded with consent from the participants. All interviews were conducted prior to analysis of any interviews. The interviews lasted between 40 and 60 minutes.

Two separate interview protocols were created prior to conducting any of the interviews, one for the advisor and a different one for the students. Because these were semi-structured, a general guide for questions was created but not all questions were asked of each participant. Additional questions based on the flow of each interview were also asked on occasion. The initial questions were generated based on previously published literature exploring the role of mentors in
professional settings. For the advisor perspective we sought to create questions that covered topics related to mentor perspectives in business settings which were found in previous qualitative research [10][11]. For the student perspectives, we also included questions that related to themes regarding graduate students' perceptions of advisor characteristics [12]. We additionally included open-ended questions on the advisor-advisee relationship [13]. The following provides list of the questions most relevant to this paper’s analysis for each of the interviews. Contact the authors for full interview protocol and questions.

Advisor Interview Questions:
- Will you describe the professional development program that your students participate in?
- Will you describe your role with respect to your students for this program?
- How is this role different than the role you have played prior to this program?
- What were your reasons for engaging the professional development program?
- What were some hurdles, set-backs, subsequent development?
- In what ways have you developed as a part of this program?
- How have you received feedback on the professional competencies?
- Have you pursued any of your own learning as a part of this program?
- Have you grown in any ways because of this program?

Interview Questions for Students:
- Can you tell me about the professional development program you are involved in?
- What were your reasons for participating in this program?
- How did you advisor become your advisor?
- What kind of interactions do you have with you advisor as part of this program?
- How has your advisor helped you in your own professional development?
- What did you see your advisor do to prepare for this role as advisor specifically for this program?
- What do you think are your advisor’s strengths in advising for this type of program?
- What do you think are your advisor’s weaknesses were in advising for this type of program?
- How do you think your advisor has developed as a result of this program?
- In what areas do you think your advisor could continue to grow in order to better support your development?
- Do you think your advisor believes in the importance of this program? Why or why not?

Interview content analysis and organization

After all interviews were complete, qualitative analysis of the interviews was done using thematic analysis. Thematic analysis is a method of qualitative data analysis where the content of the data is reviewed to determine what themes emerge [14]. Themes are then labeled and organized or grouped together to make sense. Although thematic analysis is not always considered a singular approach to qualitative content analysis but rather a broader term for many different qualitative coding methods, many scholars argue that this approach should be considered a method in its own right [14]. Unlike other structured approaches such as grounded
theory [15][16] or phenomenography [17], thematic analysis is more flexible in its methodology which allows for more themes to be explored [14]. For example, a focus of grounded theory and other related methods is finding patterns. With a single case study, such as conducted in this research, patterns may not be represented frequently enough to be identifiable. Thematic analysis allows for consideration of any theme that may emerge from the data regardless of if it is systematically present. An additional advantage of thematic analysis is that the data may be collected in interviews with some structure and need not be completely without any premeditated purpose to explore a specific topic. In this case study, we used discoveries from previous literature to help structure our interview protocol which increased the likelihood of those topics emerging as themes. However, allowing for another theme or topic to emerge and still be considered important even if it is not present in all interviews is still permissible. The strength of this thematic analysis approach is it allows for both deductive and inductive generation of themes of importance related to our research questions which is appropriate with a focused singular case study.

The majority of the analysis was conducted by the same researcher who conducted the interviews. This researcher took notes during the interviews as well as listened to each interview again while taking completely new notes on topics discussed. This way the same researcher gained exposure to the interviews and topics of conversation numerous times and on different occasions. Throughout these note takings, initial themes were generated and discussion topics and quotes were organized into these themes. Themes were sometimes re-generated to encompass a greater topic or separated into smaller meaningful subthemes. After completion of listening to the interviews, the notes were reviewed and reorganized or re-themed where necessary to provide the most logical sorting of topics. Thematic analysis was done on the advisor interview first. Then student interviews were listened to using the advisor themes as a guide for student thematic organization.

