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# Teacher Changing the Discipline: A Case Study of Participatory Professional Development

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**Abstract**

*In this case study, we explored an innovative Professional Development (PD) approach where teachers were positioned as experts and drivers of change. Simplified as Participatory PD, Michigan State University Agriculture, Food, and Natural Resources (AFNR) Education faculty constructed an experience for Michigan AFNR Educators following the characteristics of effective PD. We then employed a case study design to explore AFNR Educators' perceptions of the Participatory PD experience. Seventeen AFNR Educators engaged in the participatory PD. During the PD, educators were tasked with creating a state-wide AFNR Education curriculum resource. Data collection included focus group interviews with teacher-participants, a facilitator interview, researcher observations, and researcher reflections. Data were transcribed verbatim and analyzed using a multi-stage process based on the constant comparative method of analysis. Four themes emerged from the data: (a) Professional Development, (b) Learning, (c) Perspective, and (d) SBAE Change. Conclusions from the case study include a discussion of the outcomes reached by teacher-participants who engaged in the participatory PD, the essential role of collective teacher expertise in achieving those outcomes, and teacher preference for the participator PD approach. Recommendations include the need for additional research on participatory PD alongside recommendations for leaders in AFNR Education to implement participatory PD.*

***Keywords:*** participatory; teacher change; teacher professional development

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## Introduction

Professional development (PD) is an integral component of teacher growth (Desimone, 2011; Supovitz & Turner, 2000). Teacher learning, however, is a complex process (Avalos, 2011) and many professional development experiences are not beneficial for educators (National Research Council, 2000). Frequently, PD experiences are pre-arranged rather than seeking input from educators; the U.S. Department of Education reported two-thirds of teachers had no input on what or how they learned during PD (as cited in National Research Council, 2000). Compounding the issue is a general lack of funding for PD. School districts typically spend only 1-3% of their budgets on PD-related activities (National Research Council, 2000). As a result, many teachers are not satisfied with their current opportunities for PD (Bezzina, 2006).

While outside research indicates teachers may be unsatisfied with PD offerings, Easterly and Myers (2019) posits most research in agricultural education explores PD needs of agriculture teachers, not necessarily "how agriculture teachers engage in professional development" (p. 70). The authors

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reported in their own study that while engagement in PD by AFNR educators was high, the value of such engagement was varied. Underscoring the importance of PD, Avidov-Ungar and Herscu (2020) examined teachers' experiences in PD and reported teachers across professional phases connected PD with learning and sought to gain knowledge they could apply in their classrooms.

A potential roadmap for meeting teacher desires and the need to continue building better PD opportunities exists. According to Desimone (2011), successful PD includes five key features: (a) content focus: a focus on subject matter; (b) active learning: opportunities for teachers to be involved; (c) coherence with teachers' knowledge about learning; (d) duration; and (e) collective participation with teachers from a given community (e.g., grade level within a school). From these five elements, we can derive professional community and collaboration are critical components of PD (Hofman & Dijkstra, 2010; Niesz, 2010). Additional research supports the importance of collaboration and community during PD. Bezzina (2006) reported cooperation as the most effective way to improve PD and Easterly and Myers (2017) suggested the collaborative nature of AFNR Educators should be used to enhance PD.

Adding to the scholarship on PD change, Roseler and Dentzau (2013) foregrounded the role of teachers as PD participants, suggesting top-down PD is not effective. Instead, authors purported, "in any given teacher network, the teachers overall are both highly educated in content and pedagogy, it makes sense to allow them the opportunity to address the obstacles of reform and provide assistance when requested" (p. 619). In this view, teachers should contribute their own expertise during PD.

Research in Agriculture, Food, and Natural Resources (AFNR) Education emphasizes teacher needs and growth related to PD, but few studies describe, or evaluate, an innovative model of PD within the discipline. This gap in the literature misses an opportunity to explore the structure and impact of PD emphasizing community and collaborative expertise sharing. Therefore, teachers' experiences during an innovative, three-day PD experience focused on community and collaborative expertise sharing (i.e., participatory PD) were the focus of this case study.

