# Teacher Clarity: Cornerstone of Effective Teaching

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*Steve Benton and Dan Li*
*Anthology*

**Abstract**

Teacher clarity has been the subject of extensive research in the fields of educational psychology and instructional communication since the 1970s. It has been defined in various ways and can be demonstrated in a host of teacher behaviors. In this paper, we review definitions of teacher clarity, explain its importance, summarize the theories and research that underlie it, describe how it can be assessed, and make recommendations for improving it.

Key words: teacher clarity, teaching strategies, teacher communication, classroom teaching, fluency

Teacher clarity has been the subject of extensive research in the fields of educational psychology and instructional communication since the early 1970s. Both faculty and students agree that it is an essential element of effective teaching (BrckaLorenz, Cole, Kinzie, & Ribera, 2012; Hativa, Barak, & Simhi, 2001). In fact, teacher clarity is one of the teaching behaviors most strongly associated with student success (Titsworth & Mazer, 2010), and its positive effects are consistent across different ethnic groups (Powell & Harville, 1990). Moreover, of the 19 teaching methods in the Diagnostic Feedback (DF) instrument from Anthology's IDEA Student Ratings of Instruction, student ratings of how frequently the instructor "Explained course material clearly and concisely," an item measuring teacher clarity, have the strongest correlation with the global measure "Overall, I rate this instructor an excellent teacher."

However, the student's role in classroom communication has led scholars to contend that clarity is more than a set of teacher behaviors. Rather, the teacher and students co-create clarity through interaction. The feedback loop that such interaction produces helps instructors adapt to the informational needs of their students. Consequently, clarity cannot exist in the absence of student engagement in the lesson. Nonetheless, the focus of this paper is largely on teacher behaviors.

Specifically, we review definitions of teacher clarity, explain its importance, summarize the theories and research that underlie it, describe how it can be assessed, and make recommendations for improving it.

## What is Teacher Clarity?

In spite of over 40 years of research on the topic, the definition of teacher clarity ironically remains unclear. It seems to be one of those characteristics that is best defined by its absence--you know it when you don't see it. So, although teacher clarity is a key element of effective teaching, experts cannot agree on what distinguishes clear from unclear teaching.

In fact, in their meta-analyses of nearly 200 studies on the topic, Titsworth and colleagues (Titsworth, Mazer, Godboy, Bolkan, & Myers, 2015) found considerable variability in the magnitude of the correlations between teacher clarity and student learning, which they attributed to the lack of a consistent, precise description of the construct. Even so, across the past few decades instructional communication scholars have posed abstract, high-inference descriptions, such as those presented in Figure 1 on page 8. Common themes include providing meaningful explanations, conveying meaning through both verbal and nonverbal communication, fluency, and specifying clear goals and objectives. In contrast, educational psychologists have put forth low-inference, operational definitions that can be easily observed and quantified, such as the teacher behaviors shown in Figure 2 on pages 9–10. They include being verbally clear, being cognizant of students' level of understanding, appropriately pacing the lesson, providing structure, making good oral presentations, connecting new information to students' pre-existing knowledge, sequencing content, emphasizing certain content, and teaching students how to remember.

Approaches to clarity may differ somewhat between online and traditional face-to-face courses. Whereas students in face-to-face courses tend to need clarification about course content, those in online courses may also need clarification about logistics (e.g., "Do we need to include an MLA header on this paper?") (Spiegel, 2012, p. 247). Online readers tend to skim, filter out what they perceive as unnecessary information, and read in a non-linear fashion, which may cause them to overlook important information (Sosnoski, 1999). To counteract such tendencies, Spiegel (2012) applied the universal design for learning principles of consistency (Lidwell, Holden, & Butler, 2003). Specifically, she included three common elements in each unit--an overview of what would be covered in class, assignments for the week, and a list of additional homework. As a result, she reported spending much less time answering logistical questions, and the student success rate in the online course increased by 10 percent.

**Why is Teacher Clarity Important?**

Having reviewed behaviors that characterize teacher clarity, let's consider why it is such an important teacher trait. First of all, students are more motivated to learn when instruction is clear (Ginsberg, 2007). Second, teacher behaviors that engender clarity help students construct a meaningful understanding of the topic (Cruickshank & Kennedy, 1986). Although students must play their part by being attentive and asking clarifying questions, teacher behaviors (e.g., see Figure 2) can enhance meaningfulness. Third, teacher clarity empowers students to achieve intended learning outcomes (Beleche, Fairris, & Marks, 2012; Finn & Schordt, 2012; Hines, Cruikshank & Kennedy, 1985).

