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Two Heads Are Better Than One? Students' Evaluation of Team Teaching in a Teacher Education Classroom¹

by

Xu Di and Margaret Zidon

"Two heads are better than one." We are all familiar with the saying. However, is it indeed the case when it comes to teaching when a team approach is adopted? What impact does such a team approach have on students?

The research efforts to address our first question have been numerous (Barnett, 1982; Erb & Doda, 1989; Lewis, 1981; Thomas, 1992; Vars, 1987). Team teaching, a method that can be traced back to the early days of education, has gained a new momentum as an alternative teaching approach in the past decades. The outcry of teaching as a lonely profession (Miller, 1990; Sarason, 1966), the educational movements in mainstreaming (Myers, 1991; Villa & Thousand, 1992), and holistic and interdisciplinary teaching (Watkins, 1990; Sarkees-Wircenski & West, 1990) have all pushed team teaching to the forefront of educational research. A brief literature search has yielded 426 research articles on this very topic alone in the past five years. They have documented team teaching at different levels, from elementary schools (Boles, 1991, 1989) to middle and high schools (Goodwin, 1991; MacIver, 1990); from undergraduate classes at community or comprehensive colleges (Beckman, 1989; Leitzel, 1990) to graduate courses (Crossman & Behrens, 1992). The subject contents of this research range from a single subject such as language, writing (McKeen & Bleske, 1992), physical education (Faucette, 1992), geography (Jackson, 1989), computer technology, medicine (Brody, 1989), psychology (Morlock, 1988) to special education (Yau, 1988) and interdisciplinary programs (Miller & McCartan, 1990; Scarborough, 1993). The team structures vary from case to case, including partial teaming (in either teaching preparation or delivery), and complete teaming (cooperation in all aspects of teaching). A careful examination of this vast literature reveals a strong support for the old adage: "Two heads are better than one." Overall, they portray a very positive picture of team teaching and strongly advocate for its implementation in education.

Although team teaching appears to be a thoroughly researched topic, we see an opportunity for further research in several areas. More studies are conducted at the K-12 level and in an interdisciplinary setting than at the higher education level and in a single subject course. The study of team teaching in teacher education, where innovative teaching approaches are supposed to be tried, tested, and taught, obviously demands attention. As teacher education plays a key role in promoting an instructional method, the lack of organized research on teaming in higher education is surprising. In addition, almost all of the studies so far have primarily focused on the perspectives of researchers, teachers, and administrators (Goodwin, 1991; Scott, 1987; Smith, 1993). Few have examined team teaching solely from students' perspective. Greene (1992) and Willinsky (1990) express strong concerns about the absence of student involvement in educational assessment.

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Erickson and Schultz (1992) point out that "virtually no research has been done that places the student experience at the center of attention," and describe this phenomenon as "systematic silencing of the student voices." Since students represent the overwhelming majority in education and are the very reason for the existence of educational enterprise, it is crucial to include their experience in evaluating team teaching.

Our research questions derive from this gap in the literature: How does team teaching affect teacher education? Will the result be drastically different from team teaching in other settings? What impact does such a team approach have on students? To address these questions, in the 1991-92 academic year, we conducted a qualitative research project² in an undergraduate teacher education course, collecting students' journals, surveys, and interviews. In 1992-93, we did a follow-up study. The following is a report of our research design, findings, and analysis.

Research Design

This research was conducted in a two-credit educational foundations course in secondary education, entitled "Microteaching." It is a required course for all secondary education majors to take after the completion of all their other educational courses and right before their student teaching. The purpose of this course is to combine all the theories students previously learned with practice and to prepare them for student teaching and their future careers. We chose this class as our research site because students are definitely committed to teaching as a career, they come from a variety of subject areas such as sciences, arts, physical education, languages, etc., and therefore represent the diverse student body better. The number of students participating in this study is 97 (68 for 1991-92 and 29 for 1992-93).

