A Team Teaching Matrix: 
Asking New Questions about How We Teach Together

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Abstract:
A research team consisting of a faculty member and an educational developer, both with considerable experience in team-teaching, wanted to do research on a practice about which they were both passionate. We discovered that although team-teaching emerged as a topic of interest for educational researchers in the 1960’s, scholarly attention has diminished recently as the practice has become increasingly commonplace. To revisit the concept of team-teaching in the context of contemporary higher education, we proposed a new taxonomy of team teaching, using “true team teaching” (e.g. when each of the instructors is equally invested in the design, implementation, and assessment of the course), as the pinnacle. To evaluate the efficacy of our taxonomy, we conducted a study in which all full-time faculty members at a doctoral granting university were surveyed regarding their team-teaching experience and the applicability of the model to their work. When the results of that study demonstrated that a simple taxonomy is not sufficient to encompass the range of factors that significantly influence the success of team-teaching at the institutional level; we switched our orientation and used our results to develop new questions about both practice and research in team teaching.

Key Words:
Typology; Team-teaching; Higher education; teaching pair; integrative learning; interdisciplinary teaching.

Introduction
We both team-teach, but there may be a difference in what we mean when we say that and what you take it to mean when you read it. When scholarly concepts or
practices move over to the popular usage, the subtleties and complexities of their meaning are often lost in translation. When pushed, non-specialists might explain the Oedipal Complex, for example, as wanting to sleep with your mother; or that the seasons are caused by the earth getting closer to (or further away from) the sun. Team teaching is a concept and a practice that seems self-evident from its name, but it, too, has suffered from an accumulation of mis- or missed understandings since it was first introduced in the 1970s. Given recent advances that have been made in educational development, we thought that it might be time to revisit the concept of team-teaching; reconcile it with current practices in higher education; and explore new ways of explicating current practice.

Scholars are accustomed to finding and following open lines of inquiry within their respective disciplines. Those lines that have been resolved, however, either fade into the past or serve as launching pads for new questions in need of answers. Research into team teaching has largely followed the former trajectory, as the number of scholarly articles related to team teaching (and related terms), once relatively abundant (Bair & Woodward, 1964; Shaplin & Olds, 1964), have slowed to a trickle since the 1990s (Bess, 2000). Some bursts of activity occurred in integrating team teaching with emerging trends such as interdisciplinary research, self-directed learning, inter-professional education and on-line teaching (Brookfield, 2015; Choi & Pak, 2006; Dinitz, Drake, Gedeon, Kiedaisch & Mehrtens, 1997; Egbert & Camp, 2015; Krometis, Clark, Gonzalez & Leslie, 2011). Kathryn Plank’s edited volume, published in 2011, serves as the capstone for the subject, bringing together the inter-related veins of research into a definitive and cohesive statement.

The first generation of team-teaching research focused on setting the foundations of the practice; starting with the definition of terms. While multiple definitions vie with each other, the most direct may be Davis (1995) who acknowledged team-teaching as “all arrangements that include two or more faculty in some level of collaboration in the planning and delivery of a course” (p. 8). In higher education, team-teaching has emerged as the prevalent term, though parallel teaching and co-teaching (usually referring to mentored pairs of teaching) have persisted as well, the former being particularly prevalent in the K-12 literature (Thousand, Villa & Nevin, 2006).

After defining the practice, scholars advanced several possible frameworks to embrace the different models of team-teaching, with Cook & Friend (1996), emerging as a widely used structure. In this framework, the authors delineate six models for pairs of teachers, from one teach/one observe to simultaneous team teaching (see table below). The model builds on the increasing confidence and contributions of the second teacher, providing a pathway from student to co-teacher. Although grounded in teacher education, the framework (and associated terminology) is sufficiently transparent that it has found applications in multiple context, including higher education. This is has become necessary, as researchers in higher education have not succeeded in providing an alternative framework of equal resonance.
The next generation of team-teaching research tends to fall into two categories: benefits and challenges. In terms of benefits, scholarship of teaching and learning (SoTL) studies have systematically analyzed work in team-taught classes (Conderman, Bresnahan, Teacher & Pedersen, 2008; Fauvel, Miller, Lane & Farris, 2010; LaFauci & Richter, 2016; Lock, Lenters, Burwell, Clancy & Lisella, 2013; Vesikivi, Lakkala, Holvikivi & Muukkonen, 2018). As with most teaching interventions, the results are mixed, but the majority found that the approach can have significant benefits for student learning under the right circumstances (Hrivnak, Southam, U'Ren & West, 2017; Letterman & Dugan, 2004; Liebel, Burden & Heldal, 2017; Little & Hoel, 2011). The benefits may extend beyond the classroom; researchers suggest that the availability of team-teaching can facilitate the proliferation of interdisciplinary teaching and research; enhance faculty development efforts through peer engagement; and models appropriate inter-professional behavior in the workplace (Barr, Koppel, Reeves, Hammick & Freeth, 2008; Benjamin, 2000; Higgins & Litzenberg, 2015; Lattuca, 2001; Sandholtz, 2000;
Sibley, 2006). The consensus seems to be that when done well, team teaching works on a number of levels (Plank, 2012).