## Purpose and Objectives

The purpose of this case study was to explore the experiences of AFNR Educators during a participatory PD oriented toward teachers changing the discipline through collaborative expertise sharing. There was one research question guiding this study: What are AFNR Educators' perceptions of their experience while undergoing a participatory PD?

## Theoretical Background

The theoretical background for this study draws on several key characteristics of professional communities and PD proposed by Parker (as cited in Lieberman, 2005) and Stoll et al. (2006): (a) shared sense of purpose and vision, (b) professional reflection, (c) collective responsibility, and (d) collaboration and group learning. Table 1 describes each of these characteristics.

**Table 1**

*Characteristics of Professional Development*

| Characteristic | Description |
|---|---|
| Shared Vision | Participants are focused on learning and engagement, and have a culture where improvement is key. |
| Reflection | Valuing reflective practice as well as research and inquiry informing practice. |
| Collective Responsibility | A joint responsibility for learning, including pressure from peers to engage in the collective work. |
| Collaborative and Group Learning | Emphasizing teamwork and participants taking responsibility for helping each other learn. |

*Note.* Characteristics and descriptions adapted from research by Stoll et al. (2006).

The PD of interest and case study were built on these characteristics of a learning community. The purpose of the PD was to create a state-wide curriculum resource that would enhance AFNR Educators' abilities to unpack state standards and identify the core ideas to be taught. For the PD, the Michigan State University (MSU) AFNRE team constructed an experience that purposefully included the characteristics: (a) participants were provided a clear vision for the PD, but were given the freedom to achieve that vision at their own pace; (b) at several points during the PD, reflection was encouraged, and the nature of reviewing standards required participants to reflect on their own practice; (c) participants were placed into teams, and teams were encouraged to divide the work among members; and (d) teams were constructed heterogeneously based on experience, encouraging a culture of support and responsibility among participants.

## Methods

To conduct this study, we employed a case study design. Case studies are "an intensive description and analysis of a phenomenon" (Merriam, 2002, p. 8) and focus on a bounded system. Case studies are differentiated from other types of qualitative research because they are defined by their unit of analysis. The unit of analysis may be an "individual, group, institution, or community" (Merriam, 2002, p. 8). Given the need for new approaches to PD, the unit of analysis selected for this case study was a service-oriented professional development focused on teacher creation of a comprehensive curriculum resource in Michigan.

### Subjectivity Statement

Researchers engaged in this study are former secondary AFNR Educators and are current teacher educators. We believe PD is critical to the growth and advancement of AFNR Education and strive to offer new and diverse PD opportunities to educators in Michigan. Further, we believe knowledge is constructed and learning is enhanced when we provide opportunities for learners to not just be receivers of knowledge but creators, too. As such, we value the expertise AFNR educators bring and seek paths to elevate that expertise in ways beneficial to the broader profession. Additionally, our research team has expertise in facilitating focus groups and interviews and in analyzing qualitative data.

## The Case

In this study, the "case" was a three-day curriculum workshop hosted by Agriculture, Food, and Natural Resources Education (AFNRE) Faculty at Michigan State University during the summer of 2019. Michigan AFNR Educators were invited to participate in the workshop and were provided free meals, lodging, and a stipend for participating. Over the course of three days (see Table 2 for more detailed structure), AFNR Educators were asked to achieve three main objectives: (a) identify core ideas for each of the 12 segments of the Michigan AFNR Education curriculum (see Figure 1), (b) in groups of four to six, arrange core ideas within specific standards that fall within the segments, (c) for each core idea, create a description of the core idea, identify resources for learning more about the core idea, and identify potential methods for teaching the core idea.