This research is primarily qualitative. We collected data throughout the academic year by the following means:

- 1. Journals—Students kept weekly journal entries. They wrote and reflected whatever they thought important on teaching in general, or on readings and class events related to the course. Only once were they particularly asked to give some feedback on team teaching in class.
- 2. Interviews—A third of each class (in 1991-92) was chosen randomly for a 20-30 minute interview, which resulted in a total number of 24 interviews. Half of the interviews were conducted at the midterm, half at final. Since interviewees are likely to be more objective with an interviewer who does not have a personal interest in the course, and are inclined to contribute more in-depth discussion with the course instructors as the interviewers, half of the interviewees were randomly chosen to be interviewed by an outside interviewer, who has both experience and expertise in team teaching. The other half of the interviewees were interviewed by the team teachers.
- 3. Surveys—A survey was given to all students towards the end of the semester. The researchers had access to them only after the final grades were turned in.
- 4. Course evaluation—The standard course evaluations were collected to add information on students' responses to team teaching.

²This study was approved by the University Human Subjects Committee on October 3, 1991. It was funded by the Office of Instructional Development and the Center for Teaching and Learning, University of North Dakota.

- 5. Audio- and videotapes—A portion of classes was recorded with either audio- or videotapes.
- 6. Data analysis—All interviews were transcribed, and HyperQual was used to code and process the data. All the data were coded by the two researchers completely separately, then compared and compiled with the input of an independent analyst.

Two factors are particularly worth mentioning: First, a complete collaborative model of team teaching was adopted in this course, that is, instead of partial cooperation in teaming (either in planning only or taking turns in instruction), the instructors planned and taught the course together all of the time. Second, of the two required student presentations, one was assigned so that students paired off with each other. Therefore, students had a full experience of team teaching, not only observing and experiencing it as learners, but also experiencing it as preservice teachers as they practiced the approach themselves. The following research data reflect these two characteristics.

Research Findings

Of all the students (N=97) who participated in our study, 78% had never experienced team teaching in any formal class setting before. The majority of the remaining 22% who had had team instructors previously indicated that the experience came from taking classes at the Center for Teaching and Learning. Only 5% had had team teaching experience in high school or other university settings, and the team approaches they experienced all varied from the one used in this class. To them, team teaching was a rather new concept, and most indicated either surprise, curiosity, or confusion to a certain extent at the beginning of the semester. At the end of the semester, however, students responded very positively about their experiences with team teaching. When asked (at the end of the semester) to compare team teaching with one-teacher instruction, all the students graded team teaching as significantly better (giving it an average rating of +2 on a 7-point [-3 to +3] evaluation scale). Many listed team teaching as the most valuable aspect of the course, and yet others commented, "Keep it up!"

What, then, changed the students' attitudes toward team teaching from ambivalence or confusion at the beginning of the semester to overall enthusiasm at the end? While analyzing all the data, we realize that team teaching has impacted students in a multidimensional manner, from social to academic, and from the teaching and learning environment to fundamental issues of education such as motivation, participation, and range of knowledge acquired. Literally, hundreds of themes have emerged, presenting a very complicated impact of team teaching as students experienced it. To summarize their response in a manageable way, we focus on the four major advantages of team teaching as students ranked them in their surveys, evaluations, and interviews:

³The scale was as follows:

- -3 terrible compared to one-teacher instruction
- -2 very bad compared to one-teacher instruction
- -1 simply worse compared to one-teacher instruction
- 0 same as one-teacher instruction
- +1 better compared to one-teacher instruction
- +2 much better compared to one-teacher instruction
- +3 excellent compared to one-teacher instruction

Advantages of Team Teaching

Different Perspectives—This is the first and strongest theme in the students' evaluations. With two instructors team teaching in one class and on one subject, students felt they obtained a variety of perspectives that go far beyond what a one-instructor course can offer. Every single survey or interview⁴ touched on this in a certain way. One student noted:

• It is really fun, because they (teachers) both have different ideas about the same subject, and they try to make you do different things that normally maybe one or the other wouldn't think of. And I think that's why I really enjoyed being in the class.

The diversity and richness of the team, according to students, were not limited to opinions or points of view alone; they also comprised the teachers' "experiences," "backgrounds," "teaching styles," "personalities," as well as "language," as revealed by the following comments:

- The availability of two opinions and ways of approaching an idea or issue was the most effective for me.
- Instructors "are very different people in terms of background and experiences so you get to see things from two different angles which helps a lot."
- One thing I like about it is you have two different personalities, and two different sets of
 ideas. ... I didn't notice that they were in conflict or whatever, but it's kind of refreshing
 to have the two different personalities come out at different times and interact with the
 class as students.