Apart from enhancing understanding, motivation, and learning, teacher clarity is also associated with student perceptions of the quality of teaching and the course. Specifically, student perceptions of clarity are positively correlated with course satisfaction (Hativa, 1998; Hines et al., 1985) and students' beliefs about how much they have learned (Chesebro & McCroskey, 2001). This has important implications for course evaluations. For example, in IDEA's course evaluation system students rate how much they have learned about objectives the instructor identifies as relevant to the course. In fact, student ratings of how frequently the instructor "Explained course material clearly and concisely" are significantly related to student perceptions of learning on several of IDEA's 13 learning objectives (Li & Benton, 2019), which are shown in Figure 3 on page 11. Not only is perception of clarity positively associated with cognitive outcomes, it also correlates highly with two affective measures: student ratings of "I really wanted to take a course from this instructor" (r = .67) and "As a result of taking this course, I have more positive feelings toward this field of study" (r = .72) (Benton, Li, Brown, Guo, & Sullivan, 2015). This coincides with the finding that student perceptions of teacher clarity are positively correlated with attitudes toward the class and the instructor (Chesebro & McCroskey, 2001).

Although it intuitively makes sense that teacher clarity is positively related to student achievement of cognitive (i.e., learning) outcomes, why is it be related to affective outcomes? One explanation is that teacher clarity is negatively correlated with student receiver apprehension, which is the fear of misunderstanding or having inadequate comprehension (Ayres, Wilcox, & Ayres, 1995; Chesebro, 2003). Thus, students who rate teachers high on clarity are less likely to report experiencing anxiety when listening to course content. In addition, they perceive the instructor as more predictable, sincere (Titsworth, McKenna, Mazer, & Quinlan, 2013, p. 204), and credible (McCroskey, Richmond, & McCroskey, 2002), as well as more invested in students' learning and academic success (Roksa, Trolian, Blaich, & Wise, 2017). Students are also more likely to try to communicate outside of class with instructors they rate high on clarity (Sidelinger, Bolen, McMullen, & Nyste, 2015). Perhaps not surprisingly, then, teacher clarity is actually more strongly correlated with affective than cognitive outcomes (Titsworth et al., 2015).

### *But Can Students Really Detect Clarity?*

Can students' judgments about teacher clarity be trusted? Can they really distinguish between clear and unclear instruction? To answer this question, Land (1981) created two video-taped lessons, each having the exact same content. The only difference was the presence or absence of low-clarity teacher behaviors: a) mazes, which are false starts and redundant words; and b) utterances of "uh" and "ok". College students rated the lesson without mazes or utterances higher than the one containing mazes and utterances, thus evidencing their abilities to discriminate between clear and unclear teaching.

Not only are students adept at discriminating between clear and unclear teaching, they are also remarkably consistent in their ratings. Students within the same class evidence high uniformity in assessing how frequently the instructor "Explained course material clearly and concisely" ($r_{wg}$ = .84)[1] (Li, Benton, Brown, Sullivan, & Ryalls, 2016). Moreover, ratings of clarity for the same instructor across at least four courses are highly stable ($r > .90$)[2] (Benton et al., 2015)

## Theories Behind Teacher Clarity

One of the fascinating aspects of research on teacher clarity is that there may be as many theories explaining it as there are definitions. Although those who study the topic may not explicitly take a theoretical stance, a few broad perspectives have guided much of the research (see Titsworth et al., 2015 for a review): the information-processing model, assimilation-to-schema theory, and adaptive instruction.

### *Information-Processing Model*

The information-processing model of human memory surfaced during the cognitive revolution in the 1950s and 1960s as a result of advances in computer technology. Psychologists used computers to test theories about the structure of memory because they reasoned both humans and computers process large amounts of information (e.g., Atkinson & Shiffrin, 1968). The model, which

1. Within-group interrater reliability coefficient. Values range from 0 to 1 with 1 representing complete interrater agreement.

2. Inter-class reliability coefficient. Values range from 0 to 1 with 1 representing complete interrater agreement.

still influences teacher education, explains the cognitive processes, or mental activities that enable students to represent, store, and transfer information within memory.

