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## **Helping Pre-Service Art Teachers Confront their Pedagogical Belief Systems**

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People are behaviorally and psychologically complex to a point that we cannot separate ourselves from our values, beliefs, and assumptions; they affect every part of our lives. In education, beliefs influence what, why, and how something is taught. The many threads of teacher belief literature have deepened our understanding of the teaching phenomenon for many decades. This article suggests that educational quality can be improved if teachers would analyze their own educational belief systems more systematically and comprehensively. The article gives a brief history of teacher belief research and suggests a framework by which teachers could analyze their thinking, beliefs, or assumptions. The article finishes with an example of how one professor integrated teacher belief research into a college course helping pre-service art educators analyze their conflicting belief systems.

Cultural pressure on teachers to prove that they are high quality educators continues to increase. Implemented by state and national legislators, K-12 educational initiatives in many states are poised to equate teacher quality with student achievement through high stakes testing. So what is the answer to improving the education teaching profession? Is it more governmental oversight of teacher licensing? Is it implementing more challenging degree programs at the University? Is it longer practicum placements for pre-service teachers?

I believe the most effective answer to improving teaching is for that teacher to change themselves through the renewing of their mind. To truly begin understanding the complexities of our successes and failures in the teaching and learning process of education, I suggest that each one of us enter into the world of teacher belief research. Analyzing teacher belief systems focuses on assumptions, images, theories, and knowledge teachers hold (a) about teaching and learning, and (b) about the subject matter to be taught to their students (Kagan, 1992; Deemer,

2004). A central task of researching teacher beliefs is to help a teacher move from an implicit, privately held belief system to a consciously explicit belief system (Pajaras, 1992). Those who utilize teacher belief literature view it as purposeful toward enhancing teachers' understanding of how and why their teaching process looks and works the way it does (Love & Kruger, 2005; Osguthorpe & Sanger; 2013; Pajaras, 1992; Silverman, 2010).

Self-reflection and the analysis of a teacher's four zones of belief, discussed in this article, will transform their practice. I have been helping art teachers think deeper about their own pedagogical beliefs systems since 2005. After seeing such tremendous growth of self-awareness in the educators I have worked with, I know it has potential to help others.

This article argues that if educational quality is going to truly improve in education, then teachers will need to lead the way by analyzing their own educational belief systems in a more thorough and systematic way. Within this article a brief history of teacher belief research is given and a framework is suggested by which art teachers can analyze their thinking, assumptions, and beliefs as well as understand how these belief systems relate to their teaching practice. The article concludes with an example of a college course that integrates teacher belief research within an art education history course, helping teachers analyze their own personal educational belief systems.

### **Terminology Challenge**

For over fifty year researchers have been trying to analyze teacher thinking, perceptions, and belief systems, ultimately understanding their connection to teacher behavior within classroom practice. Throughout the decades researchers have chosen particular terms, such as belief, that define the focus of their research. Sometimes these terms are popular for a time, and then fall to the side as others take its place. What needs to be clear is that the word belief can be easily associated or analogous to other words such as attitude, value, axiom, ideology, perception, paradigm, as well as internal mental strategies, personal theories, and conceptual systems (Pajaras, 1992). The terms used by all these researchers may be different but their main goal is the same, to document teacher or student mental beliefs, perception, and assumptions concerning teaching and learning. One would be wise to see these writings and studies as a larger cohesive literature and glean what one can from any or all of them in order to better understand what we as teachers are thinking, as well as to research other teachers' or students' thinking and beliefs. In order to encourage future research I suggest that art educators become familiar with all of these sister literatures, pulling various terms under one body of literature called teacher belief research (Pajaras, 1992).

To solidify that this type of research is current, I did a literature review searching for any of the analogous terms of beliefs published no earlier than 2000. There were a number of articles from many specific discipline journals, but I chose to only cite the most reputable teacher education journals. Researchers using the term teacher beliefs are (Entwistle, Skinner, Entwistle & Orr,