**Resulting themes**

Results of the thematic analysis yielded a number of discussion topics that could be organized into broader overarching themes. A final six overarching themes were present in both the advisor interviews as well as the student interviews. At times, however, the student perspective on the same theme was different from that of the advisor. The following sections of this paper will provide an in-depth illustration of each theme and the advisor’s perspective. There will also be a discussion of the student perspectives where appropriate. The six overarching themes that emerged from this case study are:

1. Advisor role in the graduate student development program
2. Advisor reasons for participating in this program
3. Advisor challenges in the professional development program
4. Advisor skills on the professional competencies
5. Advisor areas of achieved development and growth
6. Advisor areas of need for continued development
Advisor role in the graduate student development program

A first topic that we wanted to explore was how the advisor perceives their role in the professional development of their graduate students. We asked questions specific to this goal to both the advisor and the students. We asked directly about the role in the professional development program so that we could explore the role separate from potentially more technical roles such as that of professor or researcher. In this case, the advisor had several things to say. The first way the advisor defined their role was by thinking about how the professional development program requires the focus on competencies that are more commonly associated with managers. The advisor then related his role by saying that “I’m training them to become managers.”

The advisor also discussed whether or not he considered himself a facilitator of student development. First he said, “My role is a facilitator” but then said, “Facilitator feels wrong”. Upon reflection, the advisor decides that with some competencies such as oral and written communication his role was to provide feedback saying, “My goal is to give them feedback whenever I can” and provided examples of student presentation and writing feedback. But then when it came to the competency of leadership he said, “That’s where I feel I am a facilitator to sort of remind them about opportunities.” The distinction between facilitator and feedback provider was made by the advisor not the interviewer.

Throughout the interview, the advisor spoke about different ways in which he tried to provide feedback or facilitate student development. He said that some advice he has given to students on leadership is to “Try and put yourself in active leadership roles,” and to look for opportunities on campus to take a leadership role. A specific example he gave was to tell students to think about the research projects they work on in a team and then to make sure that trying to take an active role in their project.

One of the topics that came up related to giving students direction on finding opportunities to develop skills related to the competencies was the importance of the advisor’s own experience. To prepare to facilitate, the advisor said, “Basically, I try to look around for the resources available for things like that, experience them myself, and then provide them [students] with some guidance.” The advisor’s reflection that their role as facilitator is to experience something for himself first before being able to provide guidance is a topic that came up a number of times and will also be discussed under other major themes.

Students were also asked about their advisor’s role in the professional development program. All students struggled to define the role or what the advisor specifically does. One student responded by saying, “I know he’s looking out for us, but I don’t have a concrete thing.” The students alternatively discussed general characteristics of their advisor such as, “He’s encouraging, and he’s positive.” The students also identified some of the typical ways that the advisor encouraged their development. For example, they said “He has also encouraged me to ‘try’ things more” and “[Advisor] is like, you should speak up more.” They also gave examples of opportunities that the advisor would create for them to practice competencies saying that their advisor will say “Here, we have a new person, you train them to use this machine” or “You coordinate with that person” which this student said was helpful “by having me doing the communication instead of having...
somebody else do it for me.” These comments corroborated the advisors own reflections about facilitating opportunities for development.

For the most part, when students were asked about the advisor’s role, they reflected more on what their advisor’s participation feels like or means to them. One student said, “I feel like most of the time when I talk to him it is very conversational.” A second student said, “I think it helps to just know that someone is rooting for me to get better at that.” The third student also said, “When you’re able to have a meeting that centers or that feels a lot like a research meeting where you’re just talking about how can we do this thing better but we’re talking about you now, how can we do you better, if you get the same kind of, that same type of input that same level of like thought and you know excitement then that’s what he does for sure, and I really appreciate that, and those meetings, the development meetings are every bit as good as a good research meeting.”

These reflections by the students on their advisor’s role sometimes align with the ways in which the advisor viewed his role in providing feedback and opportunities for student development, but they also add to the picture what this means to the students or how it results in a general interpretation of the advisor’s support as opposed to very specific actions or precise descriptor terms that the professor contributes.

**Advisor reasons for participating in program**

Another theme that emerged in the interviews, partially in response to a direct question, but also incorporated in other question responses was the reasons why the advisor chose to be an active participant and formal facilitator of the professional development program. The advisor detailed several reasons including reflections on personal graduate experience, genuine interest in helping students grow, and personal benefits. Although, the students did not always think they knew why the advisor was invested in their development, they did mention some comparable reasons.

