

CONSTRUCTIVIST CLASSROOMS: DO THEY BELONG IN ADVENTIST SCHOOLS?

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Or are students responsible for their own learning?*

Are teachers responsible for students' learning? Or are students responsible for their own learning? How you answer those questions will depend on the theory of teaching and learning you embrace.

For thousands of years, the following assumptions have dominated educational philosophy: The teacher knows the information, tells it to the students, and supervises their study to make sure they learn. The students are supposed to be good listeners, do the assignments, and study enough to pass a test. Within a few weeks or months, they may not be able to recall or use the information, but that has been considered an inevitable downside to education because it was assumed that students' intelligence levels could not be changed.

Most recent educational reforms are based on a different teaching and learning paradigm called *constructivism*. A theory about knowledge and learning, constructivism asserts that learners actively assemble meaning and understanding for themselves. Although constructivism is not really a theory about teaching, its concepts result in very different teaching methods than those commonly used in traditional classrooms. Because current educational literature is replete with references to and examples from constructivist reforms, Adventist teachers must look carefully at the assumptions underlying this educational approach.

For Christian educators, in-

troductory descriptions of constructivism immediately wave red flags. For example: "Constructivism is not a theory about teaching. It's a theory about knowledge and learning. Drawing on a synthesis of current work in cognitive psychology, philosophy, and anthropology, the theory defines knowledge as temporary, developmental, socially and culturally mediated, and thus, non-objective."¹ Fosnot further describes knowledge as "internally constructed."²

If each person internally constructs an interpretation of knowledge for himself or herself, what happens to truth? Where is the authority for our lives? If we accept the idea that there is no absolute truth, and that everyone personally interprets information, how can we teach children the difference between right and wrong? How can we lead them to believe that stories in the Bible were real events experienced by real people?

To evaluate the pros and cons of constructivism, this article will carefully examine the nature of truth and look at the teaching methodologies arising from constructivism.

What Is Truth?

In John 18, we find the story of Jesus' trial before Annas, Caiaphas, and Pilate. Jesus was more ready to answer the questions of Pilate than those of the other two. Yet when He mentioned truth, Pilate cut Him off with the curt question, "What is truth?" Truth to Pilate was no more than an idealized ab-

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straction. Almost 2,000 years later, his question remains unanswered for many thinking people.

In order to discover the nature of truth for yourself, take the following quiz. But instead of just inserting your own answers, try to think how different people you know would respond to each item.

A. Where is the best place to buy a new car?

B. What clothes for women are both attractive and modest?

C. Name the most dependable agricultural crop in your area.

D. Which is the greatest book in the Bible?

E. Describe the individual human cell.

F. Just how honest was George Washington?

With your circle of acquaintances in mind, did you discover absolute truth on any part of the quiz? Probably not. Almost every area of life functions outside of absolute truth. Preferences, opinions, conflicting evidence, points of view, experience, and growing knowledge all influence answers to the quiz, but truth as an absolute does not apply. The activities of everyday life can be arranged in many different forms. The understanding of science changes so fast that we can't keep up. History is frequently reinterpreted. Only in the spiritual realm can we hope to find truth. Even there, a wide divergence of opinions exists, as even an Adventist bookstore reveals.

Truth Is Relational

Yet a Bible concordance lists many verses referring to truth. Some well-known texts include John 14:6, Jesus is the way and the truth; John 16:13, the Holy Spirit will guide us into all truth; and John 17:17, God's Word is truth. The index to Ellen G. White's writings on CD ROM shows 42,829 references to the words *truth* or *truths*.

We think of truth as propositional in nature, objective, and static; something we can pass on unchanged from generation to generation. But notice that the Bible verses above define truth as relational. You will find the same theme in other Bible texts as well as Spirit of Prophecy statements. In *The Ministry of*

Healing, Mrs. White writes, "The foundation of all enduring reform is the law of God. We are to present in clear, distinct lines the need of obeying this law. Its principles must be kept before the people. They are as everlasting and inexorable as God Himself."³ Notice that she does not say God's *law* is everlasting, but "its principles. . . are as everlasting and inexorable as God Himself." How can we fit all of this together and teach truth to our students?

Ways to Think About Truth

Here are three ways of thinking about truth:

1. *The Bible and the Spirit of Prophecy are the measuring rod for every aspect of life and belief.*

As teachers, we must constantly direct our students to God's Word as authority and truth, rather than doing their thinking for them. Our judgment will frequently be faulty. If students look to us for constant direction, to whose

guidance will they succumb when we are no longer in their lives? Recent news reports reveal the dangers of David Koresh and Marshall Applewhite, and many charlatans are out there looking for disciples who have not been taught to think for themselves. Then there are always humanistic or New Age philosophies that teach individuals that they themselves are the ultimate authority. Evidence abounds that there is no safety outside of dependence on God and His Word.

