Cognitive Mediation: The Forgotten Art of Teaching to Transmit Knowledge

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Introduction

With the advent of the acceptance of developmental theories as a foundation for education, a discovery and experiential pedagogical approach to learning became prevalent in education and eventually was accepted by Christian educators. According to this model, teachers (parents, school and church) are encouraged to create meaningful, age-level-appropriate learning "experiences" that engage the student so he can discover knowledge and move through the stages of life in order to meet his full potential. The key, according to Piaget, is that the child is allowed to interact with the environment *without* the intervention of more knowledgeable individuals. Piaget said "Every time we teach a child something, we keep him from inventing it himself. On the other hand that which we allow him to discover by himself will remain with him visibly for the rest of his life."¹

Figure 1: Piaget's model of learning²



The experiential activity thus has become both the curriculum (defined as content, knowledge, truth) and the instruction (methods of teaching the content) as children are encouraged to construct their own knowledge and understanding of themselves and the world. The idea of transmitting knowledge is perceived as a negative methodological tool because the teacher is forcing his ideology on the students. The results are that the individual constructs his own subjective knowledge and understanding based on his experiences.

On June 28, 2006 the Christian community in the United States was alarmed when President Obama announced: "Given the increasing diversity of America's population, the dangers of

² *Genetic Epistemology*, lecture 1 of a series of lectures delivered by Piaget at Columbia University, Published by Columbia University Press, 1968, translated by Eleanor Duckworth.

¹ Jean Piaget, "Some Aspects of Operations" chapter in *Play and Development: A Symposium* with Contributions by Jean Piaget, Peter H. Wolff and Others, Editor: by Maria W. Piers; (NY: W.W. Norton and Company, 1972), 27.

<u>https://www.marxists.org/reference/subject/philosophy/works/fr/piaget.htm</u> Both Piaget and Vygotsky were evolutionists and believed a genetic epistemology. Neither were behaviorists meaning that the response of the environment was the "teacher" (i.e., when I put my finger on the hot pan, I will get burned; therefore, I learned something: I will not put my finger on a hot pan). Piaget thought individuals constructed knowledge through their experiences without correction or praise from a knowledgeable teacher. Vygotsky, on the other hand, believed that individuals should construct knowledge together as a social group.

sectarianism have never been greater. Whatever we once were, we are no longer just a Christian nation; we are also a Jewish nation, a Muslim nation, a Buddhist nation, a Hindu nation, and a nation of nonbelievers." In other words, Christians have lost their influence through unwavering faith because they are no longer committed to teaching their faith. Instead many have become enamored with the love of their own constructed knowledge and meaningless explanations embedded in non-biblical cultural traditions and worldly ideas (see Col 2:8). The citizens of the USA as a "Christian" nation have determined that the values and beliefs of the previous generations should not be transmitted; that godly convictions no longer fit into a humanistic society. Such thinking has ushering in a loss of committed Christ-followers and created a moral crisis where there are no absolutes.

In The History of Pedagogy, Payne and Compayre write, "If ever a people has demonstrated the power of education, it is the people of Israel."³ What pedagogy did they use that was so impactful that it preserved a culture for generation after generation? Shmuel Feuerstein, and Reuven Feuerstein, who were instructed in the Jewish tradition and are Orthodox Jews, make a case for using human mediated learning experiences to make learning meaningful, memorable, and practical.⁴

Remembering takes place in the brain - it is a cognitive function - but current educational practices villainize the skill of memorization. Because godly instruction helps Christians become wise in their choices, teachers should be taught that their part in an individual's learning is more than planning fun things to do but is the art of helping learners pay attention to what is important from God's perspective thus impacting their thoughts and lives. The concept of utilizing mediated learning as a pedagogical tool is a theory developed by Reuven Feuerstein to help struggling learners develop cognitive skills. Shmuel Feuerstein adapted the meaning to all knowledge and skills. Cognitive mediation is designed such that instructors intentionally convey a particular knowledge or skill and to encourage the student to relate the meaning to some other thought or experience; the interacting is with intention, meaning, and a spiritual reality with the intent of helping the learner expand his skills and knowledge.⁵

The purpose of this paper is to examine the idea that Christian educators should utilize the teaching method of human cognitive mediation as a pedagogical tool in order to restore, transmit, and maintain a biblical worldview thus transforming the mind of the student and promoting biblical thinking from one generation to the next generation as commanded in the Shema and in the Great Commission.