The most prominent (or at least most cited) reason that the advisor gave for wanting to support graduate student non-technical professional development was because of his reflections on the positive and negative experiences from his own graduate schooling. He said his own professional development in graduate school was “haphazard.” He said his own advisor did not formally promote professional development. He reflected that he got “about an hour talk on the way out the door” and said that in his own advising he has consciously tries to not do what his advisor did, which was as he put it, “accidentally try to develop me as time went on.” Still despite wishing his own advisor’s support was better, this advisor did think that for the technical things his advisor did help him with learning to write well, doing conference publications and presentations, and knowing how to conduct research and discern what good research entailed. He further said that “everything else was stuff that did happen, or could happen, but wasn’t necessarily part of the process, or that was somebody else’s job.” Despite these experiences, the advisor still thought that more focus on professional development would have helped him understand his own management style better and faster. He also imparted that he perhaps missed opportunities for professional development that were offered by the university, saying that he was sure training opportunities existed, but he didn’t know what was available, didn’t take advantage of them, and that his advisor did not actively push him to pursue those opportunities.
None of the students interviewed commented on the advisor’s experience in graduate school, therefore, this was not a specific reason that the students gave for their advisor’s involvement. However, the students did talk about their advisor’s choice to be an active advisor in comparison to other students’ advisors lack of involvement. One student said, “We also had some people who wanted to do it [the program] and their advisor just didn’t really give quality participation and it was just really crappy.”

Another prominent reason the advisor gave for supporting student professional development was that it was, as he termed it, “self-serving”. The advisor said, “A lot of this is self-serving because the faster I get them to writing and speaking well, the faster we can do other things, which are probably better for them and more productive.” The advisor reflected that this dual purpose of student improvement and subsequent benefit was “self-serving, but benignly self-serving.”

The advisor’s students also speculated on this self-serving reasoning. One of the students responded to the questions about reasons for advisor involvement saying, “Well it makes him look good, so there is that.” However, another reflected that perhaps the advisor’s investment was not all that self-serving and said, “I see him put effort into helping us with our written communication by him writing something together. It takes him a lot longer to write it with us than it would be by himself, at least at first.”

A final identified reason for why the advisor participates in the program was emphasized by his students but not directly stated by the advisor himself. All students at some point attributed their advisor’s involvement in their professional development as a fundamental part of the advisor’s character or more specifically as a result of the advisor’s genuine interest in his students. A student explained that the advisor’s involvement was related to “Why any teacher who teaches, teaches: because they want to see improvement in other people, they want to see growth in other people as a result of what they’re doing.” A second student expressed a similar sentiment saying, “He’s got the heart of a teacher, he loves to see us develop, loves to see us succeed.” The third student additionally said, “I think he absolutely believes in developing his students professionally” and further explained that the advisor is willing to sit down and listen to you [the student] and shows that he wants to know what the student is trying to say. This student explained, “If your advisor puts in the time and effort to go through that with you, that feels really nice...because if they care about your development then that’s a good way of showing it.”

The advisor did not actually declare his strong desire to see his students succeed but as all his students gave this as a reason it is relevant to consider this as a possible reason.

**Advisor challenges in the program**

The current graduate student professional development program depends heavily on the advisor, so understanding what aspects came easily to the advisor and what things the advisor found challenging is critical to improving this type of program. The advisor said that the easy part was finding opportunities for students to work on oral and written communication but that the other things were harder. Some of the things the advisor declared to be challenging are listed as follows:

- Providing meaningful, useful information on the students initial discovery review
- Feeling overwhelmed when all students being advised are involved in the program
Trying to maintain continual and ongoing focus

Getting students to bring up the professional development themselves

Additional challenges that the advisor detailed with more depth included changing their own behavior and the occasional people interaction related problems that arose from students seeking and receiving feedback.

When it came to changing the advisor’s own behavior, the advisor expressed that “getting myself to do it [the professional development] was challenging”. This included remembering to ask students in meetings about their professional development pursuits and to not just focus on technical and research problems. The advisor said multiple times that remembering to focus on the professional development was challenging to do regularly. The advisor also expressed that focusing on formally facilitating professional development is challenging because, as he said, “I haven’t done this myself.” He said that “Having never gone through any [formal] professional development myself it’s been uncomfortable,” further discussing that it is in part “because I feel like what I am telling them to do is guesses.” In some ways this may related back to what the advisor said about oral and written communication being the easy part. This might relate to his having more formal development in these areas or that these are more technical skills. He declared specifically that “Coaching leadership is hard, because I don’t know how to do it.”

The advisor also commented that people problems were hurdles he faced as a result of participating as the advisor in this program. He said that it was a challenge to coach students when they received critical reviews. One of the advisor’s students also reflected on this challenge saying of their advisor, “He’s not good at conflict management, but he knows that, we’ve actually talked about that.” The student continued to describe their advisors’ response to an incident of conflict, illuminating, “He says ‘I know this is a problem, but my hands are tied, and I don’t know what to do.’” Despite recognizing when a competency was challenging for their advisor as well, the students did not identify or mention any of the other hurdles that the advisor detailed as noted above.