In addition, the different perspectives did not come from the instructors alone. Team instruction consequently encouraged students' own involvement in classroom participation. As one student commented, "I enjoy hearing other peoples' views and likewise with the teachers. Different views." Yet another exclaimed, "There are actually fifteen teachers in that class. We all teach, learn from, and criticize one another."

All these differences of the teachers initiated and invited "the opportunity for a plurality of ideas," which challenged students to look at each issue differently and think more critically instead of simply seeking a right answer.

Increased Interaction—As instructors teamed up, students really enjoyed the large amount of interaction with instructors. Team teaching offered "availability of two instructors" and "dual feedback," both written and verbal. It also allowed instructors to be much more involved in group activities and with individuals both inside and outside the class. Students described this aspect as one of their favorite parts of team teaching:

- In having two teachers, there is more one on one involvement. I think this is an effective method.
- The feedback from both instructors. They each have their own style and share them with us. It gives me new ideas as well.

The presence of two instructors not only increased the student-teacher interaction in terms of frequency but also enhanced its quality in terms of student understanding:

⁴Students' surveys and interviews, 1991-93.

• I like having the two teachers.... One instructor might present something, and I'd be kind of sitting there, "Well, I really don't understand," and then the other instructor would come around and she'd reiterate it in a different way and she'd say, "You know, this is ..." And I'd go, "Oh, yeah!" So people think differently, and they relate—people are different. There are different variations. And you reach different people in different ways.

Students not only had more access to instructors but also had a "personal choice," which made them more relaxed and comfortable in interacting with their instructors.

Learning Environment—Due to the display of diversity and increased interaction, students felt that with team teaching the class atmosphere was "safer," more "democratic" and inviting for learners to participate:

- I think there are a couple of things that I especially liked, especially from our class. With two people, it's like, you feel ... It's not like there is an authority figure in the classroom because there're two people.
- I think it (team teaching) encourages discussion.

Feeling secure and involved, the class gradually develops a bond, which creates a healthy teaching and learning environment. Teachers and students get to know one another and form a community.

- They (instructors) got to know us really good, and it's a small classroom, so everybody enjoys one another's company. I think it is really important.
- I think with the teachers being able to participate in the small group discussions, or they're able to participate in the different demonstrations that we had with the microteaching. It just seems that they're more a part of the—instead of one person up there telling you what to do, it's more like they're part of the group.

For students, they mingled more as well:

- After a class like this I remember everybody. The only people I really knew beforehand was Tom, Jan and Mike in other classes. They were in straight lecture classes. ... I've talked to Jan about three or four times, Tom about once or twice, but never really knew them. I would never stop them on campus and talk to them. But now I think just after class it seems every time you leave class you are talking to somebody different.
- My partner and I ... we worked really well together, and became better friends because
 of it. And so it was an enjoyable experience.

Compared with lots of courses where students feel like just a number or attend like a robot, this community provided students with a safe environment, the motivation, and the support to strive for better academic accomplishment. At the same time, with teachers as learners and learners as teachers, it was more likely for the class to take the risk and explore teaching and learning jointly with more adventure and creativity.

Cooperative Model—With two instructors in the classroom working together, students also found that this provided them a good cooperative model to follow. Since they were going to student teach right after this course and since one of the big challenges of student teaching is to work with cooperating teachers and supervisors, it became extremely valuable for them to observe teamwork and to use it as a model for their own group work and student teaching. Students drew comparisons between team teaching and their upcoming student teaching:

- It's almost like student teaching. You have another teacher in there.
- I think it would be very helpful for the new student coming in to student teaching, just to see what teaching is all about.

As novice teachers in training, they found team teaching provided a more assuring start for them. They gained more confidence, more control over the situation with the team teachers' presence. One remarked, "If you had two people leading the class, it would take a lot of pressure off." Another student, after beginning his student teaching, came back to report that team teaching in this course had served as a great preparation for him to work with the cooperating teacher in high school. As a new teacher, he felt quite tense and nervous, but working with another teacher greatly reduced the tension. Since he was teaching in high school he realized the value of team teaching in handling workload and preventing teachers' burnout.