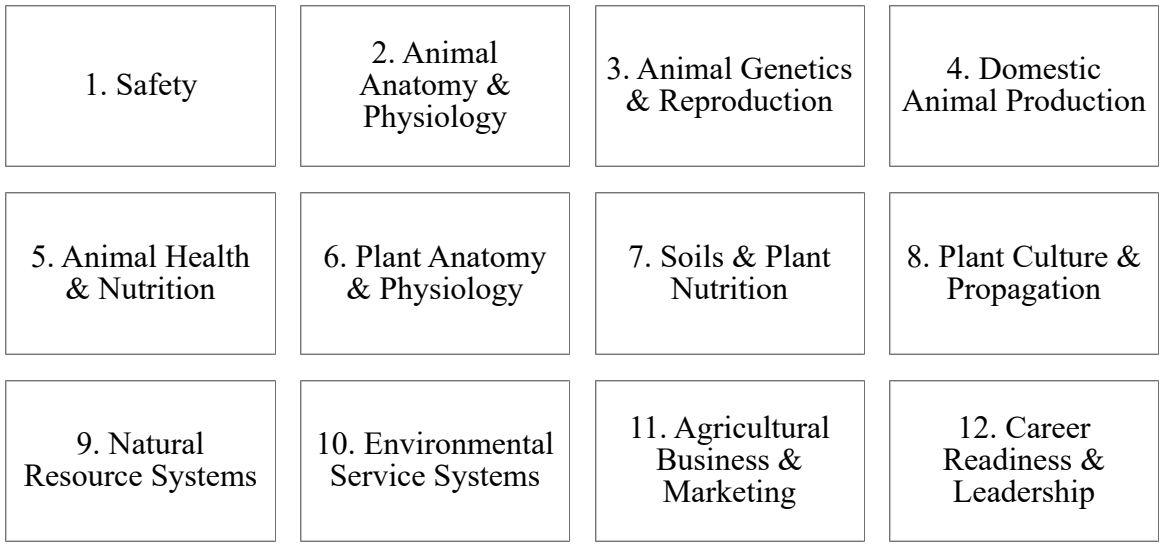
**Table 2**

*Participatory Professional Development Itinerary*

| Day | Activity |
|---|---|
| One | Introductions and consent to participate; Creating shared vision; Interactive Activity: Identifying core ideas within AFNR standards |
| Two | Curriculum team formation; introduce Google Drive structure; Curriculum team worktime (i.e., description of the core idea, identify resources for learning more about the core idea, and identify potential methods for teaching the core idea); Reporting progress: Curriculum teams |
| Three | Curriculum team worktime (i.e., description of the core idea, identify resources for learning more about the core idea, and identify potential methods for teaching the core idea); Peer review of curriculum resource |

**Figure 1**

*Michigan AFNR Education Curriculum Segments*



## Participants

Participants included 17 school-based AFNR Educators from across Michigan, ranging in experience from first-year teachers to 20-year veterans. The research team heterogeneously assigned participants to collaborative groups for the duration of the PD based on self-reported content expertise and years of teaching experience. Participants were chosen through an application process carried out by MSU Faculty in the months preceding the PD.

## Data Collection

Four types of data were collected: (a) focus group interviews with teacher-participants, (b) a facilitator interview, (c) researcher observations, and (d) researcher reflections. Focus groups were conducted with each curriculum team near the end of the PD experience. Focus groups followed a semi-structured interview protocol, each lasting approximately 45 minutes. Semi-structured protocols allowed for greater sharing by participants as compared to more structured protocols (Flick, 2009). Additionally, all four focus groups were conducted by the same member of the research team. The facilitator interview also followed a semi-structured protocol and was conducted immediately after the PD experience. The facilitator was a member of the Michigan AFNR Education team but was not a member of the research team. Both the focus group and facilitator protocols were developed in advance by the research team.

To ensure triangulation, we also collected researcher observational and reflection data. Observational data was collected at specified intervals during collaborative group work time and involved both researchers separately observing each team for five-minute intervals. Researcher observations focused on group engagement and dynamics (e.g., evidence of debate, new content being discussed, and who is contributing ideas). At least one researcher observation was conducted for each collaborative team for each of the four scheduled worktimes spread across the second and third days of the PD. Researcher reflections were also conducted at multiple points throughout the PD. A total of three reflection sections involving the two researchers were recorded, two on day two and one on day three. Reflections focused on researchers' interpretations of how the PD was progressing, including observations the research team made about participant engagement related to questioning and enthusiasm.

