

Investigating the Needs of Agricultural Education Graduates



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Abstract

The purpose of this naturalistic inquiry was to obtain general information about the successes, challenges, needs, and problem solving strategies of first year agriculture teachers so teacher education programs are better able to provide support to graduates. Structured group and in-depth individual interviews were conducted with recent graduates of an agricultural education program, as well as with individuals identified as mentors of these beginning teachers. Participants reported that prior to beginning their first year of teaching they had not anticipated concerns with community expectations, decision-making responsibilities, time requirements, nor with students being “dumped” into the agriculture program. Classroom management, comparisons to the previous teacher, curriculum development, and addressing student differences were cited as the most difficult challenges faced during the first year. Beginning teachers in this study have solved challenges and difficulties by developing relationships with teachers and partners. The factors most commonly identified as promoting successful experiences included the support and mentoring received during the first year of teaching, as well as prior experience in the agriculture industry and through FFA experience.

Introduction

The experiences during the first year of teaching have a particularly significant effect on the personal and professional life of a teacher. These initial experiences are “imprinted” on the teacher, creating lasting perceptions that influence teaching-related behavior. Pleasurable initial experiences create positive imprinting, typically resulting in positive perceptions and behaviors. First experiences of a negative, discouraging, and discomfoting nature result in negative imprinting, which, when rein-

forced, may result in a decision to leave the profession all together (Gold, 1996; Hess and Petrovich, 1977).

In his analysis of the U.S. Department of Education's National Center for Education Statistic's Schools and Staffing Survey and the subsequent Teacher Follow-up Survey, Ingersoll (2001) reported that after three years, 29% of all beginning teachers left teaching and after five years, 39% left teaching. He recommends that retaining teachers should be viewed as a potential solution to the shortage of teachers.

In a study of teacher education program graduates more than a decade after graduation, Chapman and Green (1986) found that the factor that most influenced teacher retention was the quality of the first teaching experience. This initial experience was reported as a greater factor than either academic performance or perceived adequacy of the teacher preparation program.

The beginning years of teaching have been described as a “reality shock” as teachers become disillusioned by differences between what they believed teaching would be like before they began and the realities of teaching (Marso and Pigge, 1987). Veenman (1984) cautioned that the term “reality shock” as used to describe the initial experiences of a teacher should not be viewed as a very short time period during which the teacher simply needs to adjust or adapt. The beginning teacher is faced with assimilation into the teaching profession over a longer period of time, possibly resulting in the adjusting of behavior, attitudes, and even personality because of external pressures. Additionally, adjusting to the responsibilities of the adult world and professional life in general add to this reality shock.

Beginning teachers face a myriad of problems. A review of prior research into problems faced by beginning teachers has suggested that classroom management is one of the most seriously perceived problems (Adams and Krockover, 1997; Howey, 1988;

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Mundt, 1991; Mundt and Connors, 1999; Talbert et al., 1994; Veenman, 1984). Other commonly reported problems include time management (Adams and Krockover, 1997; Mundt and Connors, 1999; Talbert et al., 1994), curriculum development (Adams and Krockover, 1997; Howey, 1988; Mundt and Connors, 1999), student motivation (Mundt and Connors, 1999; Veenman, 1984), assessment of student work (Howey, 1998; Veenman, 1984), assistance with individual student differences (Veenman, 1984), and the balance of professional and personal responsibilities (Mundt and Connors, 1999).

There are problems unique to career and technical education teachers that may also create problems for the beginning agricultural science and technology teacher. These include maintaining and managing physical facilities such as laboratories, shops and greenhouses, (Mundt, 1991; Mundt and Connors, 1999; Talbert et al., 1994), designing curriculum without textbooks, ordering supplies (Talbert et al., 1994), and maintaining safety in laboratories (Mundt and Connors, 1999; Talbert et al., 1994).

Agricultural education itself poses a set of difficulties for beginning teachers, including FFA organization and management (Mundt, 1991; Mundt and Connors, 1999; Talbert et al., 1994), liability concerns with FFA activities (Talbert et al., 1994), building support of faculty, counselors, and administrators for the agricultural education program, the recruitment of students into the program, and building community support (Mundt and Connors, 1999). Teacher isolation from other teachers in their own school as well as isolation from other teachers in the same discipline also creates a potential for beginning teacher problems as often times the agriculture program is housed in a building separate from the rest of the school and the majority of agriculture teachers teach in single-teacher programs (Talbert et al., 1994).