³ William Harold Payne & Gabriel Compayre, *History of Pedagogy*. (London: Swan Sonnenschein & Col,

^{1903), 6.} ⁴ Reuven Feuerstein & Ann Lewin-Beham, *What Learning Looks Like: Mediated Learning in Theory and* Practice, K-6. (NY: Teachers College Press, 2014), 26-27.

⁵ See Carol Brown. "Naturalistic or Biblical View of Human Development" in the *Journal of Alternative* Medical Research, 10(2) (2018): 117-123.

⁶ "These words which I am commanding you today shall be on your heart. You shall teach them diligently to your sons and shall talk of them when you sit in your house and when you walk by the way and when you lie down and when you rise up" Deuteronomy 6:7) and "Go therefore and make disciples of all the nations, baptizing them in the name of the Father and the Son and the Holy Spirit, teaching them to observe all that I commanded you;" Matthew 28:19-20a. Both the Old and the New Testament emphasize teaching – inculcating, indoctrinating, instilling in them. Teaching to the heart is spiritual: the inner man, mind, will, heart, soul, and understanding – it is

The loss of the teacher's purposeful and meaningful instruction that preserves Truth, values, morals, history, and traditions has facilitated a major shift away from a culture defined by biblical truth and ushered in the belief that one can construct his own truth, values, and interpretation of history. The "Christianly" answers to questions relevant to our being are replaced by worldly, self-constructed answers and, thus, our Christian (and Hebrew) heritage is being forsaken.⁷

The standard for the Truths that need to be taught and, additionally, for the research presented in this paper are based on the original text of Scripture. For example, a great passage that gives a glimpse of CE is in 2 Timothy 3:14-17 where Paul writes:

You, however, continue in the things you have learned and become convinced of, knowing from whom you have learned *them*, and that from **childhood** you have known the sacred writings which are able to give you the wisdom that leads to salvation through faith which is in Christ Jesus. All Scripture is inspired by God and profitable for teaching, for reproof, for correction, for training in righteousness; so that the man of God may be adequate, equipped for every good work (NASB).

This passage refers to education. Truths the passage teaches about education include:

When the education begins: *childhood* meaning babe, infant, young child;
The curriculum - "things you have learned"; the Greek word for learned is *manthanō* meaning to increase in knowledge. They encompass the sacred writing, Scripture inspired by God and includes the concepts of wisdom, salvation, teaching (doctrine or precept), reproof (proof, evidence, testing something), and correction (improvement of character);
The instruction is didactic in nature presented by individuals like Paul, Timothy's mother and grandmother;

(4) The goal is to become "the man of God . . . adequate, equipped for every good work"; and

(5) The response is evidenced in the phrase *continued in* (stand, abide, dwell in); it is and the phrase *was convinced*, meaning established in, and believe that what he learned was Truth.⁸

By contrasting Hebrew/biblical and Greek/western thinking, the author is exposing the underlying assumptions/beliefs as they relate to a philosophy of pedagogy and why each assumption establishes a worldview in the student. A discussion on what knowledge is and how one acquires knowledge determines a biblical reason to transmit God's Truth and establishes a foundation for human mediated learning. Suggestions for instructing those who teach through mediation biblical thinking are given and addressed in the conclusion along with questions for further study.

higher level, abstract concept meant for children to learn; we are to sharpen the next generation as a warrior sharpens as arrow.

⁷ Shmuel Feuerstein. *Biblical and Talmudic Antecedentsof Mediated Learning Experience Theory: Educational and Didactic Implications for Inter-Generational Cultural Transmission*. (Ashkelon, Israel: Ashkelon Academic College, 2002), 38.

⁸ Word meanings derived from *Strong's Concordance* and *The Interlinear Greek-English New Testament*.