## Data Analysis

All interview data (i.e., focus groups, facilitator interview, and research team reflections) were recorded via a handheld device, and were submitted to be transcribed verbatim by TranscriptionStar services. Researcher observations were cataloged for review by the research team in concert with other analysis procedures. After transcription, there were 56 pages of transcribed data from teacher participants, 11 pages from the facilitator interview, and 10 pages from researcher reflections. In addition to triangulation, several steps were taken to ensure trustworthiness, including member checking, peer debriefing, and providing thick descriptions (Flick, 2009). Member checking was completed by emailing findings from the study to one participant from each curriculum team, thus ensuring findings were consistent with participant experiences – this is a form of communicative validation (Flick, 2009). To further ensure credibility (Guba, 1981), peer debriefing was done with the research team and the facilitator of the PD. Increasing transferability, thick descriptions of the context of the study were provided making possible the "judgements about fittingness with other contexts" (Guba, 1981, p. 86).

Following transcription, the research team conducted a multi-stage analysis based on the constant comparative method (Glaser, 1965), utilizing open, axial, and selective coding. The constant comparative method includes four stages: (a) comparing incidents to categories; (b) integrating categories and their properties; (c) delimiting the theory; and (d) writing the theory. While the constant comparative method is presented linearly, Glaser (1965) posited all stages "remain in operation

throughout the analysis" (p. 439). Following Flick's (2009) suggestion that open coding reflects the researchers' style and stage of the research, the research team first independently reviewed (i.e., watched and read) focus group, interview, and reflection recordings and transcripts for emergent codes. Researchers then met to review the emergent codes, addressing disagreements until a consensus was achieved for 14 emergent codes and themes. Next, the codes and themes were refined and differentiated as each member of the research team more formally analyzed one focus group transcript for the emergent codes. Researchers then met to review the coding and begin delimiting the theory. The 14 emergent codes were concatenated into four themes, including Professional Development, Learning, Perspective, and School-Based Agricultural Education (SBAE) Change. Following agreement, the lead researcher further engaged in the constant comparative process to code the remaining focus groups, interview, and reflections. After coding, the research team met to refine codes and themes.

## Findings

Fourteen emergent codes and four themes were identified by the research team. Each theme, code, and a short description are provided (see Table 3).

**Table 3**

*Summary of Emergent Themes and Codes*

| Theme | Code | Description |
|---|---|---|
| Professional Development | Traditional PD Lacks Challenge | Teacher participants shared traditional PD sessions often lack rigor and engagement. |
| | Teacher Expertise | Teachers are capable of more than what is traditionally asked during PD. |
| | PD Structure Preference | Teacher participants articulated a preference for participatory PD over traditional PD. |
| Learning | Desire for Social Learning | Teacher participants wanted to engage in the workshop to learn from peer teachers. |
| | Increased Standards Knowledge | Participation in the PD increased teacher knowledge of the academic standards. |
| | Increased Standards Practice | Participation in the PD better equipped teachers to utilize standards within their curriculum. |
| | Increased Social Learning | Teacher participants learned by working collaboratively with peers. |
| Perspective | Different Perspectives in SBAE | Teacher participants learned their perspective of SBAE was different from their peers. |

**Table 3**

*Summary of Emergent Themes and Codes, Continued…*

| | | |
|---|---|---|
| | Expanded Perspective of SBAE | The participatory PD led to an expansion in teacher participants' perception of SBAE to include previously unconsidered topics, ideas, or content. |
| SBAE Change | Energy | Teacher participants expressed increased energy and excitement about SBAE due to the participatory PD. |
| | Curriculum Struggle | Teacher participants expressed past or current challenges with standards and curriculum. |
| | Strengthening the SBAE Community | Teacher participants identified the PD as an opportunity to strengthen the SBAE community. |
| | Desired New Structures | Teacher participants wanted to engage in the PD to revamp their curriculum or program. |
| | Learning for Students | Teacher participants wanted to engage in the PD because new ideas would be better for their students. |

**Professional Development**

Throughout the analysis, one of the most profound findings was the theme of *Professional Development* among teacher participants. Specifically, how the participatory PD challenged teachers in new and exciting ways. Included in the theme are three codes: *Traditional PD Lacks Challenge*, *Missed Teacher Expertise*, and *PD Structure Preference*. The code *Traditional PD Lacks Challenge* focused on educators' feelings of existing PD being "boring," supported by quotes from participants expressing disinterest in many PD activities. One focus group participant offered, "there would be times [during state-wide PD] where I just go and hang in my room because I'm like, um, I don't really want to sit through another hour and a half workshop where it's boring." Another teacher participant suggested similar feelings, indicating they spent time at PD "entering in grades [and] tuning out." Contrasting the participatory PD with previous PD experiences, one educator stated she was "applying more of my brain power than I usually do."