Achieving the benefits of team-teaching is not without its challenges. Another vein of research focuses on the obstacles, both expected and unexpected, that arise in team-teaching and strategies for overcoming them. A common misconception is that team-teaching is less work—after all, two instructors are doing the work normally done by one. While this assumption is logical, we both knew that it does not play out this way in practice. Multiple instructors attest that team-teaching takes considerably more effort than an average solo course, and that much of that time is spent in communication and coordination with other instructors, starting with initial design and continuing throughout the time the course is taught. Further, team-teaching generates administrative challenges, such as apportioning workload or cross-listing, that faculty are not always well-equipped or predisposed to spend time navigating. In this latter case, the impetus falls to institutions to develop appropriate apparatus to support the practices among multiple faculty.

Many institutions and disciplines have heeded this call, and, although its presence is neither uniform nor ubiquitous, it is safe to say that team-teaching has become part of the fabric of higher education in the United States. That fabric has, however, changed its patterns. Teaching and learning in higher education has changed considerably since the 1970s, when team-teaching first emerged, and even since the 1990’s, when research on team teaching research hit its peak. In a related trajectory, the field of educational development hit its stride in the 1980s and since then the majority of American four-year universities have created Centers for Teaching and Learning (CTLs) which exist to support the production and dissemination of evidence-based practice, including team-teaching (Sorcinelli, Austin & Eddy, 2006; Ortquist-Ahrens, 2016). Evidence-based practice has, in turn, served as the basis for widespread institutional reforms in how future faculty are trained; courses are designed; and curriculum is developed. We now have a larger body of evidence for what constitutes effective teaching practice; and that can be applied to team-teaching.

Given this shift in context, the researchers (a faculty member and an educational developer) proposed a new framework for team-teaching in higher education, one that integrated an implicit hierarchy pointing towards the pinnacle of what we called “true” team-teaching, in which each of the instructors is equally invested in the design, implementation, and assessment of the course. In other words, in our schema, true team teaching does not measure work load or credit; rather it reflects the integration of pedagogical content knowledge between two (or more) instructors (see Figure 2, below). Our use of the term “true” was an explicit value judgment, as we believed, based on our own experiences, that this was the most effective and satisfying form of team teaching.
The framework posits four levels of teaching and learning integration; beginning with co-teaching, in which instructors have responsibility for largely independent sections of the same course; alternative teaching, in which instructors take turns providing instruction, requiring further coordination; blended teaching; in which instructors share elements of the pedagogical design of the course; requiring collaboration; and finally, true team teaching in which all aspects of the course are shared; requiring full integration of all aspects of the course.

The initial design of the true team teaching framework was based primarily on our direct experience; we are both veterans of multiple iterations and variations of team-teaching at two different institutions, and the levels were further refined with input from other faculty at the respective institutions. At this point, we chose to formally test the new framework through an institution-wide study, in the form of an IRB-approved electronic survey (sent via Qualtrics). In the spring of 2017, the survey was sent to all full-time faculty at a single institution, a doctoral granting (level 1); medium-sized, public, STEM-focused institution with approximately 10,000 FTE.

The survey consisted of 12 questions, including 3 Likert scale items, 3 multiple choice matrices, and 3 open-ended responses; each intended to capture different aspects (course characteristics, teaching approach, and integration) of faculty experiences with team-teaching (see Appendix B). We intended for the survey to not only provide us with a snapshot of current team-teaching practice across the institution; but also to see how well (or not well) the components of our proposed taxonomy aligned
with actual practice. The survey response rate was 31% (n=98); which is above average for both campus and national faculty surveys.