Although we have been aware of problems that face beginning agriculture teachers for many years, retention rates of teachers remain low (Ingersoll, 2001). Little information exists regarding how these teachers solve these problems. Gold (1994) suggested that positive experiences lead to a teacher's desire to remain in the classroom. However, little information exists regarding the successes of beginning teachers.

Cole and Fanno (1999) reported that agriculture students at Oregon State University were less likely to leave the college if they had backgrounds in FFA and/or 4-H. Additionally, in a study of freshman enrolled in the College of Agriculture at Iowa State University, Dyer et al. (1999) found that students who had high school agriculture program experience and were involved in FFA and/or 4-H were more likely to complete a degree in agriculture and choose agriculture as a career than freshmen who did not have those experiences. They stated, "High school agriculture programs are good investments by those interested in promoting agriculture. Likewise, graduates of these

programs are good investments by colleges of agriculture" (p. 7). Therefore, colleges and teachers of agriculture at the post-secondary level should be concerned about the quality of secondary agriculture programs.

Methods

This study was a naturalistic inquiry as the researchers attempted to make sense of the experience of beginning agriculture teachers without manipulating the research setting (Patton, 2002). A phenomenological perspective was used in designing this research and in interpreting the data collected as the researchers sought to understand the "meaning, structure, and essence of the lived experience of this phenomenon for this person or group of people" (Patton, p. 104). The "phenomenon" in this study is the first year of teaching; the "group of people" is the group of beginning agriculture teachers. The purpose of this study was to understand the experience, including the challenges and successes, of secondary agricultural education instructors during their first year of teaching. Furthermore, the researchers were interested in understanding how first year teachers faced their challenges as well as which factors were perceived as promoting successful experiences.

Miles and Huberman (1994) suggested linking qualitative and quantitative data to strengthen research findings. They proposed conducting "exploratory" qualitative fieldwork as an appropriate means for collecting data that would lead toward instrumentation. Questionnaires based on the findings of exploratory studies could then be used to collect quantitative data from a broader and larger population, which could in turn be deepened and further tested through additional qualitative work. The focus of this study was to collect exploratory data prior to the development of a quantitative instrument.

Open-ended interviews were conducted in classrooms, environments natural to teachers. It is granted, however, that the presence of the interviewer and the questions being asked most likely had some effect on the natural setting. Although the data were organized around the research questions, inductive analysis was implemented in analyzing the data with no predetermined categories being used.

Research Questions

Open ended questions for the interviews were developed from the five overarching research questions articulated below. The research questions included:

1. In what ways was the first year of teaching different than expected?
2. What were the problems faced by beginning agricultural education teachers?
3. How did beginning agricultural education teachers solve the problems encountered during the first year?

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4. What were the successful experiences of beginning agricultural education teachers?
5. What factors promoted the successful experiences of the first year?

Participant Population

All secondary agriculture teachers in a western state who were in their first year of teaching during the 2002-2003 school year and who had completed the teacher preparation program in agricultural education at the land grant university in that state were invited to participate in a group interview process. The faculty in the agricultural education teacher preparation program identified six teachers matching these criteria. All teachers identified participated in the group interview process.

Of the six teachers participating in the group interview, four were female and two were male. All were traditionally licensed through the only accredited agricultural education program in the state. Four had completed a Master of Arts in teaching degree and two had completed the coursework requirements for the degree, but had some additional requirements they were in the process of completing. Four were employed in programs located in comprehensive high schools while two taught in programs at vocational centers. Three taught in programs in which they were the only agriculture teacher in the school, while the other three taught in multiple teacher programs. The range of programs included an extremely rural high school with less than 100 students to a vocational center that served three urban area high schools with 1200 to 1900 students in each school.

Two of the teachers who participated in the group interviews were selected for individual follow-up interviews. The teachers selected for the individual follow-up interviews were purposefully selected based upon the demographics of the program in which they taught to provide the maximum variability possible (Patton, 2002). One of the teachers selected was male, while the other was female; one taught in a multiple person program, while the other taught in a single person department; one taught in a rural school, while the other taught in an urban school.