The second code within the *Professional Development* theme, *Teacher Expertise*, focused on participants meeting the high expectations of the participatory PD session. Participants discussed two related ideas: (a) faith in participants by facilitators, and (b) fellow participant expertise helping to process information. Faith in participants was suggested by multiple teachers, with one educator offering, traditional PD "doesn't feel like development…[but] this is a different feel because you're asking for our help instead of trying to help us." Another participant suggested teachers *should* be the creators of PD and not just the receivers, stating, "I mean, it just makes sense for us to be on the driving end. And because we're the ones using it, we are the ones that need to develop it for our use every day in the classroom." In an adjacent idea, participants cited fellow participants helped them gain

understanding during the PD. Teachers discussed the benefit of sharing knowledge informally, "definitely being able to talk in small groups with people about exactly what we do in each of our classrooms is extremely helpful;" another educator added "talking about it with a small group has made me feel more confident." One facilitator summarized how participants encouraged peer learning, "I think [the] people we have working with us feel like they are now the experts in this."

The final code within the *Professional Development* theme was *PD Structure Preference.* This code highlighted participants' stated preferences for a participatory model of PD. While traditional PD was described as "boring" or unengaging, participants articulated the participatory PD was "interactive…engaging, it just gives me new energy to do new things." In a new direction, a few participants postulated the participatory nature of the PD allowed participants to move past "pre-conceived notions that we have about other teachers and their experiences, because we don't fully understand what every person does." Researcher reflections supported this new atmosphere, "I would say the focus on being a creator and not just 'sit and receive' was definitely an outcome…. watching them work the last few days, it was a very different atmosphere than what you see at [traditional PD]."

**Learning**

The second theme foregrounded learning; specifically, how teacher participants were able to unpack a complex system of standards using the collective expertise of participants. Four codes emerged within the *Learning* theme: *Desire for Social Learning*, *Increased Standards Knowledge*, *Increased Standards Practice*, and *Increased Social Learning*. *Desire for Social Learning* focused on participants' desire to engage in the PD because they recognized the value in learning from peers. A representative thought was:

> I think I came here initially more not in terms of, like, bringing new ideas, but just learning new ideas. I feel like I was glad that there were teachers here that had more experience because that's what I wanted to gather.

Similarly, another teacher participant suggested they were eager to work with their peers to unpack state standards, "I like the opportunity to explore in depth the curriculum from the state or the standards from the state and talk to other teachers about…how we interpret the standards and think about those resources."

The second code within this theme, *Increased Standards Knowledge,* illuminated how teacher participants articulated an increased understanding of the standards as a result of their PD participation. Some teachers identified the need to create a resource for others as the driving force for their learning, exemplified by the quote, "the challenge for me was to try and find ways to break those segments apart here and make them understandable not only for myself, but for someone else." Another teacher identified, "it's not very often we go through and read them standard by standard and pick them apart, and say what does this really mean?" Finally, some teachers suggested unpacking the standards was "intimidating" and brought about "struggle," but afterward engaging in the participatory PD they felt "more comfortable" with the standards.

In parallel with increased understanding, a code also emerged describing participants' increased confidence putting standards into practice. *Increased Standards Practice* was comprised of thoughts related to standards becoming more user friendly following the PD. One focus group member offered, "taking those segments [and standards] and breaking them further apart has really helped me understand how I can change my program back at home." Another teacher participant stated, "I think that's going to help enrich my curriculum and my lessons to better communicate what the meaning of these are to students." Similarly, one teacher quipped that because of this PD product, Michigan educators can look "at the standards like oh yeah, I can do this, this, this, this and this." Teachers' confidence with the standards after the PD was in direct conflict with their views entering the PD, as

one participant offered, "sometimes I read them [standards] and I'm like, I don't even know what that wants me to teach."