**Experience.** Of the faculty who responded, 67% indicated that they had engaged in team-teaching over the previous five years; a higher percentage than expected given that Tennessee Tech has no formal system of support for team-teaching nor is it included in institutional-wide initiatives such as accreditation. Two additional respondents indicated that they had engaged in activities similar to team-teaching (parallel teaching and classroom observations); another indicated their intention to team-teach in the upcoming academic year. The typical team-taught class involved two instructors (80%) in a single discipline (64%) teaching an upper-division undergraduate course (68%) for approximately 40 students. The latter measure showed the largest variation, with class sizes as large as 150 and as small as 6. We found this to be interesting information for the institution; but the finding is largely in keeping with current practice in higher education.

**Taxonomy.** When asked which of the four types of team-teaching most applied to their own work, survey respondents indicated that their practice most often fell into the lowest end of the taxonomy (co-teaching, 40%) or the highest (true team teaching, 29%) (See Table 1, below).

**Table 1: Team Teaching Models, Percentage of Responses**

<table>
<thead>
<tr>
<th>Description</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>Co-teaching: The instructors divide up the course content and teach completely independently of one another. Teachers attend class only when it is their turn to deliver content. The faculty do not comment on or contribute to other instructors; content, delivery methods, or assessment strategies.</td>
<td>40.00% (n=22)</td>
</tr>
<tr>
<td>Alternative Teaching: Multiple instructors teach about a particular aspect of a topic. There is an overarching theme for the course and instructors contribute content based on their subject expertise. The teachers attend class only when it is their turn to present. The instructors coordinate aspects of the course such as assessments.</td>
<td>16.36% (n=9)</td>
</tr>
<tr>
<td>Blended Teaching: Instructors collaborate and make decisions together concerning course content and logistics. All teachers attend every class session, but there are clearly identifiable aspects that delineate one professor’s contribution from the other.</td>
<td>14.55% (n=8)</td>
</tr>
<tr>
<td>True Team Teaching: A true collaborative partnership among the faculty involved in the course. Often, the faculty design and launch the course together. The instructors meet to discuss course content, delivery methods, and assessments. All instructors are present and provide meaningful contributions to every class session. The constituent parts have been fully merged into one complete integrated experience.</td>
<td>29.09% (n=16)</td>
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These results, too, confounded our expectations. Based on prior research, we hypothesized that true team teaching would be relatively rare because of the considerable logistical, resource, and administrative challenges it faces; not to mention the additional expenditure of time required. It should be noted, however, that we quickly determined that the items in this section of the survey are vulnerable to problems with construct validity. Although extensive definitions are provided; the meaning of the term team-teaching (and associated practices) is not always fully shared. In addition, we used the term co-teaching in a manner that is inconsistent with other literature, which caused confusion and would need to be renamed. As we learned from the qualitative responses, it is also highly likely that the list of response items or types (as given) are neither exhaustive nor fully exclusive. It may be safe to say that when viewed on their own, it is not entirely clear what these results mean.

**Pedagogy.** A further potentially confounding factor is that not all respondents were equally familiar and proficient in engaging in activities such as instructional design or assessment. These activities, as described in the true team teaching taxonomy, may mean different things to different instructors. When we asked respondents to indicate the primary form of instruction used in their team-taught course, we found that the majority (80%) used a lecture format (see Table 2, below).

**Table 2: Frequency of Instructional Strategies used in Team-Taught Courses (n>10)**

<table>
<thead>
<tr>
<th>Instructional Strategy</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>Lecture</td>
<td>81.82% (n=45)</td>
</tr>
<tr>
<td>Whole Group Discussion</td>
<td>60.00% (n=33)</td>
</tr>
<tr>
<td>Small Group Discussion</td>
<td>50.91% (n=28)</td>
</tr>
<tr>
<td>Case Studies</td>
<td>36.36% (n=20)</td>
</tr>
<tr>
<td>Project-Based Learning</td>
<td>34.65% (n=19)</td>
</tr>
<tr>
<td>Classroom Assessment Techniques (e.g. think-pair-share)</td>
<td>30.91% (n=17)</td>
</tr>
<tr>
<td>Problem-Based Learning</td>
<td>27.27% (n=15)</td>
</tr>
<tr>
<td>Cooperative/Team-Based Learning</td>
<td>25.45% (n=14)</td>
</tr>
<tr>
<td>Inquiry-Guided Learning</td>
<td>20.00% (n=11)</td>
</tr>
</tbody>
</table>