2000; Hamre, Pianta, Burchinal, Field, LoCasale- Crouch, Downer, Howes, LaParo & Scot-Little, 2012; Hativa & Goodyear, 2002; Kinchem, 2004; Love & Kruger, 2005; Kane & Health, 2002; Kinchem, 2004). Murphy, Delli & Edwards, 2004; Onwuegbuzie, Witcher & James, 2002; Smith & Croom, 2000; Windschitl & Sahl, 2002; Raths & McAninch, 2003). Those researchers who use the term teacher concepts are (Boulton-Lewis, Smith, McCrindle, Burnett & Campbell, 2001; Desimone, 2009; Eley, 2006; Entwistle, Skinner, Entwistle & Orr, 2000; Opfer & Pedder, 2011; Smith & Croom, 2000). Researchers who analyze teacher knowledge are (Craig, 2006; Munby, Russell & Martin, 2001; Zanting, Verloop & Vermunt, 2003). Teacher epistemology is used by (Bendixon & Feucht, 2010; Bhuvanewari, Greene & DeBacker, 2005; Brownlee, Walker, Lennox, Exley & Pearce, 2009; Buehl & Alexander, 2005; Hofer & Pintrich, 2002; King & Kitchener, 2004; Schommer-Aikins, 2004). Researcher using the term teacher thinking are (Calderhead, Denicolo & Day, 2012; McAlpine, Weston & Fairbank-Roch, 2006). Teacher perspectives is used by (Skelton, Carrington, Francis, Hutchings, Read & Hall, 2009). Teacher reflection is used by (Fendler, 2003; Giovannelli, 2003; Howard, 2003; Kane, Sandretto & Heath, 2004; Milner, 2003). And finally teacher perception is used by (Childs, Ross & Jaciw, 2002; Fulmer & Turner, 2014; McCombs, Daniels & Perry, 2008). Grubbs (2010; 2013) points out that an inconsistent use of terms analogous to belief is also present in art education literature. For instance, some art education researchers (Eisner, 1979, 1992; Fischer, 1969; Freedman, 1991; Giffhorn, 1978; Smith, 1983; Swanger, 1981; Wolff, 1990) refer to art teacher ideologies. Other researchers (Grossman, 1971; Morris, 1975; Smith-Shank, 1992) speak of art teacher attitudes. Tomhave (1992) analyzes art teacher values. McSorely (1996) studies art teacher conceptions. Maitland-Gholson (1988) analyzes teacher epistemological assumptions. Kowalchuk (1999) researches art teacher knowledge. Art teacher reflection is used by Unrath & Nordlund (2009). Bain (2004) uses the term art teacher perception. Still others study art teacher paradigms (Carrol, 1995, 1997; Dorn, 1994; Kerlavage, 1992; Kuhn, 1980; Lanier, 1977; Pearse, 1983, 1992; Smith, 1992). Finally, art teachers who use the term teacher belief are (Codon-Evron, 2001; DiBlasio, 1978; Grauer, 1998; Grubbs, 2010, 2013; Smith-Shank, 1992).

## **Developing a framework to Analyzing Teacher Belief Research**

Within the teacher belief literature there have been scholars developing research techniques and frameworks to better collect and analyze teacher and student belief systems; this would be termed teacher belief research (Pajares, 1992). There have been a few researchers who have conceptualized teacher belief research frameworks. Shavelson & Stern (1981) chose four categories: Students, Nature of instructional tasks, Classroom, and School Environment. Elbaz (1983) developed five categories: Subject Matter, Curriculum, Milieu, Instruction, and Self. Brousseau, Brooks & Byers (1988) also developed five categories: Pedagogy, Curriculum, Milieu, Teacher, and Student. Pajares (1992) also developed five categories: Nature of Knowledge, Causes of Teacher Performance, Perception of Self and Self Worth, Self-Efficacy, and Specific Subject Beliefs. Influenced by all of these teacher belief research frameworks, Grubbs (2010, 2013) proposed a teacher belief framework: (1) Epistemology, (2) Teaching &

Learning, (3) Domain Knowledge, (4) Milieu. The following section goes deeper into Grubbs (2010, 2013) four teacher belief research categories.

## **Epistemology**

The first and most broad category in Grubbs (2010, 2013) teacher belief framework is epistemological beliefs. Epistemology is a person's view about the nature of knowledge (Hofer & Pintrich, 1997). A number of researchers analyzing teacher beliefs suggest analyzing teacher and student epistemological beliefs as effective to understanding aspects of classroom practice (Bendixon & Feucht, 2010; Bruning, Schraw, Norby, & Ronning, 2004; Grubbs, 2010; 2013, Kagan, 1992; Pajares, 1992, Schommer, 1990).