Shifting to how learning occurred, *Increased Social Learning* highlighted teachers' proclivity to cite collaboration as their main avenue for learning during the participatory PD. Common thoughts were reflected by one participant, "and even if it's just putting us together to conversate, this kind of thing is helpful." Another common thread was learning socially allowed participants to consider something they "never would've thought about" otherwise, as there were "lots of different and diverse minds" working together to break standards apart. However, social learning did incur dissonance, as a facilitator reflected:

> And, you know, in understanding of what standards were, I saw conflict. I saw people that were talking about what this was, and some people were defending their position, others are defending their position. It wasn't a negative, it was a positive.

**Perspective**

The third theme focused on the changing perspectives of teacher participants regarding SBAE as they engaged in the participatory PD. The first code illuminated teachers recognizing there are perspectives of SBAE that differ from their own. This code was considered a prerequisite for the second code, *Expanded Perspectives of SBAE*, which is discussed in the next paragraph. Providing a representative statement for the *Different Perspectives in SBAE* code, one focus group member offered,

> I think seeing things taught, like I teach, like I see things being taught in the other schools just like I teach them, but they teach them differently. And so, it's cool to say, "Wow, I never thought of teaching that that way, we've always done it this way."

Another teacher participant added, "I'm seeing…how my vision of Ag Ed is different from other people's vision." In the same focus group, another teacher suggested the PD experience led them to "think about Ag Education in a different way." The realization of different SBAE perspectives permeated other focus groups, with another teacher indicating their perspective of standards changed; stating, "mainly in the context of looking at the standards and realizing, yes, we all teach the same standards, but we all teach them in very different ways." Yet another teacher identified the realization of different visions as an unintended, positive consequence of the experience, "I don't know if that's one of the underlying goals or not…but just the idea that you become more conscious of what other people's world looks like."

Building off the first code, *Expanded Perspective of SBAE* encompassed participants' expanded perceptions to now include previously unconsidered topics or content. The expanded perspective held by teachers after the participatory PD may have been as simple as recognizing another method or topic is better, as one participant suggested, "yeah, that actually fits into that standard better than the way I'm doing it." Another participant cited a specific content area when discussing how their perspective changed,

> So composting was a big one that I didn't think about in terms of greenhouse and plant[s]….when I'm thinking of the plant science side of things that I worked on it's more of, okay, here is the plants, the structure of the plant, how do plants work, and then producing things.

Researcher reflections included the changing perspectives, too, with one researcher commenting:

> They are [participants] willing to think a little bit outside of the box, look at a segment and look at standards and say this is what has been taught, are we missing something? Are we willing to think outside the box here?

**SBAE Change**

The final theme, *SBAE Change*, highlighted how the participatory PD impacted participant energy and eagerness to learn new structures in Agricultural Education, and included five codes: *Energy*, *Curriculum Struggle*, *Strengthening the SBAE community*, *Desired New Structures*, and

*Learning for Students*. Among some of the participants, *Energy* was cited in their discussion of how the experience impacted them. One veteran teacher suggested they were "reenergized" after the experience, with another participant in the focus group adding they "felt like it was energizing." A different focus group concentrated on their energy being directed to create change, with one participant saying "[the experience] makes me want to go through more of them with my, with all my curriculum." Finally, another participant offered they were "getting burned out," but this experience left them "excited."

The second code, *Curriculum Struggle*, emerged from participants describing difficulties with navigating the curriculum in Michigan. One transition-to-teaching participant provided a representative thought, "as someone who was a new teacher and was on an annual authorization, I really struggled with the idea of curriculum concepts and where they fit into specific standards." This struggle gave some participants the energy to seek help from PD, such as this participatory experience, evidenced by the quote, "so I think my energy for this came from the fact that I felt like I was struggling." Lastly, others remembered the struggle from an early career perspective, which drove their engagement, "I remember being a young teacher and not knowing where to start."