Those strategies receiving fewer than ten responses included virtual clickers, flipped/inverted classroom, service learning, undergraduate research, hybrid/blended learning, scaffolding, gamification/educational games, and other. Three of the “other” responses indicated forms of experiential learning, which should be added to the list for any future iterations. The pattern of responses seems compatible with TTU’s mission as a STEM-focused institution. This is reflected in the preponderance of lecture; but also in the relatively high standings for project-based learning (frequently used in the engineering curriculum) and inquiry-guided learning (the focus of the institution’s quality enhancement plan). The lower frequency of undergraduate research seems, at first, to be at odds with the institution’s considerable investment in this form of high impact.
practice; but it is possible this reflects an administrative distinction rather than a pedagogical one; as students register for undergraduate research separately from conventional coursework.

The research literature suggests a strong correlation between team teaching and increasing pedagogical diversity; a phenomenon that appears to be somewhat limited in the case of Tennessee Tech. To be fair, the question was worded so that respondents could indicate all strategies that applied to any team-taught course they had been involved in over the previous five years. Based on the structure of the survey question, we have no way of gauging to what extent each of the indicated strategies was used within a course or across several courses. It is possible, for example, that the respondents lecture only for a small percentage of course time and spend the remainder engaged in a wider range of activities. Even with this caveat, the results are suggestive that work remains to be done in supporting the teaching practices used in team-taught courses; a finding that is corroborated in the qualitative responses.

**Benefits and challenges.** The need for additional support also emerged as a theme in the respondents’ qualitative responses; in which they were asked to articulate the benefits and challenges of team-teaching through open-ended responses to three scenario-based questions. For the most part, their responses largely affirmed findings already identified in the literature including the significance of trust, planning, flexibility and communication. Major challenges included logistics/administration; merging perspectives; consistency and funding. What is perhaps most interesting about these responses, though, is how the diversity of the respondents’ experiences illuminated the limitations of the true team teaching model.

We used a simple coding method using the data collective from all three open-ended questions, the results of which affirmed our hypothesis that the model is hierarchical; e.g. true team teaching, in which all aspects of the course are integrated among multiple instructors is the goal; what became increasingly clear is that there are many more variations and pathways between level 1 (co-teaching) and level 4 (true team teaching). The primary variable between levels of our proposed taxonomy is degree of integration—how much the pedagogical content knowledge applied in the course is shared—but our respondents indicated that a whole host of other factors; including instructor role; cross-disciplinary integration (e.g. whether a course is disciplinary, inter-disciplinary, multi-disciplinary or trans-disciplinary in orientation); pedagogical literacy and environment/environmental awareness; were significant factors in defining the levels of a team-teaching experience (see Table 3 below).
### Table 3: Factors in Team-Teaching

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
<th>Sample Quote(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration</td>
<td>The degree to which instructors collaborate on pedagogical content knowledge (includes interpersonal skills; trust; communication)</td>
<td>“You need strong coordination and cooperation skills to be effective”; “Make it an authentic partnership”</td>
</tr>
<tr>
<td>Role</td>
<td>The degree to which the course is to be instructor-led/centered</td>
<td>“The greatest challenges arise when you team teach with faculty who don’t share a similar philosophy as to the role of faculty and role of students.”</td>
</tr>
<tr>
<td>Discipline(s)</td>
<td>The degree to which the subject matter of the course merges disciplinary perspectives (including disciplinary, interdisciplinary, multidisciplinary and transdisciplinary perspectives)</td>
<td>“Find overlapping/intersecting areas between the disciplines and work at these interfaces in your courses”; “Identify a common language between the two disciplines…provide a mini-dictionary”;</td>
</tr>
<tr>
<td>Pedagogical Literacy</td>
<td>The degree to which the instruction reflects evidence-based teaching practice</td>
<td>“This requires instructors who are used to active learning techniques and are successful with them…instructors should be matched by their ability to deliver at that level”;</td>
</tr>
<tr>
<td>Environment</td>
<td>The degree to which the physical and cultural environment come together and impact student learning</td>
<td>“Be watchful of different departmental cultures”; “Things to consider include type of technology used, options of assessment, options of how presentations will be made, and noise level of classroom (discussions in small groups)”</td>
</tr>
</tbody>
</table>