The Hebrew Mind vs the Greek Mind

Hebraic/Biblical thought is based on the revelation in Scripture through the Holy Spirit that enables us to understand the biblical view of God. Greek thought is rooted in Platonism, the doctrine of reality (empiricism), and Idealism, the doctrine of shaping the human mind.⁹ They answer the questions of life from different perspectives because their presuppositions are based on their personal knowledge and beliefs about the basic questions that form assumptions in every area of life. Each of the following questions contrast the difference between Hebrew thought and Greek thought. Depending on which answers one believes dominates the way an individual thinks and acts. Presuppositions are often hidden but they are the lens through which one answers life's questions and responds to the world.

Worldview Questions:	Hebraic/Biblical Thinking	Greek/Western Thinking	
Who am I?	An Image bearer who is flawed and needs restoration	A <i>homo sapien</i> ; behavioral product of my environment; an individual with "rights"	
Where did I come from?	Created by the Creator	Evolved over millions of years into what they are today.	
What is the problem and its cause?	Sin has tainted relationships with God, self, others and the world.		
How is the problem fixed?	Justification through a redeemer (Jesus Christ);	Science and technology; behavioral conditioning; social change	
What is my purpose in life?	Humans ARE God's Image Bearers; To BE Christlike; to care for the world God created	To BECOME by going through stages of development; to be happy and successful	
What is important in life?	Loving God and others; obedience to Christ's commands; being transformed into the image of Christ (holiness); bring others to a relationship with Christ; relationship with others	To change, grow up, be happy, to be successful (education, power, wealth, material things), to contribute to the society	
What is truth?	Scripture; principles and theories based on scripture alone; spiritual things verifiable in the created world	Discovered knowledge based on personal experiences and feelings and socially constructed values, empirical evidence – what is observable	

Some basic Hebrew and Greek concepts that are opposite are: abstract vs. concrete (reality), being vs. becoming (Who am I?), training vs. development, God-centered vs. child-centered, group vs. individual, God's glorification vs. self-actualization (autonomy), and creation vs. evolution.

⁹ Thorleif Boman, *Hebrew Thought Compared with Greek*. (NY: W.W. Norton & Company, 1962), 19. First published in German in 1954.

The Greeks used concrete ideas where numbers and quantitative descriptors dealt with the physical world. They thought humans could only understand what they can see with their senses, collecting information as they proceeded. Empirical evidence is truth.

The Hebrews used descriptive language; they used numbers to help get a clear picture in the mind and to help understand what God was doing. Numbers were not used for the purpose of being prescriptive or provide empirical evidence. The Hebrews often started with teaching abstract concepts and used concrete examples to help their children know and understand God. For example, one cannot argue that the lilies of the field cloth themselves nor can they worry since they are not human; instead the object of the lesson is that God cares for them and gives them their beauty.

The philosophical reasons for the decline in transmitting knowledge and the decline of value in knowing traditional things was greatly influenced by Darwin's theory of evolution and by the progressive movement and pragmatism. The presuppositions for the teacher becoming "facilitators of learning" rather than imparters of knowledge has implications ascribed by evolutionary anthropology (Who am I and Where did I come from) and an evolutionary epistemology (What is Truth?).

When toddlers and preschoolers learn about who they are, biblical Christianity and Judaism relate their "being" to the creation of Adam and Eve rather than taking the modern approach that helps the child develop his self-esteem and personality by focusing on me-myself-and-I. A God-centered perception of who the child is rather than a self-centered one begins when the child is introduced to language. Development from a biblical perspective says that you already ARE a person created in God's image so you need to be trained how to fully become what God intended you to be.¹⁰

Teaching, in its simplest sense, is the communication of knowledge. This knowledge may be a fact, a truth, doctrine of religion, a precept of morals, a story of life, or the processes of an art. It may be taught by the use of words, by signs, by objects, by actions, or examples . . . the training of the mind, the increase of intelligence, the implantation of principles, or the formation of character. . . it is the communication of knowledge. It is the painting in another's mind, the mental thought and understanding to the comprehension of some truth, which the teacher knows and wishes to communicate.¹¹

"Today we hardly know how to separate education from the idea of development." Although one does observe the stages of a child's development, such observations were not the focus of education prior to the late nineteenth century. Some developmental theories are cultural rather than Truth. Schooling "stressed correcting nature rather than following her . . . Progressive education . . . does not look upon the child as naturally sinful. Quite the contrary: sin is felt to be a result of the imposition of human social customs upon the innocent being who come straight with God. . . the classical aim of education was to correct nature through civilization" but now

¹⁰ Reuven Feuerstein, Louis H. Falik, & Rafael S. Feuerstein, *Changing Minds & Brains: Higher Thinking and Cognition through Mediated Learning*. (NY: Teachers College Press, 2016), 1.