Additionally, the two teachers selected for the in-depth interview were asked to provide the name of the person most involved in providing support to them during their first year of teaching. The individuals identified, both of whom were experienced agriculture teachers, were then contacted and invited for an interview. Both consented to telephone interviews.

Data Collection

This exploratory study consisted of three phases for collecting data. The first phase was a structured group interview. All of the teachers identified were in attendance at the state's FFA convention. The

convention took place in late March with the beginning teachers having completed approximately seven months of teaching. The interview was conducted in a science classroom at the high school in which the state convention was held, with all six participants and two researchers gathered around a group of lab tables that had been pushed together. A relationship did exist between the beginning teachers and the researcher who had supervised them during their student teaching and had taught several of the courses in their preparation program. Relationships also existed amongst the participants as they had completed the teacher preparation program together as a cohort group. The questions and responses were recorded and later transcribed for data analysis.

Using an interview protocol derived from the initial analysis of the group interview, in-depth interviews were scheduled and conducted with the two teachers purposefully selected using the methods described above. These interviews were conducted by the primary researcher and took place on two different days within the same week in the teachers' classrooms. These interviews were also recorded for later transcription and data analysis.

The third phase consisted of an interview with the person identified by each of the two beginning teachers in the second phase as having provided the greatest support during the first year. These interviews were conducted by the secondary researcher via telephone. This phase was used to validate findings and look for alternate explanations. These interviews took approximately 20 minutes and were recorded and later transcribed.

Triangulation

The main form of triangulation for this study was the triangulation of data sources (Patton, 2002), primarily through comparing what people say in a group setting with what they say in the individual interview setting, and by comparing the beginning teachers' responses to those of their mentor. Triangulation with multiple analysts also took place through a process of individual initial coding and then negotiation of a formal coding scheme, followed by individual recoding of the data. Themes were then identified separately and comparisons made using cross case analysis (Miles and Huberman, 1994). Additionally, the completed manuscript was returned to those who were interviewed for verification and clarification.

Limitations of the Study

As this study was exploratory in nature, it is recommended that caution be exerted and context carefully considered prior to making any attempt at transferring results beyond the population studied. The nature of potential relationships contributing to bias versus rich data being elicited by the trusting relationship between the interviewer and interview-

ees and the exploratory purpose of the study present issues for future study in a larger, more representative population.

Data Analysis

Interview data recorded were transcribed and analyzed using inductive analysis and cross-case comparison (Patton, 2002; Miles and Huberman, 1994). After the transcription was complete, the text was reviewed with the recording to check for errors. Independent initial coding by two of the researchers followed, allowing codes to be freely associated with the statements provided by the participants. The codes were then compiled and relationships identified between the initial codes across the data sources

in an attempt to develop a formal coding scheme. The data were then set aside for more than one week and re-coded independently. The initial codes were compared with those during the second coding. An analysis scheme was then developed, organized around the five research questions. Codes were organized visually in a matrix for each question.

Themes were identified from this matrix and from the essence of the transcripts. The themes were then placed into a matrix for cross-case comparison (Table 1). This was done to find support for the conjectures made (themes) in each of the data sources as well as to look for alternative explanations.

Table 1. Cross Case Analysis of Results by Research Question

Category	Group Interview	Teacher 1	Teacher 2	Mentor 1	Mentor 2
I. How is first year different than expected?					
a. "Dumping Grounds"	X	X	X	O	O
b. Expectations of community/parents	X	X	X	O	X
c. Ownership/decision making	X	X	X	X	O
d. Time Requirements	O	X	X	O	X
II. What problems and challenges are faced?					
a. Classroom management	X	X	X	O	X
b. Comparison to previous teacher	X	X	X	O	O
c. Curriculum development	X	X	X	O	O
d. Addressing student differences	X	X	X	X	O
III. How have challenges been faced?					
a. Develop relationships	X	X	X	X	X
b. Communication with key people	X	X	X	X	X
IV. What are successful experiences?					
a. Helping students succeed	X	X	X	X	O
b. Developing partnerships	X	X	X	O	X
V. What factors promote successful experiences?					
a. Support and mentoring	X	X	X	X	X
b. Background in FFA and agriculture	O	X	X	X	X

Note. X = comments made in this area; O = no comments made in this area.