Team teaching also served as good preparation for student teaching in terms of exposing students to different teaching styles, connections between disciplines and subjects, and it gave students a chance to learn how to "work together with others." In the survey, listed under the category of "most effective" were the following comments:

- You have to come together and decide on your team presentation. Cooperation!
- Working together with another person on the same topic.
- Team teaching forces us to work with other people and forces us to accomplish goals. Like
 in our team teaching experience we had to work together, to get along and complete the
 assignment.

For them, team teaching provided an educational alternative model. At the same time, the diversity and richness exposed students to many teaching styles, ideas, approaches beyond team teaching itself. This was extremely pertinent to the course theme and crucial for students' preparation as novice teachers. Moreover, cooperation prepared them for the real world at large.

The richness, diversity, and the breadth and depth of knowledge presented in team teaching, together with a congenial educational environment and a keen pertinence to the purpose of the course, largely accounted for students' changed attitudes toward team teaching and their high rating of the class as "exciting," "fun," and "enjoyable." The strength of team teaching was in its potential to display the connectedness of academic, social, and emotional dimensions, creating a richer experience in teaching and learning.

However, it is important to point out that these four attributes, by no means, form an exhaustive list of the advantages of team teaching. Many other beneficial factors also emerged from the data. For instance, students found that team teaching helped to maintain classroom discipline, to keep the class continuity during the absence of one instructor, and to provide easier or alternative access to instructors. Students who had previous team teaching experiences expressed a strong preference for full cooperative team teaching (instructors present all the time and teaching cooperatively) over partial turn-taking team arrangements. The full cooperation of the team provides better "continuity" and "clearer communication."

Dilemmas of Team Teaching

Our research also indicates that since team teaching was a novelty to the majority of the class, a lot of issues and concerns needed to be addressed openly and explicitly in order to assure the effectiveness of this approach. The biggest fear of students for team teaching was that the

instructors may send mixed messages in class due to personal conflict, power struggles, or miscommunication. As preservice teachers they were also very concerned about the potential for implementation in their own teaching.

Conflicts—Students' main concerns about team teaching seemed primarily social. They were highly sensitive about and wary of the relationship between team teachers. Relating his initial concerns, one student told the interviewer:

• I hope they work well together. If they work well together, I think this will be really great. But, if they don't, then I'm scared. I don't want to ... I don't think this will help me at all, if those two are just bashing each other.

While discussing team teaching's disadvantages, some indicated:

- The only thing I can really think of is that if the team teachers don't really get along, or
 they don't really mold to each others' teaching style, because I know teachers have
 different teaching styles.
- We talked about the negative aspects of two teachers not getting along, and I think that would be a risk of two teachers getting mad at each other, not sharing the same enthusiasm one day, or maybe one doing more than the other.

To a few, their own team teaching experience seemed to validate such fear and concerns. One discussed her team teaching presentation:

• My first presentation, because I disliked my partner, I never felt prepared because we never got together outside of class to prepare our lessons.

Another described his previous experience of team teaching in another course,

My other team teaching class that I had is, the two professors hated each other basically.
 And it was more of a class of watching those two argue than teaching. No, they were not arguments trying to show points of views, it was just mine against yours.

These social concerns are ultimately academic. Without a comfortable and healthy social environment, teaching and learning will simply not proceed, at least not at their best. Here, what is important in the team teachers' relationship for students is not that they have to constantly strike a resonant note or become lifelong buddies. The key is that they create a challenging and inviting atmosphere for students to learn, not a battlefield for themselves to show off. They can definitely disagree, but such disagreement must have an educational value which inspires learners instead of turning them off. In the surveys, students clearly differentiated between "getting along" with that of different perspectives:

- They need to be able to get along with one another to be able to work together, but at the same time, there should be differences to allow room for different viewpoints.
- It's very possible to disagree. It depends upon how the disagreement is handled. If it's handled effectively, it can actually be very beneficial. But if it's not handled effectively, it can be destructive. There's a lot of power to disagreeing, from one side to another.

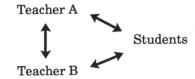
If this power is not used appropriately, the unpleasant relation between team teachers can indeed be destructive and negative for any learning to occur.

Communication—While team teaching changes the teaching model from one-teacher autonomy to collaboration and cooperation, it also complicates the communication. Consequently, instead of the traditional two-way relationship between a teacher and students, now team teaching increases it to a minimum of six-way communication.