¹¹ John Milton Gregory, *The Seven Laws of Teaching*. (Boston: Congregational Sunday-School and Publishing Society, 1886) 4-5.

education is trying to correct nature through education. Child development has become the sacred cow so education is no longer trains for the future but for the present.¹²

Achieving personal goals and making decisions because I want to be happy is often accomplished at the expense of others. "Me first?" and "What's in it for me?" is the mantra of me-ism. Christians talk about "my heart, my ministry, my spiritual gifts, my blessings, my call, my ministry." Worship has become all about me; stories focus on how I feel. It should be all God's glorious grace and marvelous mercy. God's intended purpose for the gospel is to glorify Him, not to can get good things for ourselves.¹³

Knowledge (Truth, Epistemology, What Should be Taught?)

Especially since the 1950's, educators have engaged in discussions relating to how one gains knowledge; some theories are that individuals acquire knowledge, construct knowledge, or receive knowledge through "the process of connecting certain responses to certain stimuli."¹⁴ However, one can argue that if something goes into the brain and sticks, the individual has learned something and has more knowledge. Knowledge is gained through an experience (planned or lived), through direct input (lecture, TV, books, the Internet, etc.), through metacognitions (thinking about something), through the responses one makes as a reaction to, or through the illumination of the Holy Spirit, learning takes place. In each of these situations, knowledge is "constructed" - there is a direct effect on the mind/brain that influences the learner's thoughts, interpretation of things and actions for the rest of his life.¹⁵

Transmitting Knowledge

According to S. Feuerstein, transmitting knowledge is the method by which God's morals, the acts of God's intervention in history is played out from one generation to the next, and His promises are passed down from one generation to the next. It is concerned with teaching about the past to provide stability in the present and plan for the future (S. Feuerstein, 1990, 40). By ensuring the survival of and flourishing of the Christian culture, Christianity must be transmitted from generation to generation so non-Christian values are not absorbed and integrated into the body of believers. The goal of preserving our biblical values and absolute truths by transmitting them from one generation to the next is simply no longer important. In Genesis 18:19 God tells why he chose Abraham: "so that he may command his children and his household after him to keep the way of the LORD by doing righteousness and justice, so that the LORD may bring upon Abraham what He has spoken about him." He has chosen Christians to command their children and household to keep God's ways and that can only be done by teaching them godly truths just as Paul, Timothy's mother and grandmother, and others taught Timothy.

¹² E. D. Hirsch, JR. *Why Knowledge Matters: Rescuing our Children from Failed Educational Theories.* Cambridge, MA: Harvard Education Press, 2016, 194-5.

¹³ Doug Greenwold, *Making Disciples Jesus' Way: Wisdom We Have Missed*. (Grand Rapids, MI: Zondervan Publishers, 2006), 17-18.

¹⁴ James C. Wilhoit & John M. Dettoni, Ed. *Nurture That Is Christian: Developmental Perspectives on Christian Education*. (Grand Rapids, MI: Baker Books, 1998), 8-9.

¹⁵ Construct from Webster's 1828 dictionary refers to "put together a thing in their proper place and order" and "to interpret or understand." According to etymology online, the Latin word means to interpret or understand; (1660's) and came to mean "devise or form in the mind" around 1755.