Results and Discussion

A cross case analysis table was used to find supporting and alternative evidence for each of the identified themes (Table 1). Themes that were identified in the analysis of data are summarized along with discussion and supporting data, organized around the five research questions. Each of the data sources were identified as follows: “group” represents data collected during the structured group interview; “T1” and “T2” represent data collected during the in-depth interviews with the two beginning teachers; and “M1” and “M2” represent data collected during the interviews with the mentor teachers.

How Was the First Year Different Than Expected?

The participants expressed that they had not expected to have so many students “placed” into their classes that did not want to be there, had no interest in agriculture, and/or had difficulties learning and expected the class to be “easier” than traditional academic classes. One teacher expressed concern about the misinformation provided by counselors to students. During an in-depth interview the teacher stated:

“You get a lot of kids dumped in your class. Getting them to understand that there's science involved and they're going to have to work and get motivated [is difficult]. You get a lot of kids that are dumped in the program because of what the counselors have told them” (T1).

During the group interview, other teachers made similar statements. One teacher stated, *“When the kid doesn't do well in something else, [the counselors] just send him out to me”* (Group). Another teacher added concern about counselors “dumping” students into a landscape design course by stating, *“They sent me a student eight weeks into it and expected him to get a grade just because he hadn't done well in another class. They just send them out to me”* (Group). Some teachers conveyed concern that their courses were viewed as easy, or non-academic. During the in-depth interview, one teacher explained, *“It's very frustrating to me for them to constantly use us as a dumping ground . . . and to constantly use us as a non-academic class when we do so many things that are academic”* (T2).

Another area in which the participants expressed that they were not prepared or did not expect was in regard to expectations from parents and/or community members. During the group interview, one teacher commented, *“Where I didn't see things is struggling with parents. I really enjoy the kids but maybe just the parent part is what I've been still struggling with”* (Group). Another teacher expressed concern with the community and parents' lack of understanding about the agriculture program in saying:

“A lot of the parents don't understand and so it's

been a struggle dealing with parents, whether it's trying to get their son or daughter to go on an FFA trip with you, and trusting your program because the students have a better idea of the program than the parents do” (T1).

One of the mentors supported the comments made by the beginning teachers in saying,

“The biggest problem is that alumni and parents think that when they think something, that's how we as ag. teachers should think. If they would do it a certain way then we're supposed to do it that way and that's not the way it is and [the beginning teacher I mentored] has struggled a couple of times in particular with parents that were pretty head strong” (M2).

Many of the teachers hadn't expected the latitude they were given with their own programs, the decision making abilities they were given, and the ownership they felt in their program. One teacher during the group interview commented, *“[I] didn't realize the full responsibility of it. I'm the one that makes the decisions and that's weird. I've never been the boss. It really throws me off guard sometimes”* (Group). One teacher in an in-depth interview said:

“It's been really good to be able to have the kids as my own and to be able to form the program. It's been really nice to actually take my ideas and implement them and see things form through the whole year” (T1).

The mentor who taught in a multiple person program with a beginning teacher explained that program ownership was essential in the development of a beginning teacher, even in a multiple person program. The mentor said:

“We divided responsibilities. I really trusted [the beginning teacher] would accomplish those things and really gave [the teacher] the freedom or flexibility to do what [the teacher] wanted within those areas. I think that giving the freedom to do that probably helped in [the teacher's] successfulness” (M1).

The beginning teachers who were interviewed individually expressed that the amount of time required was more than they had expected. Interestingly, no comments to this effect were made during the group interview. It may be that the teachers were unwilling in a group setting to admit that the time commitment was larger than they had expected. One of the beginning teachers stated:

“It takes so much time for me. I don't have the curriculum down where an experienced Ag teacher would. I'm still learning a lot about the program and the FFA as well and that takes some time. I expected to be able to leave a couple of nights a week right after school. I knew I was going to have some time commitments where I was going to be here late. I didn't know it was going to be as much” (T1).