The information-processing view helps to explain why teacher clarity is important. First, instruction must be clear in order to reduce extraneous cognitive load, which is the burden that course materials and instruction place upon students' limited working memory capacity. Depending upon the way material is organized and presented, instruction may either increase or decrease cognitive load. When subject matter and teaching are clear, extraneous cognitive load is reduced (Bolkan, Goodboy, & Myers, 2017), and students are more likely to transfer the information into long-term memory (LTM).

One means for reducing extraneous cognitive load is through visual imagery and multimedia instruction, which is using words and pictures to foster student learning (Mayer & Moreno, 2003). However, in attempting to process both words and visual images, students must employ two separate processing channels: a) an auditory/verbal channel and b) a visual/pictorial channel, each of which is limited in capacity (Mayer & Moreno, 2003). Students must therefore engage in a substantial amount of cognitive processing in order to construct a meaningful representation of the verbal and visual information. They must pay attention, organize the two sources of information into a coherent whole, and connect the new material to previously stored knowledge. Trying to associate the dual sources of information could create cognitive overload, whereby "the processing demands evoked by the learning task may exceed the processing capacity of the cognitive system" (Mayer & Moreno, 2003, p. 45). However, instructors can take steps to counteract processing demands. For example, in the context of online teaching, content could be presented auditorily, thereby freeing-up load on the visual channel. Instructors could also teach the content in "bite size segments" (Mayer & Moreno, 2003, p. 46) by taking one property at a time and connecting each to a visual image.

If the processing demands of the learning task do not exceed working-memory capacity, then learners will be more successful at transferring information into long-term memory. But they may need help making connections with knowledge already stored in memory. Clear teachers provide such assistance with concrete examples that relate to students' lives and connect with past topics.

### *Assimilation-to-Schema Theory*

Assimilation-to-schema is another cognitive theory that is relevant to teacher clarity.

Mayer (1977) recognized the role that schemata play in meaningful learning when he coined his assimilation-to-schema theory. Students construct meaning from new material when they integrate new information into existing mental frameworks stored in LTM. Teachers can activate schemata through advance organizers, which are statements or explanations that connect what students are going to learn with what they already know about the topic. Teaching vocabulary associated with the new subject matter can also help students to create schemata into which the to-be-learned information can be assimilated (Mayer & Moreno, 2003).

### *Adaptive Instruction*

Although the foregoing cognitive theories are helpful for planning meaningful learning experiences, what happens when students are confused during or following the lesson? Adaptive instruction holds that clear teachers can respond by modifying their behaviors in accordance with student feedback (i.e., questions, comments, performance on assessments). For this to happen, the teacher and students must communicate back and forth to negotiate meaning, because learning requires not only effective teaching but also student effort and input (Civikly, 1992). Instructors should encourage students to ask clarifying questions when meaning is muddied, so that they can respond with elaborations and additional examples. Effective teachers help students understand that they are more than passive receptacles into which knowledge is dispensed. Rather, they are active learners that draw upon information stored in LTM and integrate it into new subject matter. When clarity is lacking, students can signal to instructors their need for further explanation by indicating exactly what they misunderstood or their confusion about related concepts (Darling, 1989).

Thus, clarity can be enhanced when teachers: 1) assess student learning to check understanding and then repeat or reteach; 2) provide students time to think and reflect on what they are learning; 3) use examples and explain them; and 4) review periodically to help students prepare for the upcoming content (Titsworth, n.d.).

**How Can Teacher Clarity be Assessed?**

Consistent with their preference for high-inference descriptions, instructional communication researchers (e.g., Chesebro & McCroskey, 1998; Powell & Harville, 1990; Sidelinger & McCroskey, 1997) have traditionally conceived teacher clarity as unidimensional. Educators interested in a unidimensional measure should turn to the Teacher Clarity Short Inventory (TCSI; Chesebro & McCroskey, 1998), a 10-item instrument with a single factor structure. Born out of the instructional communication field, TCSI serves as the "go to" instrument for those wanting a measure of students' overall impressions of teacher clarity. Examples of items are "My teacher is straightforward in her or his lecture" and "In general, I understand my teacher." Alpha reliability was .92 on a sample of undergraduate students (Chesebro & McCroskey, 1998).