Learning as Acquisition of Knowledge

All learning is focused on gaining knowledge so the question is not about learning but about knowledge. Although learning is not the concept that we can pour in the knowledge and the human mind then stores it; learning does involve acquiring information, sorting and labeling it, and storing it but it is also having a teacher who helps the learner remember what is important. Acquiring knowledge includes learning how to utilize basic Image Bearer skills such as listening, visualizing, and focusing in order to remember and access the information. Some say that knowledge is not transmittable but God commanded that we "transmit" knowledge from one generation to the next. "Cultures throughout the ages have passed down their traditions by transmitting knowledge. . . Older teaching the younger so that the next generation carries on the traditions of former generations. Without this happening, there is no identity, not standards, no morals and chaos insures."¹⁶

Cognitive Mediation

This work does not address the word *cognitive* as an evolutionary term referring to only the physiological development of an individual's brain as people in our current culture define it; it simply refers to what is put into a person's mind that he uses whether referring to skills or knowledge. Webster's 1828 dictionary defines cognitive simply as *knowing*. The word *cognition* came into use in the 1580s; it came from the Greek word *ginosko* which is used 225 times in the NT. It means to know, understand, perceive, and have knowledge of.

Memory, according to Piaget and other constructivists, is "a retention <u>of how one has interpreted</u> <u>things at the time of encounter</u> but it becomes more realistic as the intellectual interpretation improves" (Piaget,1 977, 19). However, in Scripture *zakar* the Hebrew word for remember is used 233 times in the Old Testament and means to remember, mention, record, be mindful of, and think. Throughout the Old Testament God commands his people to "remember" Him so they could worship Him, His commands so they could obey Him, and His saving grace towards them so they could thank Him. In the NT, two Greek words are used for remembering: (1) *mnēmoneuō* (twenty-three times) meaning to exercise the memory, be mindful of, to remember and (2) *anamimnēskō* (six times) meaning to call to remembrance, call to mind, bring to remembrance, remember, put to remembrance. This is what cognitions are – your mind what you learn! So cognitions - knowing the Truth - are important to God.

Educators in the past century accepted the idea that the transmission of knowledge is not the best way to teach; what followed was that memorizing has been villainized. As a leading philosopher and advocate of Social Darwinism, Spencer's influence had lasting effects on the education system. Since progressive change is the main vehicle through which evolution takes place, he saw the processes of development as the goal of the curriculum and life. He advocated that rote memorization should be eliminated in education because it impedes the search for empirical evidence and the process of using it to form a rational.¹⁷ However, transmission of knowledge is

¹⁶ Hirsch, Why Knowledge Matters, 6.

¹⁷ Kenneth O.Gangel and Warren S. Benson, *Christian Education: Its History and Philosophy.* (Eugene, OR: Wipf and Stock Publishers, 1983), 216-219. Herbert Spencer (1820-1903) was a British sociologist and philosopher who is known for applying Darwin's theory of biological revolution to social revolution.

not direct instruction as defined in traditional education but is directed instruction. Directed instruction which is also cognitive mediation takes place when a knowledgeable human intercessor or instructor is a negotiator between the stimulus (experience) and the individual learner and then between the individual learner and the response.¹⁸

For R. Feuerstein and his colleagues, the main aim of cognitive mediation is to implement a thinking program based on the cognitive process skills that increase learning. Emphasis is placed on training the mind or rewiring the brain rather than ways, styles, or higher level thinking skills. Feuerstein said, "So I ask, do I create? No, I make. I am, to some extent, compelled to mend what creation has failed to mend."¹⁹ In a sense, the goal of Christian education is to teach others about justification and sanctification in Jesus Christ so the relationship with God, self, others, and the creation is restored.²⁰ Shmuel Feuerstein took the model a step further and suggested cognitive mediation is applicable as a methodology for all learning. For the Jew, it preserves the traditions and values given to them by God. Likewise for the Christian, but it also trains the "learner" to think from a biblical perspective rather than from a worldly one. It is a vehicle for transmission of a value system that is of paramount importance for education, and a process by which the individual's character is shaped and transformed.

What happens to knowledge when teachers allow the children to make sense of whatever they perceive from their own private universe of experience and knowledge? Unmediated exposure to stimuli may be meaningless.²¹ Hosea 4:6 says, "My people are destroyed for lack of knowledge. Because you have rejected **knowledge**. I also will reject you from being My priest. Since you have forgotten the law of your God, I also will forget your children." We as Christians need to figure out a method that helps the next generation know God.