The other teacher interviewed shared similar feelings, being concerned specifically about taking time for self. The teacher said, *“I knew it was going to be really long hours and I knew there was going to be not so much personal time but it's been really hard for*

me at times to say no and balance that” (T2). One mentor teacher verified the beginning teacher's struggles with the time requirements by saying, “Just trying to schedule everything and make sure that it goes . . . it can be overwhelming at times” (M2). When asked what areas in which the same mentor teacher felt the beginning teacher was least prepared, the mentor responded, “I think for how much time and effort it takes to run a full program . . . and dealing with parents and those type issues” (M2).

What Problems and Challenges Were Faced?

Classroom management was one of the most commonly reported difficulties. During the in-depth interview, one of the teachers confided, “I'm constantly worried about classroom management and if I'm doing a good job of it” (T1). This was also echoed by another teacher in the follow-up interviews. The teacher stated, “Classroom management has been a struggle. Probably that's been the most problematic” (T2). One of the teachers in the group interview reported: “The other challenge for me would probably be just the classroom management and having to deal with some of the kids” (Group).

One of the difficulties expressed by beginning teachers was moving into a program and replacing the previous teacher. Difficulties were experienced by teachers who moved into what might be considered weak programs. One teacher stated, “There were certainly huge fans of [the person I replaced] and then there were also students who took the classes to slide. One of my biggest challenges has been trying to raise the bar without losing students” (Group). Difficulties also were experienced by teachers who followed teachers that were perceived as providing a strong program. Another teacher in the group interview said:

“Standing next to the measuring stick of the [teacher] before you is big. I didn't go and spend a whole lot of time talking with the person who I took over for. I felt it was important to forge my own path” (Group).

Another difficulty reported by the beginning teachers in this study was the development of curriculum and the selection of appropriate curriculum material for their students. One of the teachers in the in-depth interview reported, “It was hard picking what to use in curriculum and where to use it. I find myself pulling from what's already been developed but then trying to develop my own from what works for me” (T2). A teacher in the group interview said:

“Curriculum is a huge challenge. What on earth do I teach today? I have no materials. I have everything I have from college so I go through that and try to tone it down. I steal and beg off of other people [and] use the internet. How do I bring it down to their level? How do I make them pay attention and get something out of it and enjoy it?” (Group)

Working with students who have different abilities was reported as a difficulty by the beginning teachers. In the individual follow-up interview, one teacher cautioned:

“You're going to get a variety of students with a variety of learning curves . . . some very bright students and some struggling students and that can be a problem if you cannot manage your lesson to be able to get both people involved. Your bright students are going to get bored if you go too slow. The students that are struggling are going to lose you if you go too fast. I have about 50 to 60 students that are on an Individual Education Plan. And in one class, out of 20 kids, about 15 of them are on an IEP. Not only that, a lot of times they come with a behavioral problem” (T1).

How Were Problems Solved?

Both beginning teachers and mentors mentioned several times the importance of working with other people during the first year to solve problems. One teacher said:

“Teachers don't get paid a lot, but you're working with some pretty neat people, pretty special people and you've got to think of your students that way . . . and that makes up for the money you don't make in my mind. If you're in it for the money you don't belong here” (T1).

Communication was mentioned several times by both beginning teachers and mentors as being an important method for addressing problems faced during the first year. When asked how the problems of the beginning teacher were faced, one teacher said the problems were solved --

“By making sure that I've tried to be a quality classroom teacher and actually taught things in my classroom . . . then talking with other teachers and making sure they know what's taught in the classes. I think it's really helped . . . talking through what we each teach and trying to build the relationship with the counselors” (Group).

Beginning teachers who work in multiple person programs have different challenges. Communication with the other agriculture teacher in the department was viewed as being extremely important. The teacher in the multiple person program reported, “I think [in] working with your partner [agriculture teacher], communication is the key” (T1). The mentor of this beginning teacher stated, “It's been a good working relationship. We've had real open lines of communication . . . trying to check in advance to make sure we were thinking the same things before we told kids things” (M1).

What Were the Successful Experiences?

The most common response provided by the teachers in both the group and individual interviews to the question regarding successful experiences revolved around the students, primarily in helping students succeed. Comments from the teachers

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included helping students experience success in classroom as well as in FFA and SAE activities. One teacher commented, “*I think it's exciting just to see kids succeed whether it's in FFA or whether it's in the classroom. I don't mean like my good FFA kids either*” (T2). Teachers in both the group and individual interviews affirmed that their experiences with students were particularly positive when helping those students who hadn't experienced much prior success. One teacher from the group interview stated:

“I think long hours with a student helping them out then that students succeeds, I think is probably the highlight of this whole job. When you see a student succeed is even better when a student is kind of marginal and not sure about themselves” (Group).