In contrast, and in harmony with their focus on low-inference behaviors, educational psychologists (e.g., Bush, Kennedy, & Cruickshank, 1977; Cruikshank, 1985; Kennedy, Cruiksank, Bush, & Myers, 1978; Titsworth & Mazer, 2010) tend to view clarity as multidimensional. For those who find a multidimensional instrument more appealing, Bolkan's (2017) Clarity Indicators Scale (CIS) is well suited. The 20-item scale taps into five dimensions: disfluency (e.g., "My teacher has a hard time articulating his/her thoughts"), working memory overload (e.g., "The amount of information presented in our lessons can be overwhelming"); interaction (e.g., "This teacher takes time to answer class questions if things don't make sense"); coherence (e.g., "Our teacher goes off topic when lecturing"); and structure (e.g., "My teacher's lectures are well organized"). Although CIS and TCSI scores are highly correlated (.83), the CIS explains significant variance in student receiver apprehension, cognitive load, and perceived cognitive learning after controlling for the influence of the TCSI. Moreover, the five CIS factors are differentially related to student receiver apprehension, cognitive load, and perceived cognitive learning.

**Recommendations for Improving Teacher Clarity**

The foregoing sections explained what teacher clarity is, why it is important, its theoretical underpinnings, and how it can be measured. Consistent with that research, in this final section we make recommendations for improving teacher clarity. To begin, we review research on IDEA's Diagnostic Feedback, which reveals specific teacher behaviors related to clarity.

***Teacher Behaviors Associated with Clarity on IDEA's DF***

IDEA's single-item measure of teacher clarity--"Explained course material clearly and concisely"--has consistently been the teaching method most highly correlated with student ratings of overall excellence in teaching (Benton & Li, 2015; Benton, Li, Brown, Guo, & Sullivan, 2015; Benton, Webster, Gross, & Pallett, 2010a; Benton, Webster, Gross, & Pallett, 2010b; Hoyt & Lee, 2002). Knowing this, Li and Benton (2019) examined which of the other 18 teaching methods on the DF were most strongly related to the single-item clarity measure. Using Bayesian Model Averaging, they entered IDEA's 18 other teaching methods into a regression model, and the following four had posterior mean coefficients of .10 or higher:

*Found ways to help students answer their own questions.* Students play a critical role as clarifiers (Civikly, 1992), and question asking is a key strategy. Students who ask and seek the answers to questions tend to be more independent and self-confident learners (Pearson & West, 1991). Instructors who help them answer their own questions tend to get higher ratings on clarity.

*Made it clear how each topic fit into the course.* Clarity and organization go hand in hand (Blaich, Wise, Pascarella, & Roksa, 2016; Hativa, 2014; Loes, Saichaie, Padget, & Pascarella, 2012;). One of the five factors on the CIS, described previously, is structure, which assesses how well the lecture and lessons are organized (Bolkan, 2017). In addition, one of the teacher-clarity items from the National Survey of Student Engagement (NSSE) asks whether the instructor "Presented course material in an organized way" (Ribera, BrckaLorenz, Cole, & Nelson Laird, 2012). Explaining how each topic fits into the course is, thus, an important correlate of teacher clarity.

*Provided meaningful feedback on students' academic performance.* Providing feedback clarifies for students what they are doing well, where they need to improve, and how they might go about improving (Desrochers, Zell, & Torosyan, n.d.). Meaningful, immediate feedback following test performance is especially helpful in dispelling misconceptions that may surface when students find the subject matter difficult (Goodwin & Miller, 2012).

*Introduced stimulating ideas about the subject.* One means for increasing clarity is to stimulate students' interest by making connections between course content and their real-world experiences. When complex knowledge is made more concrete, clarity and meaningfulness are enhanced (Theall, n.d.). A useful strategy is to create assignments that connect subject matter to learning outcomes, so that students see the relevance and usefulness of activities rather than perceiving them as "busy work" (Franklin & Theall, 1995).

For suggestions on how to carry out these methods in the college classroom, see IDEA Notes on Instruction (https://www.ideaedu.org/idea-notes-on-instruction/). In addition, Figure 4 contains specific recommendations for improving teacher clarity. See Figure 4 on pages 12–13.

## Summary

Teacher clarity has long been associated with excellence in teaching and student achievement of learning outcomes. Although researchers have done much to uncover the kinds of low-inference behaviors that exemplify teacher clarity, its definition remains difficult to pin down. Nonetheless, students are able to consistently distinguish clear from unclear teaching, and those perceptions are highly correlated with overall ratings of the instructor. Multiple theoretical explanations account for this relationship: information processing, assimilation-to-schema theory, and adaptive instruction. Depending upon one's theoretical stance, educators can choose either a unidimensional measure, such as the TCSI, or one that is multidimensional, for example, the CIS. With the feedback gained from such assessments, teachers can then select specific research-based recommendations for improving clarity in instruction.