Why mediate learning experiences? Without the mediator, the "experience" is often meaningless or misconceptions become truth. Some features of mediated learning are that the learner (1) becomes better able to process stimuli from the environment; (2) acquires tools for learning becoming an autonomous learner; (3) recognizes the value of mediation as a way to interact; and (4) acquires the ability to transmit values and beliefs. "Mediation not only transmits but it transforms."22

The following true story told by R. Feuerstein explains why mediating learning is necessary;

¹⁸ Note that all learning does NOT require a cognitive mediator but all mediated cognitive experiences lead

to learning. ¹⁹ His thinking was misguided from a NT view because creation was perfect and complete (Genesis 1:31) but man's decision to disobey God caused all of creation to fall resulting in a flawed man. Only Christ can return us to God's original image; however, we are compelled to restore whatever we can with His help. See The Feuerstein Method for Improving Cognitive Functions at https://www.youtube.com/watch?y=w28Cuh1x59M

²⁰ Francis A. Schaeffer, Trilogy: The God Who Is There, Escape from Reason, He Is There and He is Not Silent. (Wheaton, IL: Crossway, 1990), 164.

²¹ S. Feuerstein. *Biblical and Talmudic Antecedents*, 22. ²² Ibid., 59.

I describe a young man who came from an important and high functioning family that enabled him to experience, to be exposed to the world. He met with very important stars in the film world. He visited many countries together with his father and mother. And he had no serious, observable physical or mental factors to explain the fact that he was not able to learn either reading or writing or adapt to certain experiences. When we tried to figure out where this deficiency came from, why he was not able to benefit from all of these opportunities, it turned out that although the parents were really concerned with the child, and took him with them everywhere they went, they never took care to transmit to him what they saw, what they experienced, where they were, what they were there for, and in what way should they react to conditions they experienced. He was just not offered any kind of mediation. And this turned this child into a very seriously deficient boy who – because of this condition – was actually suspected of having some internal determinants for his deficiency. The only explanation for his deficiency was lack of mediated learning experiences.²³

The lack of mediating the experience does not allow the brain to perceive all there is, process it, and then apply it to live their lives and for critical thinking. For example, when I was observing elementary level student teachers as a university supervisor, I heard teachers complaining about having to go on a field trip to the zoo. They said the students did not learn a thing and did not behave well when they went field trips. When I asked the teachers what they wanted the kids to know when they visited the zoo, they said "to have an experience animals they otherwise may not have seen." Thus, the experience was the content and the instruction. The schools in question were comprised of underprivileged children and most of them had never been to a zoo; they could not recognize many of the animals they would encounter. Teachers read a couple of books about some of the animals the children would see but did not mediate their learning while they were at the zoo by asking questions about the animal they approached or by recalling information they read to them. The teachers predictions were accurate . . . the children did not focus on the "lesson" at hand. They were over stimulated and simply not taught.

The Feuerstein Model

Human cognitive mediation is "defined as the interposition of initiated, intelligent, goal-oriented individuals who interpose themselves between the world of stimuli impinging on the child and interpret what one is supposed to see; not only this, but the mediator must be interested in and concerned with certain elements that the child has to learn. The mediator provides activities that intentionally focus on the content to be learned in a way that the learner is able to learn from them, understand them – not only to learn from them in order to know the particular content, but to learn how to approach reality and stimuli being exposed – to learn from them, to experience them, and eventually to use this transfer structures of knowledge acquired to a variety of

²³ Reuven Feuerstein, Louis Falik, & Refael S. Feuerstein, *Changing Minds and Brains – The Legacy of Reuven Feuerstein: Higher Thinking and Cognition through Mediated Learning.* (NY: Teachers College Press, 2015), 5.

conditions including to those areas that are progressively more and more complex (Feuerstein, et.al, 2015, 5-6 changing brains).

The following diagram explains Feuerstein's model. A brief discussion to help understand the figure follows using the zoo experience for some explanations.