In many ways, what was most interesting about this study is what we did not find, which was a clear consensus that the proposed taxonomy clarified the practice of team-teaching. It would appear that our proposed category was not “true” in any sense of the word (in fact, we received considerable negative feedback on the use of this adjective). By looking at team-teaching from a broader perspective than our own practice, however, we did gain a greater appreciation for the variety and complexity of what it entails when the scope is extended to the many different disciplines and context that characterize contemporary higher education. The failure of the survey to affirm our hypothesis led us to question our own values and assumptions; and at the same time, illuminate potential new areas of practice and inquiry not covered by previous studies.
For our study, we had sought to extend the previous practice of classifying different types of team-teaching; in particular, by re-conceptualizing its components in the form of a taxonomy. A taxonomy differs from a typology in that it acts as a classification system, often a hierarchical one, with implicit value statements contained within that hierarchy (Cruz, 2017). We placed true team teaching at the top of the hierarchy, but found that the path towards reaching the pinnacle did not correspond to the evidence collected. If the taxonomy were to change to a typology; i.e. a system of nominal sorting without the assumption of hierarchical relationships; we found (from our survey results) that we would need many more categories to capture the full range and variation of the team-teaching experience. Perhaps, we thought, the solution may lie in shifting our approach from an emphasis on classification by type to a more practical orientation in which we looked at the salient factors that our respondents indicated had strong influences on their team-teaching experiences.

In statistics, factor models are specific quantitative techniques used to show how a range of factors, usually unobserved phenomenon, may explain the patterns displayed by the visible variables. In the case of team-teaching, our study revealed the presence of a number of significant factors, previously largely implicit, that may explain the observed variations in the team-teaching experience. What if it were possible, for example, if faculty who are considering whether or not they can team teach together, would conduct self-assessment in which they rate themselves along a scale for each factor (integration; instructor role; discipline(s); pedagogical literacy; collaboration; and environment); then they share those assessments with their potential co-instructors. Such assessments could be used to determine appropriate teaching partners; provide formative feedback as the course progresses; and match gaps with opportunities for faculty development. Our self-assessment instrument follows in Appendix A below.

We both believed that such a framework would have benefitted our own practice; with particular emphasis on pedagogical literacy and collaboration as key deciding factors in whether or not a team-teaching relationship would work. The framework can serve as a “talking point” as faculty decide not only whether or not to work together; but also to design and deliver courses in innovative ways. And the development of such a tool may be timely for others. The need for effective match-making to support team-teaching is becoming increasingly acute as more institutions adopt inter-disciplinary models for general education courses. This extension of integrative learning will likely mean that more instructors will be encouraged, even required, to find partners with whom they have little to no prior relationship.

The challenges to construct validity inherent in much teaching and learning practice, including team-teaching, means that we are unlikely to be able to elevate this research to a level of reliability needed to conduct detailed quantitative analysis. By switching to a more action-research inspired approach, however, our study suggests that there may be new pathways for supporting effective team-teaching and interdisciplinary or integrative learning. Much of the research on team-teaching to date has focused on the course or program level. We aspired for our study to move the focus from the micro- to the meso (or institutional) level, but we found that this scope, though flawed, revealed new insights and tools to enhance individual practice,
And there seems to be reason to do so. In our study, respondents frequently expressed frustration that they had not reached true team teaching (e.g. “at a high level, I think it’s possible for instructor to co-teach in a way that is beneficial. I have not yet truly experienced it though”); but they overwhelmingly indicated that they would like to continue to try. Of all the respondents, 71% (n=68) said that they were either likely or extremely likely to have the opportunity to team-teach again; and 81% (n=75) said that they were interested in team-teaming over the next five years. It is likely there is some self-selection bias inherent in the survey design (potential respondents were told the survey was about team-teaching prior to choosing to take it); so these percentages should be taken not as absolute values. Rather, they may be seen as broad indicators of positive attitudes towards the practice, even with the identified challenges and limitations. Assuming our institution is not alone in this perspective; it may be time to revitalize the questions we ask about team-teaching; begin the next generation of studies in how we take team-teaching to the next level; and connect this work to larger efforts to transform teaching and learning in higher education.

References


Ortquist-Ahrens, L. (2016). Beyond survival: Educational development and the maturing of the POD Network. *To Improve the Academy, 35*(1), 1-34.