Advisor skills on the professional competencies

When specifically discussing the professional competencies that are highlighted in the program, the advisor only commented on a select few of the nine competencies which were written and oral communication (combined by advisor), leadership, and conflict management. He speculated that all his students were working on the same competencies. When the students were interviewed, they confirmed that they had indeed selected the competencies of oral and written communication and leadership to focus on and that perhaps their research lab as a unit was working on conflict management. The following Table 1 provides an overview of what the advisor had to say about his skills and ability with each of the relevant competencies along with what the students said with respect to the advisor as well. Because not all of the competencies were discussed by the advisor, not all the students’ comments on the advisors skills on these competencies are presented. Instead, it is worth noting that one student said, “I think he feels quite competent at the competencies and another stated, “In all of these areas he is better at them than I am.”
<table>
<thead>
<tr>
<th>Competency</th>
<th>Advisor Comments</th>
<th>Student Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral and Written</td>
<td>“I have something concrete to give them because I have been sort of ‘aggressively trained’ in those two things”</td>
<td>“He is pretty good at getting across what he means…and so the fact that he can talk about things to where a wide variety of people can understand him I think is pretty good”</td>
</tr>
<tr>
<td>Communication</td>
<td>“I’ve actually spent a fair amount of time reading that literature trying to get better at helping people do that”</td>
<td>“I really enjoy his writing, a lot of when he’s edited my stuff his ideas are really good and I think that’s a strength that he has”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I don’t read that much of what he’s written”</td>
</tr>
<tr>
<td>Leadership</td>
<td>“Coaching Leadership is hard, because I don’t know how to do it”</td>
<td>“He does the things that I would think of that you would do to be a good leader”</td>
</tr>
<tr>
<td></td>
<td>“Maybe I should be working on that as well”</td>
<td>“I wanted to work on but I didn’t know how”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“It’s easier when your stuff is concrete”</td>
</tr>
<tr>
<td>Conflict Management</td>
<td>“I do not get much feedback on that…unless I ask…and then only if it doesn’t work”</td>
<td>“It would be helpful to me to have more guidance in conflict management”</td>
</tr>
<tr>
<td></td>
<td>“didn’t know how to handle it, still don’t” (in reference to incidences of bullying)</td>
<td>“From what I’ve seen in terms of professors in ME and [Advisor] as well, they really don’t like conflict management”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I think he had to probably do that on purpose” (in reference to Advisor actively handling conflict in the lab)</td>
</tr>
</tbody>
</table>
Advisor areas of achieved development and growth

One of the main research questions of this study was how the advisor may have also grown and developed as a result of advising graduate students during their own pursuits. When asked about this, the advisor responded that by becoming more aware of others’ personal development “I’ve become aware of my own.” He clarifies this statement by saying that he is always aware of oral and written communication but that the formal program has made him think more about how to help coach his students. He said, “It’s definitely made me think about how I can provide guidance for helping them achieve their goals.”

Additionally, the advisor commented on how he now recognizes when his students come to him for advice when they do not know how to work on something. The advisor specifically talked about how this applies to conflict management saying that when there is conflict in the lab, his students come to him first. He said that this is a competency that he was not sure about so it inspired him to go to the program’s online tutorial program where he watched around six videos in order to have a better understanding of how to approach conflict and subsequently give advice to his students who were working on the same thing.

The advisor was not the only one who could see how he had developed in specific areas of competency. The students also reflected how participating in the program has changed their relationship with their advisor. One student said “I feel like our professional relationship has changed a lot over the time I’ve been a grad student” indicating that this was in a positive direction. Another student said, “I think we communicate better, for sure…I feel like our interactions are significantly more effective in terms of getting our work done.” The students were not sure though of the exact reason for the improvement in their professional relationship with their advisor. One said, “I know I’ve grown” but none of the students had had any prior thoughts on if the reason for the improved interactions was a result of traditional graduate student learning, or if it was because of the program. They also did not know that if improvements were the result of the professional development program, if it was because they as students had improved, if it was a result of their advisor also developing, or if it was because of their whole lab working on developing these types of skills.