Many focus groups highlighted the desire to strengthen their community (i.e., SBAE teachers in Michigan) as a driving force behind their participation. A representative feeling is summarized by the quote, "I could provide this for another teacher who is either new or coming in non-traditional, so that way they wouldn't have to feel like they're…treading water all the time in the first year of teaching." Another focus group discussed the unique nature of SBAE, "for me this is a strong community and we're supportive of one another; and it's a really unique place because we compete against one another, but we share resources and support one another." Lending partial voice to the preference for participatory PD, one focus group member noted "I feel like I'm doing more good here than I do when I've gone to other workshops," and suggested SBAE teachers are "builders" and they are "building…helping to establish an essential resource that is going to be helpful for us and other teachers in the state."

In addition to wanting to strengthen the SBAE community, some participants articulated wanting to learn new structures. The *Desired New Structures* code focused on participants' interest in revamping their curricula or programming as their reason for engaging in the PD. For example, one participant discussed how they would meet with their co-teacher to "revamp our courses to cover what we'd like to teach better in those classes." One early career participant underscored their own growth with curriculum as a reason for engaging,

> I thought it would also be a really good way for me to sit down and think about how I want to start writing more curriculum….I personally this year struggled student teaching to connect the standards to the curriculum I was teaching, so I thought it would bring in a lot of really good perspectives and helping to connect more with the core ideas.

While a few participants contributed to the final code within the SBAE Change Theme, *Learning for Students*, it was primarily driven by one focus group's desire to improve their programs for their students. One participant offered,

> I think for me it was like an intrinsic want to change. Like, I mean I know what we do, and I wonder sometimes living in that rural community if what I'm doing is actually what my students want to be doing.

In the same focus group, another participant indicated they wanted to make "needed courses for our students." Outside that focus group, another teacher participant suggested they could use the PD experience to have a "more solid understanding of some of the ideas and materials" utilized for the students in their classes.

## Conclusions and Implications

This case study explored the experiences of AFNR Educators who completed a participatory, service-focused professional development emphasizing teacher participants both as collaborators and experts (Desimone, 2011; Roseler & Dentzau, 2013). Findings from this case study are consistent with research outside of AFNR Education suggesting a new model of teacher PD is needed (National Research Council, 2000). As teachers across all career phases equate PD and learning (Avidov-Ungar & Herscu, 2020), any new model of PD must leverage teacher expertise; specifically, teachers should be expected to create and contribute to the knowledge being gained. Community, whether in terms of present community of learners during the PD or a broader community like AFNR Educators (Hofman & Dijkstra, 2010), surfaced as an essential element of participatory PD. However, the most revealing finding was participants' preference for this new type of PD.

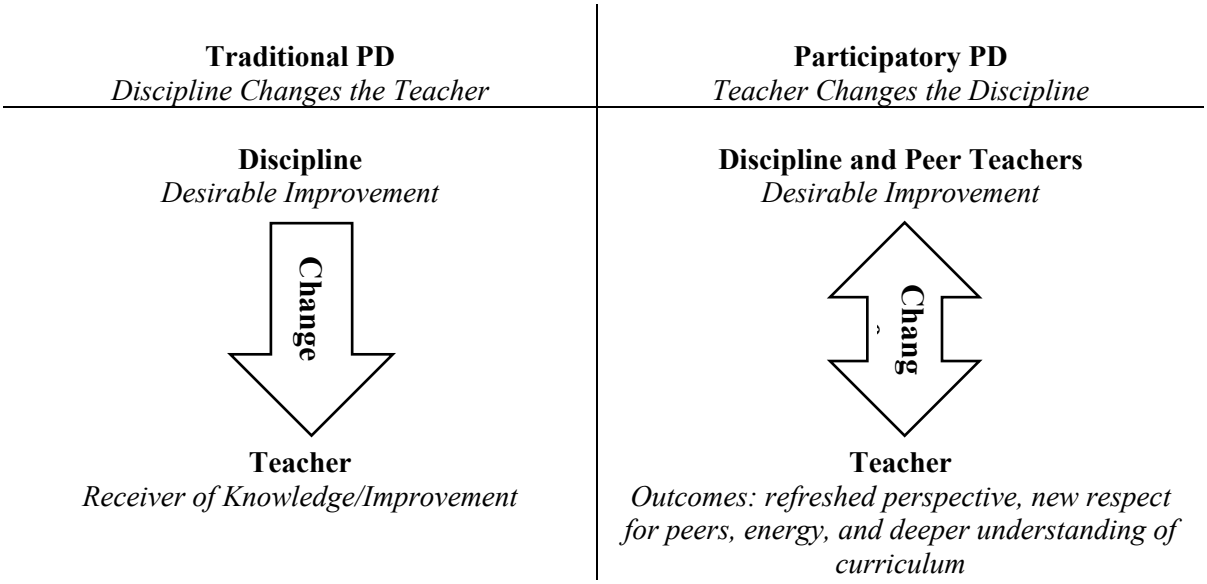
Participants routinely alluded to, or outright said, the participatory PD was more engaging when compared to traditional PD experiences, supporting suggestions for collective participation during PD (Desimone, 2011). While the stated goal of the PD was to create a curriculum resource, participants highlighted many other outcomes of this new format: (a) deeper, wider understanding of AFNR Education standards; (b) a willingness and eagerness to learn from peers; (c) challenging existing paradigms of SBAE; and (d) a renewed energy to revamp courses for students and communities. Given the depth of participant growth beyond the stated goal, participatory PD should be more broadly considered in AFNR Education.