### Appendix A. Team Teaching Matrix Match

<table>
<thead>
<tr>
<th>Integration</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction</td>
<td>Conventional</td>
<td>Experimental</td>
</tr>
<tr>
<td>People</td>
<td>Individual</td>
<td>Collaborative</td>
</tr>
<tr>
<td>Context</td>
<td>Classroom</td>
<td>Culture</td>
</tr>
</tbody>
</table>

#### Integration: Interdisciplinarity
- How would you define interdisciplinary thinking in the context of this course?
- What is our purpose for developing this as an interdisciplinary course?
- To what extent or degree do we want to integrate the different disciplinary perspectives, methods, and approaches in the way we teach this course?
- To what extent or degree do we want our students to be able to integrate the different disciplinary perspectives, methods, and approaches in what they learn in this course?

#### Instruction: Pedagogical literacy
- How much of the course will need to focus on covering content?
- What is your level of pedagogical content knowledge (PCK) within your own discipline?
- What are your personal and disciplinary signature pedagogies?
- What has been your experience with trying new instructional strategies?

#### People: Instructional roles
- What role(s) do you see yourself playing in *the delivery* of instruction for this course?
- What role(s) do you see yourself playing in developing *the design* of this course?
- What role(s) do you see yourself playing in implementing *the assessment* of this course?
- What degree of collaboration do we wish to achieve?
- How much time are you willing/able to commit to designing, delivering, and implementing this course?
Context: Learning environment

- What kind of logistical, administrative, or other non-pedagogical challenges will we face in making this course successful? How will we address these challenges?
- What kind of learning space will be most conducive to reaching our goals? How will we utilize our learning space to support our goals?
- How can we leverage our campus environment to enhance the success of our course? What other people or offices might be useful for our work?
- What value does our department, college, campus, or system place on interdisciplinary teaching, integrative learning, and/or team-teaching? How will that affect what we do in this course?
- How can we positively influence our broader teaching and learning community?

Appendix B: Team Teaching Survey

1. Have you taught a TTU course with another instructor or instructors over the past 5 years?
2. How many instructors were there for the course that you taught with another instructor or instructors?
3. How many disciplines were included in the course that you taught with another instructor or instructors?
4. What is the level of the course that you taught with another instructor or instructors?
5. How many students were enrolled in the course that you taught with another instructor or instructors?
6. Which of the following models of team teaching best describe your experience with this course?

- **Co-teaching**: The instructors divide up the course content and teach completely independently of one another. Teachers attend class only when it is their turn to deliver content. The faculty do not comment on or contribute to other instructors' content, delivery methods, or assessment strategies. (1)

- **Alternative Teaching**: Multiple instructors teach about a particular aspect of a topic. There is an overarching theme for the course and instructors contribute content based on their subject expertise. The teachers attend class only when it is their turn to present. The instructors coordinate aspects of the course such as assessments. (2)

- **Blended Teaching**: Instructors collaborate and make decisions together concerning course content and logistics. All teachers attend every class session, but there are clearly identifiable aspects that delineate one professor's contribution from the other. (3)

- **True Team Teaching**: A true collaborative partnership among the faculty involved in the course. Often, the faculty design and launch the course together. The instructors meet to discuss course content, delivery methods, and
assessments. All instructors are present and provide meaningful contributions to every class session. The constituent parts have been fully merged into one complete integrated experience. (4)

7. Which of the following instructional strategies did you use in your teaching with others? (Please check all that apply)

- Lecture (1)
- Whole group discussion (2)
- Small group discussion (3)
- Project-based learning (4)
- Problem-based learning (5)
- Case studies (6)
- Classroom assessment techniques (e.g. think-pair-share) (7)
- Virtual clickers (e.g. PollEverywhere) (8)
- Flipped/inverted classroom (9)
- Cooperative/team-based learning (10)
- Service learning (11)
- Undergraduate research (12)
- Inquiry-guided learning (13)
- Hybrid/blended learning (online and face-to-face mix) (14)
- Scaffolding (15)
- Gamification/educational games (16)
- Other (please describe) (17)

8. A colleague is considering whether or not he/she will team-teach a course next year. What advice or insight would you give to him/her?

___________________________________________________________________

9. A colleague will be team-teaching a course the following semester with a colleague from another department. What advice, insight, or suggestions, would you give to him/her?

___________________________________________________________________

10. The Director of the Center for Teaching and Learning asks you what the largest challenges or obstacles there are for team-teaching here at Tennessee Tech. What would you tell her/him?

___________________________________________________________________

11. How likely are you to have the opportunity to team-teach a course in the next five years? (Scale 1-5)

12. How interested are you in team-teaching a course in the next five years? (Scale 1-5)