Nearly all of the existing research on epistemological beliefs can be traced back to the 1950s with William Perry at Harvard University (Hofer & Pintrich, 1997). Perry (1970) was the first to suggest that college student-made meaning of their educational experiences was not a reflection of personality but an evolving developmental process. Another key researcher in analyzing teacher epistemologies has been Marlene Schommer-Aikins. Hofer & Pintrich (1997) state, that Schommer (1990) made a major contribution to epistemological research by initiating an important line of research that links epistemological beliefs to issues of academic classroom learning and performance. "Teachers' personal epistemology, in particular their epistemic development, influence not only their choices of teaching strategies and use of educational materials, but also openness to educational reform and further professional development" (Bendixon & Feucht, 2010 p.7). There are differing views of epistemology by researchers; some scholars (Baxter, 1992; King & Kitchener, 1994, 2004; Perry, 1970) view epistemologies as systematic stages, while other scholars (Schommer, 1990; Schommer-Aikins, 2004) view epistemologies as collections of independent beliefs. Schommer's (1990) proposal that epistemological beliefs are independent dimensions rather than developmental stages ultimately has implications for individual learners to be sophisticated in some beliefs but not others. Regardless of whether you view epistemology as developmental stages or independent beliefs, Hofer & Pintrich (1997) found four dimensions which are consistent in both camps: (1) Nature of knowledge, (2) Nature of Knowing, (3) Nature of learning and Instruction, and (4) Nature of Intelligence. However, it is debated whether beliefs about learning, intelligence, and teaching should be considered a central component of epistemological beliefs (Hofer & Pintrich, 1997). To address this concern Hofer & Pintrich (2002) developed a new epistemological research framework: (1) Certainty of Knowledge (stability of knowledge and the strength of the supporting evidence); (2) Simplicity of Knowledge (relative connectedness of knowledge); (3) Justification of Knowledge (Procedure to evaluate and warrant knowledge claims); (4) Source of Knowledge (Knowledge resides internally and or externally). So why should I research my own epistemology as a teacher? Bruning, Schraw, Norby, & Ronning, (2004) state that the most consistent findings in the teacher belief literature is that teachers plan and implement instruction in ways that are consistent with their personal epistemologies. What is even more interesting is

that many teachers are not fully aware of what they believe epistemologically. Bruning, Schraw, Norby, & Ronning (2004) identify this type of belief as implicit belief, calling it personal, unconscious beliefs about the world which have slowly evolved over time. These researchers continue saying, "Implicit beliefs significantly affect the way we view ourselves as learners and how we operate in the classroom" (Bruning, Schraw, Norby, & Ronning, 2004, p. 138). Therefore, it is highly likely that your instruction is being dictated by your unconscious implicit epistemological beliefs rather than your clearly detailed unit lessons.

## **Teaching & Learning**

The second research category by Grubbs (2010, 2013) is teaching and learning. Within this category there are many subcategories that could be relevant areas to analyze. One important subcategory is pedagogy, which addresses questions concerning how content is being taught. Two excellent books that thoroughly explain pedagogical models is *Philosophical and ideological voices in education* by Gerald Gutek (2003) and *Curriculum Theory: Conflicting Visions and Enduring Concerns*, by Schiro (2013). Gutek (2003) lists four pedagogical models: Perennialism, Essentialism, Progressivism, and Critical Theory. Schiro (2013) has similar pedagogy categories in his book, adding Social Efficiency to Gutek's list. Some other relevant subcategories under teaching and learning would be curriculum design, evaluation or assessment approaches, classroom management, learning goals, teacher role, learner role, motivation, self-esteem, and self-efficacy, just to give a brief list.

## **Domain Knowledge**

A third category suggested by Grubbs (2010; 2013) is domain knowledge. Domain knowledge is the realm of knowledge that an individual has about a particular field of study (Alexander, 1992). "Teachers often teach the content of a course according to the values held of the content itself" (Pajares, 1992, pp. 309-310). Art educators agree that teacher beliefs about art are important to study because they influence what teachers do, how they interpret what happens in their classes, and how they continue to shape their teaching (Bain, 2004; Carrol, 1997; Coden-Evron, 2001; Eisner, 1973-74, 1979, 1992; Grauer, 1998; Grubbs, 2010, 2013; Kowalchuk, 1999; McSorely, 1996; Morris, 1975; Smith-Shank, 1992; Unrath & Nordlund, 2009).