Figure 1

***High-Inference Definitions of Teacher Clarity***

- The way teachers use examples, descriptions, and explanations to help students understand subject matter (Bush, Kennedy, & Cruickshank, 1977)

- Teaching behaviors that help students gain understanding of a topic (Cruickshank & Kennedy, 1986)

- Instruction that helps students understand the material (Metcalf, 1992)

- The ability to convey the meaning of course content to students through verbal and nonverbal messages (Chesbro & McCroskey, 2001)

- Fluent, meaningful language adapted to students' knowledge level (McCroskey et al., 2002)

- "A cluster of teacher behaviors that contributes to the fidelity of instructional messages" (Chesebro & Wanzer, 2006, p. 95).

- Teacher behaviors that make goals, objectives, and expectations transparent so that students can better comprehend the material (Ginsberg, 2007)

- Explaining course goals/requirements clearly, teaching in an organized manner, and using examples/illustrations (BrckaLorenz et al., 2011)

- Students' overall impressions of how well the teacher explains things clearly (Titsworth, McKenna, Mazer, & Quinlan, 2013)

Figure 2

***Low-Inference Operational Definitions of Teacher Clarity***

- Explaining concepts and directions in an understandable manner and at an appropriate pace (Bush et al., 1977)
- Using examples and illustrations to convey information (Bush et al., 1977)
- Presenting new material in simple terms (Kennedy et al., 1978)
- Providing students with an opportunity to think about and respond to what was taught (Kennedy et al., 1978)
- Appraising student understanding (Kennedy et al., 1978)
- Staying on topic until most students understand (Kennedy et al., 1978)
- Employing repetition frequently (Kennedy et al., 1978)
- Pacing the lesson (Kennedy et al., 1978)
- Providing structure (Chesebro, 2003) by
    - Explaining the objectives of each unit
    - Previewing for students the main ideas of the lesson
    - Linking upcoming topics with the current topic
    - Summarizing frequently
    - Reviewing main ideas at the end of the lesson
    - Displaying and adhering to an outline
    - Providing skeletal notes
- Being verbally clear (Chesebro, 2003) by
    - Avoiding terms like “uh,” “um,” and “like”
    - Explaining material in a straightforward manner
    - Steering clear of tangents unrelated to course content
    - Pacing the lesson
    - Providing examples.

Hativa (1998)

- *Structuring by:*
    - Providing and referring to a general overview, outline, and objectives
- *Making good oral presentations by:*
    - Using clear speech (i.e., loudness, rate, articulation, variation in pitch)
    - Using simple language (use of familiar words, short sentences, conversational language)
    - Being fluent (avoiding pauses)
    - Avoiding signals of hesitation/vagueness (e.g., “um,” “you know”)
- *Embedding* (i.e., connecting new information to students’ pre-existing knowledge) *by:*
    - Inserting micro reviews within the lesson
    - Sorting problems into categories
    - Breaking down explanations of procedures
    - Elaborating
- *Sequencing by:*
    - Sequencing topics
    - Avoiding incoherence (by proper use of transitions)
    - Avoiding errors in computations
    - Rationalizing or explaining steps and procedures
- *Emphasizing by:*
    - Repeating concepts or procedures for emphasis)
- *Teaching students how to remember by:*
    - Providing titles for formulas and procedures to aid memory storage
    - Providing algorithms that specify a certain order for doing things

Figure 3

**IDEA's 13 Learning Objectives**

1. Gaining a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories)

2. Developing knowledge and understanding of diverse perspectives, global awareness, or other cultures

3. Learning to apply course material (to improve thinking, problem solving, and decisions)

4. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course

5. Acquiring skills in working with others as a member of a team

6. Developing creative capacities (inventing; designing; writing; performing in art, music, drama, etc.)

7. Gaining a broader understanding and appreciation of intellectual/cultural activity (music, science, literature, etc.)

8. Developing skill in expressing myself orally or in writing

9. Learning how to find, evaluate, and use resources to explore a topic in depth

10. Developing ethical reasoning and/or ethical decision making

11. Learning to analyze and critically evaluate ideas, arguments, and points of view

12. Learning to apply knowledge and skills to benefit others or serve the public good

13. Learning appropriate methods for collecting, analyzing, and interpreting numerical information

Figure 4

***Additional Recommendations for Improving Teacher Clarity***

*Assess students' background knowledge in advance of instruction.* To be meaningful, a lesson must be tied to knowledge students already possess. Students who have gaps in critical background knowledge are, therefore, at a disadvantage. One means for assessing students' background knowledge is to have them rate how familiar they are with each topic on the syllabus.