Reinforcing the connection of PD and learning (Avidov-Ungar & Herscu, 2020), one of the outcomes of the new PD format was peer learning, which addresses the themes of *Learning*, *Perspective*, and *SBAE Change*. Potentially, the participatory nature of the PD resulted in participants increasing their professional respect for peers. This development could be related to both the learning focus of participants as well as their change in perspectives. Many participants discussed entering the PD wanting to learn from peers, especially educators with a different amount of experience or a different background. However, once engaged in the PD, participants described peer learning leading to a new element: perspective. Participants described learning from one another's expertise, catalyzing broader discussions of SBAE perspective.

A desire for peer learning and an opportunity to utilize their expertise, this group of teachers learned from each other and changed their own perspectives of SBAE. We describe this phenomenon as *Teacher Changes the Discipline*. Specifically, the outcomes teacher participants achieved were due to their own expertise, resulting in a resource with the potential to change AFNR Education. This is in contrast to traditional PD in which, commonly, an expert (or group of experts) is brought in to change the teacher in some fashion (i.e., improve the teacher and make the teacher more in line with what the discipline perceives as effective). Traditional PD, or *Discipline Changes the Teacher*, can situate the teacher as less-than, or in need of help (National Research Council, 2000). In contrast, participatory PD, or *Teacher Changes the Discipline*, acknowledges the teacher as the expert. Figure 2 juxtaposes the traditional form of PD with a participatory model.

**Figure 2**

*Comparison of PD Approaches*




The main implication for practice is to consider if we, as an AFNR Education community, are missing opportunities to structure teacher PD differently? Based on the findings of this case study, we suggest the answer is "yes." We recommend all states restructure their portfolio of PD offerings to ensure at least one opportunity exists for teachers to engage in participatory PD during any given year. Professional development structured with dictated-to experiences are, however, still beneficial in certain contexts and, therefore, are an effective tool for the profession. However, as a collective, we seem to be missing an opportunity to deepen community while simultaneously increasing collective expertise in a topic or area (Easterly & Myers, 2019). Importantly, the participatory PD structure is not simply achieved by adopting a constructivist philosophy; rather, participatory PD requires sharing the role of knowledge-creator between facilitators *and* participants.

## Future Research

Continued research should focus on future participatory PD opportunities for AFNR Educators. A continuation of the present study would be to explore teacher perceptions of other existing PD structures. Given the preference for a new style of PD, exploration of other PD experiences may help differentiate effective and ineffective PD structures in AFNR Education. Another potential area for research is examining AFNR Educators' potential and interest in innovative PD structures. This could be completed through an experimental study in which a population of teachers is randomly split into two groups and PD on the same topic is offered using traditional and participatory methods. Afterwards, the experience could be assessed (e.g., measuring learning, community, engagement, self-efficacy to change) to reaffirm the need for participatory PD in AFNR Education.

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