There are so many areas that one could look at when it comes to art. A teacher could self-reflect about how they teach art making; that is, how they communicate art media techniques, process, tools, and equipment to students. A teacher could self-evaluate how they implement art criticism or the art critique in their teaching and how it impacts student development, such as Barrett (1997) and McSorely (1996) research. The approaches to art history could be analyzed pedagogically. Does the teacher teach art history chronologically or does she think it is more effective to teach art history thematically. The teacher could self-evaluate with a colleague about the ways they implement aesthetic or visual culture discussions. One could analyze how they increase a student's creativity in their classroom and have them become familiar with creativity

literature. A teacher could reflect about how they increase students' critical thinking by using reading Stout's (1996) critical thinking in art education article. And finally, the art teacher could reflect about how they teach culture through art. Does the teacher have students create art that mimics finished works from other cultures, or do they learn about that culture's art and then create their own work inspired by the themes coming from that culture.

The last category suggested by Grubbs (2010, 2013) was milieu. Webster's New World College Dictionary (2001) defines milieu as a setting, whether environmental, social, or cultural. Nespor (1984) cites Sieber's (1978) study showing that community pressure by organizations along ethnic, religious, and class lines may have considerable influence on both the curricular and pedagogical practices of schools. A teacher's milieu will be very circumstantial to the person being researched; this of course should not be a reason to leave it out of the research design. In fact, milieu is one of the key areas of a teacher's belief system that will reap rewarding data. Some important research categories that would fall under milieu would be physical, cultural, ideological, religious, gender, economic, political, or pragmatic influences on teachers', students' or even administrators' beliefs. This is not comprehensive, but art education scholars who have analyzed some of the milieu categories mentioned are (Check, 2004; Delacruz, 2003; Desai, 2003; Freedman, 2000; Grubbs, 2010, 2013; Lampela, 2001; Luehrman, 2002; Oweis, 2002; Sandell, 1979). This does not include the journal, *Arts Education Policy Review*, which is entirely devoted to analyzing the political realm of arts education.

### **Tips before Researching Belief Systems**

This article looked at teacher belief history and suggested a framework in which to analyze yourself or another teacher colleague. It seems important to give some tips to the reader before researching belief systems. First, beliefs are contextual and therefore research must be kept in context. Pajares cites Bandura's (1986) contention that beliefs must be studied as "context specific and relevant to the behavior under investigation" (Pajares, 1992, p. 315). Contextually designed research is supported by Kagan (1992), who states that a teacher's professional content knowledge is situated in context, content, and in person: (1) In context because it relates to a specific group of students; (2) In content because it is related to particular academic material to be taught; (3) In person because it is embedded within a teacher's unique belief system. Ultimately what this means is that if a teacher chooses to use teacher belief research, special care must be taken in designing the research study so that these inferred beliefs can be documented, triangulated, and articulated in a way that does not over generalize the findings.

Another important tip relates to truisms of human belief systems. There are three basic characteristics present in human beliefs: (a) beliefs are interconnected, (b) beliefs differ in intensity and influence and (c) beliefs often contradict themselves. To process further these three common human beliefs I offer up a toy box metaphor. The toy box represents the child's mind

and the child's toys represent that child's individual beliefs. A first characteristic consistent when analyzing personal beliefs is that beliefs are interconnected. Pajares (1992) cites research which argues that cognitive tasks are very much driven by beliefs and will invariably connect in some way. Pajares (1992) contends that, according to Rokeach (1968), the greater the connections, the more powerful the strength of the belief. Nespor (1987) maintains that one's beliefs influence how a task is defined as well as how that task is carried out. The connectivity of beliefs can extend like a web to various areas involving attitudes toward the nature of society, the community, religion, family and so forth. It is probably not hard to conceive that beliefs are interconnected. In the toy box illustration, the child's toys range from old to new, collected at different times and places, but through use they become interconnected in the box to the point of growing tangled and difficult to separate when the child wants to use them. Our beliefs are similar in that experiences connect with other past experiences, influencing potential new beliefs as we move into the future. A second characteristic of human beliefs is that beliefs differ in intensity and influence, with some beliefs taking a more central role as core beliefs, while other beliefs assume a more peripheral role (Pajares, 1992). Not all of our beliefs hold equal importance or impact our other beliefs with the same intensity. Looking again at the toy box illustration, when observing a child at play it becomes obvious that some toys are in constant use while others get little attention. These seldom-used toys can ultimately shift deeper into the box and become nearly forgotten. In the same way some beliefs are more central to our being and other, lesser beliefs build around that central belief to create a belief system. Trying to change one of these core beliefs is like trying to get a favorite toy away from a child.