*Be sensitive to those who lack background knowledge.* Take time early in the semester to answer questions, teach at a slower pace, and provide sufficient examples. Supplemental reading assignments and study aids can also be helpful.

*Be fully prepared.* Students associate teacher clarity with coming to class well-prepared, explaining course goals and requirements clearly, and using class time effectively (BrckaLorenz, Cole, Kinzie, & Ribera, 2011)

*Provide an advance organizer.* Content at a general or abstract level presented in advance of an orally presented lesson enhances learning and retention (Alexander, Frankiewicz, & Williams, 1979).

*Check students' understanding periodically.* Recognize that students' lack of questions does not mean they understand. Some students who lack understanding of a concept may feel too inhibited to ask questions. Subsequent periodic reviews help inform the instructor of student knowledge gaps while at the same time create new retrieval paths in students' memories. You might also ask students to stop and write down any questions they might have or do a think-write-pair-share (i.e., allow time for students to think and write about a question or topic and share their thoughts with a learning peer).

*Use meaningful examples.* When instructors use relevant examples to explain material, students find the course more meaningful, interesting, and useful (Finn & Schrodt, 2012). But be sensitive to cultural differences when selecting examples. Common knowledge may be less common than you think.

*Summarize periodically.* When an instructor paraphrases or summarizes students' contributions, they find the course more meaningful, interesting, and useful (Finn & Schrodt, 2012). Summarizing helps students understand the most important concepts and principles.

*Use visual displays (e.g., presentation slides) and multimedia.* Memory is enhanced when information is presented in more than one modality (Clark & Paivio, 1991). Presentation slides can increase learning by reducing cognitive load (Mayer & Moreno, 2003, p. 40) and enhancing student self-efficacy (Susskind, 2005).

*Allow students access to slides or the lecture material prior to class.* Having information to review before class aids student comprehension of the lesson. Those who have access earn higher grades in the course than those who do not (Hove & Corcoran, 2008), most likely because they can view the lecture multiple times, pause and reflect, and revise notes. Moreover, lecture material posted online in advance of the lesson will not decrease the likelihood of students attending class (Babb & Ross, 2009).

*Provide and adhere to a lesson outline.* Following an outline raises the perception that you are organized, which is associated with higher ratings of clarity. However, the success of a lesson depends not on whether you covered all the material but on what students actually understood about what you did cover (Titsworth, n.d.).

*Hand out instructor notes or post skeletal notes for student note taking.* Students' own notes are generally incomplete and thus provide an inadequate resource for exam preparation. Students who take and review instructor notes therefore outperform those who take and review their own notes. Providing skeletal notes in advance of the lesson can also effectively facilitate learning (Kiewra, 1985).

*Post recording of lectures.* With each re-viewing of a video recording of a lesson, students pick up new information (Kiewra, Mayer, Christensen, Kim, & Risch, 1991).

*Provide opportunities for additional practice with items missed on quizzes.* Post supplemental unit quizzes to offer students the opportunity for additional practice on similar items. Give feedback about whether they answer correctly or incorrectly, and convey an explanation of why their response was correct or incorrect.

## Author Biographies

Steve Benton

Steve Benton, Ph.D., is a data scientist in the Anthology data science team. Previously, he was Senior Research Officer at The IDEA Center where, from 2008 to 2019, he led a research team that designed and conducted reliability and validity studies for IDEA products. He is also Emeritus Professor and Chair of Special Education, Counseling, and Student Affairs at Kansas State University where he served from 1983 to 2008. His areas of expertise include student ratings of instruction, teaching and learning, and faculty development and evaluation. Steve received his Ph.D. in Psychological and Cultural Studies from the University of Nebraska-Lincoln, from whom he received the Alumni Award of Excellence in 1997. He is a Fellow in the American Psychological Association and the American Educational Research Association.

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