A teacher during the in-depth interview said, “*I think the most exciting thing is seeing a student win an award, especially if it's a student that [has] never won an award before in their life*” (T1).

Developing partnerships with business and industry and working with the community members, parents, adult groups, extension agents and 4-H leaders were also cited as successful experiences by beginning teachers. One teacher during the group interview stated, “*It's tremendous to see how much when a community comes together . . . how much they can get done for you . . . it has made my job so much easier at times*” (Group).

What Factors Promoted Successful Experiences?

The most common response to the question regarding factors promoting successful experiences included support and mentoring from other individuals. The majority of the responses cited positive support from other agriculture teachers as being a very important factor in helping them to be successful during their first year. One teacher stated:

“I've tried to explain to people that aren't in [agricultural education] how unique it is because we are great . . . whether you talk to someone else in your district or you talk to someone outside your district it doesn't matter where you're at. You're going to help each other and you can't say that about another teacher” (T2).

The beginning teachers' prior experiences in FFA and in the agriculture industry were also cited several times as factors contributing to the successful experiences of the first year. One teacher during the in-depth interview said, “*I think one thing that's been really helpful is having the FFA background. I've fallen back on having that FFA background so many times*” (T2). The other teacher interviewed individually said:

“I really appreciated my FFA experience. Growing up in this program, I knew all of the agriculture teachers before I got out of college and it was pretty easy for me to work with them. A lot of them were teaching agriculture when I was in high school. That has been a tremendous benefit when it came to the FFA part” (T1).

Both mentors interviewed affirmed the statements by the teachers. One said, “*I think [this teacher's] background has contributed tremendously . . . in terms of growing up around FFA and ag programs . . . being a state officer, experiences in college, work experience*” (M1). The other mentor commented, “*[This teacher] is best prepared with some personal experience in curriculum with animal science and things [the teacher] has done in the past*” (M2).

Summary

This study was exploratory by design and conducted with a small number of beginning agriculture teachers in one state. As mentioned previously, it is recommended that caution be exerted and context carefully considered prior to making any attempt at transferring results beyond the population studied. However, following the model proposed by Miles and Huberman (1994), these findings could be used in the development of a questionnaire that may determine if the reported challenges and experiences are widespread for agriculture teachers.

Similar to the findings by Marso and Pigge (1987) the first year of teaching was different than expected for the teachers in this study. Some challenges faced by these teachers such as time management, curriculum development, addressing student differences, and classroom management were cited in previous studies (Adams and Krockover, 1997; Howey, 1988; Mundt, 1991; Mundt and Connors, 1999; Talbert et al., 1994; Veenman, 1984). However, unexpected challenges with community expectations, comparisons to the previous teacher, decision-making, and students being “dumped” into the agriculture program were found in this group of teachers as well. Attention should be given to these less documented challenges and studies should be designed to determine if these challenges are experienced by teachers beyond this population. If so, teacher educators and others providing support to beginning teachers should keep these challenges in mind when developing support programs.

All of these may be challenges teachers never faced in their student teaching experience. Teacher preparation programs should inform teachers of potential challenges they may expect in their first year of teaching. Beginning teacher workshops might be implemented to help teachers discuss and problem solve these challenges and expectations during their first year experience.

Beginning teachers in this study had confronted challenges and difficulties by developing relationships with teachers and partners. Beginning teachers emphasized the factors that promote successful experiences are the support and mentoring they receive in their first year of teaching. Effective mentoring programs should be developed and modified to help beginning teachers in their first years of teaching.

Further research would strengthen the conclusions of this study. A quantitative follow-up on a broader population basis should be conducted. This might include a national survey of beginning agriculture teachers. A stronger qualitative approach might serve to deepen and systematically test the experiences of first year teachers. Methods used might include a long term case study of beginning teachers including interviews before, during, and after the first year, observations throughout the year, and reflection journals kept by first year teachers.

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“Advancing the scholarship of teaching and learning”