One teacher classroom:

Team teacher classrooms:

The teacher ← Students



During this transference from a single-mode communication to a multi-mode communication, complications naturally increased. Students often felt perplexed and worried about the missignals and ambiguity. Especially at the very beginning, they simply wondered to whom they should talk:

 I'm never quite sure who I should discuss something with or how I can involve both teachers.

As the class progressed and students got to know the team teachers, the situation got better. However, the fact that there was more than one facilitating figure still made some students pause before they communicated. The issue simply did not fade away.

- Sometimes it is difficult to talk and communicate to both instructors all the time.
- If the two teachers have not contacted each other about the class activities and assignment, then the students will get confused.
- What frustrates me with team teaching is not knowing who is in charge and accountable.
- I'm not sure who to go to with questions for fear of offending the other and confusion as to whose turn it is to make comments on the papers.

The confusion would definitely arise if cross-purpose communication occurred from team teachers' instruction. For instance, one student mentioned the following case:

 Well, in my other class, the teachers had different standard and objectives, which was very frustrating.

Although students highly appreciated the diversity and richness of team teaching, they were very much concerned about the possible ambiguity, confusion, and mis-communication that team teaching might bring. They perceived that their achievement levels and future careers were dependent upon the success of the teaching team.

Implementation—As preservice teachers in training, students were very keen on the possibility of applying team teaching in their future careers. While observing and experimenting with the approach, they remarked on the dilemmas for implementing team teaching in the classroom, which range from practical to policy issues.

Practically, it was a constant challenge to find enough time to make the adequate preparation for team teaching. One told the interviewers:

- I know one big drawback was trying to find time for us, because we're both so busy. It was always hard to try to schedule the time together. We finally did it. But that's one drawback. If you were doing your own lesson plans you could just sit down and write it out ... whenever you have time. But it has to be more organized when you are team teaching because you have to spend time together to get your thoughts on the same track. Because I know it took us quite a while to get one thing, get everything going in the same direction.
- Team teaching requires much careful planning and it can be difficult to get organized (timewise) with another person.

Closely connected with the time issue are current educational structures and the policy issue of teaching load. Many point out:

- Ideally I would like to try it (team teaching), but realistically I have never been in a class in high school or junior high where the teachers had that luxury.
- I probably wouldn't (use team teaching) because I don't think schools would financially be able to allow it.
- I don't mean to be highly critical of team teaching, but when I look at the state of secondary education and the quality of students that must be taught, I feel that team teaching is an expensive luxury that will not stem the tide of mediocrity. If we had students, parents, and government officials that respected education and educators, then I would whole-heartedly back team teaching for the information it would provide the students and the rich teaching environment it would provide.
- I can't see [a] school system allowing that because it would be so expensive. I wouldn't want my pay cut.

As it is, the current education system, especially higher education, is structured very much according to the one-teacher autonomy model in terms of time schedule, workload assignment, salaries, and other related matters. In order for team teaching to be implemented more widely as an alternative in teacher education programs, fundamental policies need to be reconsidered and adjusted. This presents an extremely difficult dilemma when the nation is facing an economic recession and considering increasing, rather than decreasing, teaching loads.

These three dilemmas in team teaching regarding the team teachers' relationship, communication, and team implementation are just as real and powerful as the advantages of team teaching. While the advantages promise a better education, these dilemmas, if left unsolved, could wipe out and negate all the possibilities and promises of team teaching.

Analysis

The students' surveys, interviews, and journals from this course throughout our research illustrate a complex picture of both pros and cons of team teaching in teacher education. If we go back to our original research question—are two heads indeed better than one in teacher education from the students' perspective—then the answers can be as follows:

First, this research indicates that two heads are better than one. It reconfirms the powerful influence of team teaching in a number of studies (Barnett, 1982; Boles, 1989, 1990; Clarke, 1977; Erb & Doda, 1989; Lewis, 1981; Vars, 1987) and suggests further that team teaching, as an alternative approach, can provide very positive experiences in teacher education classrooms for students. While experiencing team teaching, students benefit from an improved environment,

social and academic interactions, and better performance. Students enjoy the collegial learning atmosphere, the dialectic relationship with teachers, and better motivation and participation as a result. However, different from teachers and researchers, the benefits of team teaching that students focus on are largely on the content, process, and implication of learning versus those of teaching. What they appreciate most is the richness, diversity, and complexity of knowledge that team teaching brings to them. Learning through team teaching provokes more interest and offers more challenge. As preservice teachers, they view this experience far beyond an instructional approach used for this course alone, but more importantly as part of professional development that opens them up for alternatives and new avenues. To a certain extent, the advantages of team teaching for students outweigh those for teachers for the ultimate purpose of education and the very reason for the existence of the teaching profession reside in the students' academic and professional development.