Advisor areas of continued need for development

By taking an active role in supporting the professional development program for graduated students, the advisor also became aware of some opportunities to continue to improve. One thing the advisor mentioned early in the interview was that he is learning to not mix feedback conversations with coaching. This distinction was made by taking the perspective of the student and recognizing that it can be difficult for students to hear feedback (especially negative feedback) and then be able to also understand developmental coaching suggestions or even encouragement. The advisor expressed that going forward he has the goal of “arming myself to be a better mentor.” When asked how he would do this he listed the following pursuits:

- Gaining more awareness of resources to support professional development
- More frequent conversations about what students are doing and how they are doing
- Providing and recognizing more opportunities to provide feedback to students on what they are doing
Knowing that the students would be interviewed concerning their perspective on him, the advisor speculated that the feedback he provides is probably important and said, “I like to think that they put more weight on what I tell them than their friends.” He also speculated on how the students might view him and said that he was vaguely nervous and said “Good intentioned but ‘clueless’ is what popped into my head.” He clarified that he was alternatively not that nervous because it would not really change the advisor to student power difference or interaction. However, he elucidated, “but it does matter to me because I came from a [mostly good] experience and I want to replicate that.”

When the students were interviewed, they were generally not able to identify many areas of improvement for their advisor. As mentioned in sections above, the students truly do think of their advisor as a strong leader and a good model of the professional competencies that they have focused on. When pressed a little on what might be the advisor’s strengths and weaknesses, all three students commented that advisor’s degree of busyness was a well-known (and often discussed) challenge in their interactions with him at times. They said:

- “At times he’s distracted during meetings, so if you do want to discuss something sometimes you need to kind of pull him back”
- “I don’t know if he is a procrastinator, or if he is a bit scatterbrained, or maybe a combination…He kind of goes from one thing to another”
- “He’s not very focused on one thing at a time”
- “I would say he is sometimes too busy to the point where little things get forgotten”

However, the students acknowledge that they think this is something that their advisor is aware of saying, “I think he kind of knows that time management” and the students themselves do not see it as being a major problem citing, “It’s not easy to track him down, but whenever I’m around him it’s very easy to communicate, it’s pretty casual most of the time.”

In further response to the questions about advisor strengths and weaknesses, the students interviewed had much more to say about strengths. The following statements represent quotes about what they see as the advisor’s strengths from all three of the students:

- “That he does want to see us better scientists and humans by the end of our degree”
- “His broadness of experience…I think that’s useful when trying to work on different things, like conflict management and communication skills”
- “One thing that I am always impressed with is that he can talk about literally anything”
- “Everyone who works for him likes to work for him. There are a lot of reasons for that”
- “He is extremely enthusiastic, very genuine and those things are kind of contagious…He gets excited about progress…He gets excited about problem solving…He’s very present”
- “That he does care about us”
- “I definitely want to be like that with my students someday”

It is worth noting that the advisor himself did not spend much time discussing his own strengths. At the end of the interview, the advisor revised his final speculative statement of what he thought the students would say about him. He said that he thought they might think him “good intentioned but maybe not fully aware of what I could do.” In some ways, the student comments support this perspective in that they certainly confirm the good intentioned aspect. However, based on the student perspective, the way the advisor may not be fully aware of what he can do
specifically when it comes to being aware of how much those good intentions and enthusiastic support are appreciated by the students.

**Study strengths and limitations**

A strength of this study is that it provides an in-depth examination of the experience and perspective of the most involved advisor in the professional development program. This study should be useful for gaining insight that could help with increasing advisor participation in this program. However, as with all case study methods of research, there is a limitation with generalizability since the perspectives of this advisor may not be the same as those of other advisors. Furthermore, this single case does not allow for comparison of perspectives. For example, adding additional cases of advisors who are choosing not to participate may be helpful to developing this specific program. Additionally, similar interviews may also be conducted with advisors who represent different demographics of interest such as gender or race to see how the perspectives on similar issues compare between representatives of each group. The interviews in this paper reflect the gendered nature of this advising relationship in which the advisor was a male. We chose to keep the male gendered pronouns as it reflected the reality of the situation. This broad question is often examined in professional development research and may be applicable when considering advisor development as well [18]. A last limitation to note regarding the methods of this study was that all interviews were conducted by the same researcher, who also analyzed the recordings and transcripts to identify themes. Although this does create consistency, there may be alternative conceptualizes or interpretations of the emerging themes or even additional topics that were not captured. Further analysis of this and future data by additional researchers may be beneficial.

**Discussion**

The first research question of this study was: What reasons might advisors choose to take on this role as primary support in advising their student’s professional development? However, when conducting interviews, we discovered that defining the advisor role was not that simple. Perceptions of the advisor role in student development often vague or uncertain and fluctuated at times. The advisor himself identified a distinction between the roles of feedback provider and facilitator of opportunities for development.