Questions about behavior and standards relating to dress, jewelry, dating, games, and sports frequently arise in Christian schools. Students can always argue with whatever we say or however many rules we make. But if we direct them to inspired sources to study for themselves the instruction given, they are less likely to argue with us, though they may struggle with the information they find. This is not a bad thing, for struggle is part of spiritual growth.

Students must be taught to search for the overarching principles of inspired writings rather than seizing on a few selected statements. There are dangers in basing belief or practice on an

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To see the balanced picture and apply the teaching to our own practice, we must look at the full range of her statements on the topic.

2. *We must come in humility to our study of truth.* There are few, if any, areas where we know it all. What we say and do and believe are based on our best understanding, not truth in the absolute sense. Review Paul's humble attitude toward truth in 1 Corinthians 13:12 and Philippians 3:7-16. Both of these passages place truth within a relational setting.

Mrs. White also took a humble attitude toward truth. She said, "Let no one come to the conclusion that there is no more truth to be revealed."³ In *The Great Controversy*, she wrote, "The plan of redemption will not be fully understood, even when the ransomed see as they are seen and know as they are known; but through the eternal ages new truth will continually unfold to the wondering and delighted mind."⁴ That statement makes me wonder why we split hairs over the details now when we will have eternity to understand more without the dangers of wandering into deceptive paths.

Solomon, the wisest man who ever lived, took a humble attitude toward truth. The whole Book of Ecclesiastes bears that out, and in Proverbs 4:18, Solomon points out that light (truth and understanding) begins dimly like the dawn, then gradually shines brighter and brighter like the sun rising in the sky.

How the Brain Organizes Information

Let's use an example to see how that works neurologically. Schema theory is currently the dominant theory of how learning occurs. The word *schema* refers to the way information is organized. You have probably bought some piece of equipment that came with a paper showing the arrangement of the electrical wiring. That drawing is called a schematic. From computer science, especially studies in artificial intelligence, educational researchers have concluded that the brain is organized somewhat like a computer. Information is not stashed away in one central location. Rather, related information is organized together, somewhat like files are saved in a computer. There are separate "files" for different concepts or topics. Over time, more and more linkages are made among the varied files of stored information. In the human brain, this represents hundreds of thousands of files and untold numbers of linkages.

To simplify this complicated theory, think of one of those files (related information about some concept, i.e., birds or col-

assortment of proof texts or statements without considering the comprehensive coverage inspiration provides on specific topics. A simple case in point: Mrs. White wrote in a few places about not sending children to school until they were 8 to 10 years of age. However, her biography⁴ relates her meeting with the elementary school board at St. Helena, California, in 1904. This church school did not admit children younger than age 9 because they were trying to follow closely the Spirit of Prophecy teaching on school attendance. Their policy was causing trouble for the St. Helena Sanitarium because children too young to attend the school were running unsupervised through the hospital, disturbing patients and staff. Mrs. White explained to the school board that her statements about age of school attendance had been made when Adventists had no church schools. She desired that children should be taught at home the difference between right and wrong before they were exposed to public school. As far as learning was concerned, she said, some 5 year olds were just as ready to learn as 10 year olds. As a result of that meeting, the church school lowered their entrance age to 7.

By adding this account to the statements in *Child Guidance*, it becomes clear that Mrs. White was setting forth some very important principles, but none of them was intended to teach that children are unready for school before the age of 8 to 10.

ors) as being a fishnet. The lines in the net are the pieces of information that you learned sometime in the past. Easily understood ideas are represented by big fish swimming to the net. Complicated, detailed, technical ideas are represented by little fish swimming to the net. If a fish gets caught in the net, it becomes another line in the netting. (So much for reality.)

Now think about the way this would work for a child learning about colors. What information would likely form the netting? Probably the names of basic colors, crayon colors, rainbow colors, etc. Then as the new school year begins, a certain color is very popular in children's clothes stores (a big fish swimming to the net). Is a child likely to notice the color and want one of the garments? Probably so, and a new line will be woven into the net. But now someone tells the child that the colors in the crayons are determined by light waves of different lengths (a little fish swimming to the net). Is this little fish going to get cap-

tured by the net? Not a chance. The net is too loosely woven. It has plenty of holes for this technical information minnow to swim through and get lost somewhere in the brain (since we are told that *everything* we ever hear, see, or experience is forever stored in memory). Additionally, this piece of information is contrary to everything the child has known and thought about colors, so the discrepancy will probably cause him or her to disbelieve and/or discard the information. Nothing in past experience had prepared the child to accept this new idea.

This brings us to another important point in schema theory. Learning depends on prior knowledge. What we know today determines what we are able to learn. The more we know about a concept, the easier and faster it is to learn something new about that same concept. If we don't have many lines of prior knowledge in our net, we will need more time and effort to add yet more lines. And we will probably forget or ignore much of the information that swims our way.