A third characteristic of personal beliefs is that a belief system is most often contradictory. Nespor (1987) found that an individual's belief system, unlike knowledge systems, do not require internal consistency within that person's belief system. Core beliefs are more resistant to change, which helps explain why new beliefs can become part of the belief system without changing core beliefs, even when they are contradictory. When a parent looks into a child's toy box there is no rational pattern or order. Dolls, toy guns, picture books, game pieces, stuffed toys, as well as items that are not even intended as children's toys such as old cell phones, art materials, and kitchen containers, find their way into the toy box. This is interestingly consistent with our beliefs; belief contradictions are the norm. This is common because much of these beliefs are implicit or subconscious beliefs.

### **Helping Pre-Service Art Teachers Process their Belief Systems**

I have been teaching an art education history course at the university level for eight years, and am fully convinced that the art education history course is the perfect place to help students confront their own pedagogical belief system inconsistencies, helping students move from implicit beliefs to consciously explicit. We all have had some type of history course during our education career, and yet we struggled to retain the information because as a student we could not connect our life to the content and time period that was being taught. The innovation of this course is not the art education history but the way our history is framed within a reflective

teaching practice. The way that I teach art education history integrates education and art education histories, conjuring up philosophical, ideological, and pedagogical issues in art education theory. These various issues are then fodder for class discourse, critical thinking, and self-evaluation. Peer discussions are lively and force students to evaluate their beliefs systems, ultimately defending a particular perspective. The continual process of confronting one's beliefs through the class ultimately reveals belief inconsistencies in their education belief system, from which the student begins to renew and realign their belief system.

That is where books like *Philosophical and Ideological Voices in Education* by Richard Gutek (2003) are so helpful. Another book that would be of equal value is *Curriculum Theory: Conflicting Visions and Enduring Concerns* by Michael Stephen Schiro. These two books do a great job of showing us the big picture by framing historical models of teaching. If history is going to be relevant to the student, then the professor must systematically integrate an approach of self-reflective practice while teaching historical content. Only then can students question key assumptions of their belief systems. You may be asking how a professor promotes belief change in students. Kagan (1992) states three things educators must do to promote belief change for students: (1) Help each student's implicit beliefs become explicit; (2) Help students confront their own belief system inconsistencies; (3) Help students distinguish old beliefs from new beliefs and develop new belief systems. For more practical applications regarding Kagan's theory, I turn to Roger Bruning, Gregory Schraw, Monica Norby and Royce Ronning (2004) in their book *Cognitive Psychology and Instruction*. In this book they mention eight principles for developing a reflective classroom. These eight principles fit nicely within the three goals from Kagan. First, Kagan, (1992) states, teachers must help the student's implicit belief become explicit. Bruning, Schraw, Norby, & Ronning (2004) state, "Implicit beliefs significantly affect the way we view ourselves as learners and how we operate in the classroom"(p.138). The art education history course I have taught for eight years is structured to help students bring their many implicit beliefs to the forefront. To elaborate on how to achieve this, I will show how four principles from Bruning, Schraw, Norby, & Ronning (2004) work with Kagan's goal.

(1) First, take a broad perspective on knowledge. This course does take a broad perspective on knowledge by holistically explaining all of the pedagogical models in education history as well as chronologically, philosophically, and ideologically connecting those education models to curriculum theories in art education. Taking a broad perspective on knowledge is good because complex relationships between disciplines such as education, political science, and philosophy for example, begin to emerge and this sets the stage for students to see the world differently.

(2) Second, organize instruction in ways that favor knowledge construction. For students to make any headway in changing belief systems requires the professor to clearly conceptualize content into understandable schemas (Schunk, 2002; Sousa, 2012). Clearly clarifying content schemas in your class allows students to begin categorizing their own belief systems. The schemas which I have found useful are educational pedagogies, ideologies, and philosophies which have already been developed in educational history, and Gutek (2003) just made them overtly obvious by



making them book chapters. Because education history is long and complex, it is a plus to find authors like Gutek (2003) and Schiro (2012) who write about education history on a level that normal people can understand.

(3) Third, develop students' information-seeking skills. In our information age, information filtering is a lost technique for students (Curtis, 2001). Through your course, condition students to understand differing degrees of quality data sources, but also help them develop techniques to filter through data. One way I accomplish this is through assigning art education reports. Students are asked to write a ten to fifteen page paper on one art educator's life and contribution to education history. They would need to search through journals, books, and websites, filtering what is relevant. These written papers are then created as "Prezi" power points, recorded, and put online in Black Board, forcing students to restructure their original written reports for a different visual mode of communication.