However, the answer to our original research question does not stop here. The second response, drawn from students' data, is that two heads are not necessarily better than one. Since the dominant teaching approach has been one teacher per course, the use of team teaching can be a dramatic change for students. The dilemmas that students face in team teaching require significant attention from teachers, administrators, researchers, and policy makers. The issues need to be addressed openly and explicitly so that students are able to adjust to and benefit from this approach. Moreover, such efforts need to be continuous. As this research indicates, the issues of communication and potential conflict will never go away in a team approach. How the situation is handled and how students' dilemmas are addressed largely determine the rise or fall of this methodology. The simple math formula, one plus one equals two, does not always apply in team teaching. The dilemma presented in this research can be detrimental to a whole class or an individual student despite the fact that teachers or researchers may find teaming effective or satisfactory. For these preservice teachers, a bad experience with team teaching often will color their view on this and other alternative teaching approaches and affect their willingness to explore and implement such innovative approaches in their own teaching careers.

These two seemingly contradictory answers may sound confusing, however, they represent the reality more closely. Team teaching itself, as an alternative approach, can be either positive or negative for teaching and learning. This offers a good explanation for the research conducted by Faucette (1992), Webb (1988), and Lopossa (1971) which contradict the majority of researchers, declaring that team teaching has either no advantage or even disadvantage compared to individual instruction under certain circumstances. Our research reveals that, as powerful as team teaching is, it does not lead to success by simply adding up instructors. The real power and key to team teaching lie in how well the members of the team work together for the benefits of the learners. The measure of real successful team teaching does not stop at improvement of teaching but advances one step further to the enhanced quality of learning. It is how teachers team teach, and more importantly, how students perceive the team dynamics that make the real difference. In this research students discussed some of the qualities that may assist their learning in a team teaching setting. They include teachers' willingness to work with each other and with students, careful organization, flexibility, less ego, and common goals. One student summarizes that the key for team success is to keep in mind that the goal of teaching is "to educate your students." The ultimate resolution to any dispute in class "should be that learning is important." All that goes on in the class, no matter different or similar, disagreement or agreement, should serve educational purposes and enhance students' learning.

It is important to point out, however, that the findings of this research, similar to other research on team teaching (Bergman, 1990; Kasten, 1989), indicate the benefit of team teaching is

gained in the affective domain of teaching and learning as well as in the variety of subjects and contents. While researchers have indicated strong ties between affective satisfaction and students' overall achievement, the actual relation between satisfaction and achievement and the depth of their learning remains to be explored in future research.

The revelations and limitations above provide direction and challenge for further study in this field. While this research suggests that teams which are well organized and executed have a positive impact on students in teacher education, the questions remain: How much is this satisfaction really reflected in students' performance in terms of qualitative and quantitative measurement? How far will this impact last in student professional and personal development?

Conclusion

Overall, this research portrays both the potential advantages and disadvantages of team teaching in teacher education from students' perspectives. Student reactions to team teaching in this particular course were mainly positive. They welcomed the diversity, increased interaction, and improved learning environment, and liked the alternatives team teaching offered for their professional development. However, they were also strongly concerned about the conflict and confusion which hinder their learning. As students' descriptions show, there is no perfection in this teaching model and there is only a thin line between its "success" and "pitfall." Our research points out that teaming itself does not necessarily assure benefits or a better learning experience for students, and that the fate of each team largely depends on how teachers and students work together. The true success of the approach lies in maximizing its advantages and minimizing its disadvantages.

This research also indicates that students are vital and significant participants in education. They are not merely receivers, but are, as this research shows, full members of our educational team. They are not simply influenced by team teaching. Their perceptions and active participation in team teaching provide insightful findings, and they, to a large extent, determine the success and failure of any educational enterprise. This is particularly true for preservice students in teacher education. They must be actively involved as part of the preparatory process of teaching and learning. An educational endeavor will have no chance to thrive unless their voice is heard.

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