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Learning Is Actively Constructed

One final point from schema theory: Learners actively construct meaning. Students don't simply internalize what teachers or textbooks say. Whatever they hear, see, or experience prompts their God-given computer brain to bring forward all their prior knowledge that seems related. Then they use what they already know to interpret and evaluate the new information. This theory reveals the reason why students' interpretations frequently differ from what we thought we taught them. They may not have the background knowledge to understand the concept the same way that the teacher does. In fact, they may *never* understand it exactly the same as the teacher does because each person has a unique set of background experiences and knowledge to draw upon. What does this say about the differences in learning abilities you see in your classroom? What about the different opinions people hold on Bible topics?

Now let's move on to the final suggestion for thinking about truth.

3. *No matter how tightly woven their mental fishnets, only saints have any hope of understanding truth, which can only be found in the spiritual realm.* Both the Bible and the Spirit of Prophecy talk about the fact that knowledge must be combined with faith in order to be understandable and valuable. (See 1 Corinthians 2:14; Titus 1:1; 2 Peter 1:8; and Hebrews 4:2.)

Notice these statements by Mrs. White:

"The perception and appreciation of truth depends less upon the mind than upon the heart. . . . Truth must be received into the soul; it claims the homage of the will. If truth could be submitted to the reason alone, pride would be no hindrance in the way of its reception. But it is to be received through the work of grace in the heart. . . . Man's advantages for obtaining a knowledge of the truth, however great these may be, will prove of no benefit to him unless the heart is open to receive the truth" (*The Desire of Ages*, pp. 455, 456).

"As the Word of God is received into the soul, we partake of the flesh and blood of the Son of God. As it enlightens the mind, the heart is opened still more to receive the engrafted Word, that we may grow thereby. Man is called upon to eat and masticate that Word; but unless his heart is open to the entrance of the Word, unless he drinks in the Word, unless he is taught of God, there will be a misconception, misapplication, and misinterpretation of that Word" (*Review and Herald*, Nov. 23, 1897).

"New light will ever be revealed on the word of God to him who is in living connection with the Sun of Righteousness" (*Counsels on Sabbath School Work*, p. 34). Pilate and others like him do not find truth because they are not willing to submit to the authority of the Author of Truth. "The beauty and preciousness of truth, which are undiscerned by the worldly-wise, are constantly unfolding to those who have a trusting, childlike desire to know and to do the will of God" (*Thoughts From the Mount of Blessing*, p. 27).

Probably many of the active learning strategies listed under CONSTRUCTIVIST VIEW on the accompanying chart are already happening in your classroom because intuitively you know they follow the spirit of our prophetic instruction to "train the youth to be thinkers."⁷ When you understand the philosophical base of the constructivist view—that its rejection of absolutes holds up in reference to basically all of life except religious beliefs—then you are prepared to intelligently draw on its teaching methodologies, which can educate students to be far more thoughtful and accurate in constructing personal interpretations of knowledge.

Our first responsibility as Adventist teachers is to draw our students to know Jesus Christ as a personal friend and to choose Him as Lord of their lives. Then by God's grace, we and they may daily grow in faith and knowledge, guided into all truth as it affects every aspect of our lives. ☞

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WHICH METHODOLOGY WILL TRAIN THE YOUTH TO BE THINKERS?

	TRADITIONAL TEACHING	CONSTRUCTIVIST TEACHING
1. Teacher's responsibility:	Maintain order and transmit knowledge	Create a collaborative learning environment, orchestrate, facilitate
2. Knowledge:	Something the books and teacher possess and transmit to students, after which the teacher tests its acquisition	Something actively constructed in each mind, depending on prior knowledge
3. Subject matter:	Fragmented book learning	Topics related to life, drawing on natural curiosity
4. Curriculum coverage:	Rapid and largely theoretical	In-depth inquiry, performance based
5. Technology:	Text, work sheets, tests, paper and pencil	Raw data, primary sources, paper and pencil, video, calculator, computer
6. Interaction:	Question-answer-evaluation sequence	Student questioning, argument, articulation of understanding
7. Assessment:	At the end of the unit or period	Of prior knowledge before the unit, then ongoing
8. Feedback:	Vague, subjective	Based on clearly articulated public criteria
9. Communication style:	Taboos against sharing knowledge, authority, or responsibility	Collaboration: teacher with students, teacher with teachers, teacher with research, student with students
10. Need to know:	Facts that students will be tested on	Basics plus ability to think through problems, reason well, and use creative solutions
11. Intelligence	Generally fixed at birth	Depends on opportunities for positive interaction with adults and more capable peers as well as other factors

versity in 1993 and has taught at the elementary, secondary, and tertiary levels.

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