(4) Fourth, create a "thinking classroom". You as the teacher will need to model the critical thinking process. This is accomplished not only through depth of course content, but also in the manner in which you inspire student to respond to their assignments and in your classroom. One way I have been doing this in my course is through simple reflection papers. For each assigned chapter they are required to write a one hundred words abstract summering the basic overview of the chapter. Then they must write a one-page paper with their comments, disagreements, and questions regarding each chapter in Gutek and Efland's book. All these small reflection assignments make them self-reflect about each educational ideology, philosophy, and pedagogy. This prepares them for their final ten-page paper, which requires them to summarize their entire belief system, referencing specific educational philosophies, ideologies, and specific art educators.

The second goal, as Kagan suggests, is for teachers to help students confront their own belief system inconsistencies. To elaborate on how to achieve this, I utilize two principles from Bruning, Schraw, Norby, & Ronning (2004) that work with Kagan's goal.

(5) Fifth, use discourse structures that promote reflection and knowledge construction. Directing students to see their own belief contradictions requires a course geared toward self-reflection and discourse, exposing students to a diversity of perspectives in a respectful, inclusive, and safe environment. People learn and retain better that which has personal significance (Sousa, 2012). Social Cognitive theorists like Albert Bandura and others would support discourse teaching because people learn from their social environments (Shunk, 2002). It is for this reason discourse takes up the majority of my course. Students reflect about their own beliefs through chapter journaling, online discussion boards, argumentative papers, and classroom discussions. It is important to remember that students are required to reflect and articulate their teacher beliefs in reference to all of the education and art education theories that the course has taught. Peer-to-peer conversations do have an impact on an individual's belief systems. Discourse supports student belief change because students are motivated to listen to their classroom peers and share

their own beliefs. Facilitating a class that is driven by student discourse is not easy and requires significant preparation on behalf of the professor. For each class one must develop a hierarchy of relevant questioning to facilitate students into a deeper questioning/ reflective process.

(6) Sixth, consider decentralizing discussion. Not every student will want to share their opinions in larger groups, so it is important to utilize different opportunities for them to share their views. Online discussion boards or breaking students up into smaller groups for private discussion would be more useful for some students. But equally important, the professor must create an environment that allows students to openly share their personal beliefs with the class.

Third, teachers must give students extended opportunities to distinguish old from new knowledge, synthesizing a new conceptualization while eliminating weak preconceptions. To elaborate on how to achieve this, two principles from Bruning, Schraw, Norby, & Ronning (2004) work with Kagan's goal.

(7) Seven, make tolerance a basic rule for classroom interaction. If students are going to distinguish old beliefs from new beliefs and develop new belief systems, the professor must create a classroom environment with a high level of tolerance that allows students to openly share their personal beliefs with the class. Developing an environment of tolerance requires that the teacher understand his or her role in relation to students' needs. In other words, there are different roles a teacher may take at any given moment depending on the sensitivity of the topic discussed. Often in my class the goal is to instigate debate and open discourse. In order to facilitate this, I will take the teacher position of withholding my opinion on the controversy being debated or, in the instance when the entire class holds the same perspective, I will play "devil's advocate" in order to force them to look at the topic from another viewpoint.

(8) Eight, use coaching and scaffolding to build student understanding. Beliefs are very personal and people situate their beliefs into structures that make sense to them. If you are going to be a coach for belief change, developing a good rapport with your students is critical. Scaffolding is when teachers enable students to do things they could not do on their own. Being that this course is so dense with historical and philosophical content, helping students see alternative viewpoints or accurately connect their belief to a specific ideological view would be good scaffolding. Ultimately, enabling students to dismantle their own erroneous knowledge conceptualizations may be the goal, but it is an uncomfortable process. Teachers need to be an empathetic resource able to patiently clarify any position that a student needs to further think through.

## **Conclusion**

The key premise to the article is that the more self-aware a teacher is about their beliefs and assumptions, the more in control they are to change them and improve their teaching. This article gave a brief history of teacher belief research and suggested a framework by which to begin this type of research, either through analyzing themselves or another teacher. Hopefully what became

clear to the reader is how powerful teacher belief research can be for our field. With the structure I laid out in this article, art educators can take steps toward implementing a systematic process of documenting, reflecting, and analyzing our own pedagogical belief systems. The article concludes by giving an example of a specific course in which teacher belief teaching can be implemented. The article gave details on how an art education history course can be a self-reflective discourse oriented class that achieves three key goals for student belief change: (1) Help student's implicit beliefs become explicit (2) Help students confront their own belief system inconsistencies and (3) Help students distinguish old from new beliefs and develop new belief systems.

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