Differences in how the advisor role is viewed also seemed to relate to different reasons for taking on the active support role. Reasons for taking an active role in student professional development identified in this case study included the advisor’s personal experience with professional development, the advisor’s self-serving benefits of student development, and intrinsic value for seeing students succeed. Qualitative interview studies of mentors in government and business organizations have found similar reasons for engaging in these types of supportive professional development roles [10][11]. While not all the reasons from these studies were identified in this case study, the overlap raises the question of how advisor roles with graduate students may be similar to professional mentorship roles when it comes to professional development.

There also seemed to be variability in advisor role related to different professional competency focus. When the advisor focused on oral and written communication, he took more of a feedback
providing role. Whereas leadership development support was focused more on facilitating opportunities for students to engage in practice. Furthermore, when conflict management competencies were discussed, both advisor and students discussed how advisor style was less focused on feedback and more on advisor development and conversational discussions.

These fluctuations in role and competency support efforts could help distinguish when and why the advisor is more or less comfortable or engaged in their role as advisor. The variation in advisor role based on competency of focus was also prevalent when exploring the second and third research questions. The advisor was more comfortable and prepared to provide feedback on more technical or research related competencies like written and oral communication. However, the advisor was less sure of his role or his ability to provide meaningful support with developmental pursuits of leadership or conflict management.

The final research question was: How does supporting graduate student development also impact advisor development? One of the most interesting factors that became apparent through this case study was that the advisor appeared to be quite conscious of his own professional development alongside the students. The fact that the advisor did not participate in a formal professional development program while in graduate school emerged as both an obstacle and a motivational factor. The advisor was motivated to provide his students with an opportunity that he did not receive but still believed to be valuable. However, the advisor also expressed that because he did not have experience with any similar development programs, he did not always know how to proceed or advise the students in this domain. The motivation to further gain understanding and reduce uncertainty also seemed to be somewhat contingent on the competency of focus. The advisor expressed that he was motivated to learn more about areas that he had less formal exposure to such as leadership development or conflict management. With these areas he sought out more understanding specific to the competency but with more graduate school salient competencies, he expressed interest in developing feedback or coaching style skills. This is an interesting concept to consider when pushing the expansion of this program and soliciting other advisor involvement, perhaps it is necessary to treat this program as not only a student professional development program but also consider including a formal advisor development component.

Conclusion and future directions

Through this case study, we identified a number of reasons why the advisor chose to be actively involved in supporting their students’ participation in a graduate student professional development program. However, we discovered that the reasoning was not simple or straightforward. Furthermore, it became apparent that some of the complexity was a result of role fluctuations which was also related to how different professional competencies yield variation in knowledge and developmental needs for the advisor. These findings suggest that future evolutions of this graduate student professional development program could potentially benefit from including a more formal focus on support of advisor development. This is not the first study to acknowledge that supporting advisors in their role may be beneficial [19][20]. However, this study is unique in that it focuses specifically on these concerns of where advisors need support and how they might experience growth through their role.
There are three areas where we believe it will be relevant to create more formal means of supporting and facilitating advisor development. The first is in providing role clarity by structuring the different ways in which the advisor might support student professional development. This would include distinguishing between identifying opportunities for practice, providing feedback, or simply being a model of certain competencies. The second area of advisor support is in competency or skill training and development. Understanding that advisors may have varying degrees of exposure to formal training in areas of professional competencies, we surmise that advisors would benefit from receiving training on the nine competencies of our program as well. They may also benefit from additional training opportunities on skills and competencies more germane to their advising role such as giving feedback, cultivating facilitator style, managing simultaneous priorities, and maintaining momentum. Finally, we think it would be beneficial for advisors to also participate in the program in some of the ways that the students do. For example, the first activity of the program is for the students to engage in a competency discovery review in which the student, their advisor, and select peers fill out a form in which they rate and comment on the students demonstration of each of the nine areas of competency. Advisors could also complete this discovery themselves and perhaps even gain feedback from their own peers or students. In this case study, the advisor appeared cognizant of his developmental challenges and students seemed to corroborate this. By encouraging the advisors to participate in their own development program, we could help alleviate concerns about not having enough experience with professional development and not knowing how to support the graduate students in their pursuits. This study’s comprehensive examination of an active advisor’s experience with supporting graduate student development proves to be informative and useful in determining potential next steps in the formative development of a program aimed at graduate student professional development.

Acknowledgements

This material is based upon work supported by the National Science Foundation under Grant Number 1545211.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

References