	Stimulus (A)	Human Mediator (B)	Individual "Learner" (C)	Human Mediator (D)	Response (E)
TRUTH: Knowledge/Skills Curriculum/Content	S			Ø	R
	<i>External</i> Instructional Activity		Internal Processing information		<i>External</i> Application
TRUTH: K Curricu	- A tríp to the zoo - A walk in the forest - Reading a book - A Lecture - Project _Group work	Asks question that help the individual see; understand what is there. Helps make meaning of learning experience	The learner's mind is on the details of the stimulus and s/he thinks about them.	Helpíng the learner process ínformatíon through applícatíon and problem solvíng; transfer.	The learner utílízes what he has learned ín daíly lífe sítuatíons and to thínk.

Figure 2: Feuerstein's Model of Mediated Learning Experience²⁴

NOTE: Figure 2 has been adapted from Feuerstein's S-H-O-H-R (Stimulus - Human mediator - Organism - Human Mediator - Response) model with wording changes. The organism is the learner in this author's diagram and "H" has been replaced with an M for Human Mediator.

Stimulus (A) In the zoo scenario, the objective of going on the field trip was expressed as the activity - instructional rather than in terms of what they would KNOW. The stimulus/activity was a visit to the zoo. They may have wanted the children to KNOW animal names and compare and contrast their differences but did not teach them.

Human Mediator (B) Without the mediator, the "experience" is often meaningless or misconceptions become truth. In the zoo experience, a mediator could have asked questions like: How are the elephant and the zebra different? How were they alike? etc.

²⁴ Reuven Feuerstein, Rafael S. Feuerstein, & Louis H. Falik, *Beyond Smarter: Mediated Learning and the Brain's Capacity for Change.* (NY: Teachers College Press, 2010), 28.

Dr. Carol Brown is Founder of Equipping Minds, a cognitive program that teaches basic process skills to individuals with special needs. She instructs parents and teachers how to use Aristotle's "Ten Categories of Being" to help students' attend to the story being read or the picture she shows them.²⁵ Such mediation by a teacher is necessary for any learner to know what is important. A human mediator who is negotiating between the activity and the student should know how to ask concrete questions so the student observes what is intended.

Mediators do not avoid abstract ideas. Why? Because God is an abstract idea and the Bible is about the spiritual, abstract ideas. Avoiding spiritual concepts such as sin, salvation, wisdom, discernment is not part of God's plan. Instead, mediate the understanding of the concepts by using concrete objects, stories or explanations, just as Jesus did. Spiritual concepts are abstract yet just as real as physical concepts although they cannot be seen, they can be understood at an early age if a teachers knows how to use the created material world to explain the abstract, spiritual world. Empirical evidence is designed to support the Christian's faith, not to develop new ideas. Rightly minded biblical thinkers interpret what they observe from a biblical view.

One might ask: what are the benefits from a biblical perspective of using a human mediator? The following is a brief summary:

- **Relationship.** God created us to be relational with our relationship with Him first and with others second
- **Transmission of Truth.** God commanded parents and teachers to transmit knowledge of God (Shema Deuteronomy 6: 4-9) He instructed parents and teachers to give children the skills and knowledge to remember godly principles 24/7.
- Focus and Attention. Students learn to attend to and focus on what is important in the learning experiences they encounter.
- **Understanding.** The correct answer to a test should not be what drives learning the desire to know and comprehend as a motivator is enhanced with human interaction.
- **Inquiry.** Through discussion, questioning, and guided conversations, the discipline of a loving parent or compassionate instructor teaches the learner to discern thoughts and think through right and wrong choices and decisions.
- **The Holy Spirit.** The ultimate Teacher is God Himself the Holy Spirit, who represents Christ in the Christian, is the one who guides us into all truth through mediation.
- **Construction of Truth.** Students should not construct their own knowledge and understanding based on their personal perceptions (which are subjective) but develop a strong apologetic for Truth (which is objective).

Learner (C). Even without the mediator, the student can and should gain new knowledge. The issue goes back to whether he constructed truth. Truth does not come automatically but requires direction. If it is invented, is it true? Did the learner even pay attention to what he was supposed to learn? In the zoo field trip, I wonder what the students learned?

²⁵ Carol. T Brown, *Equipping Minds Cognitive Development Curriculum*. (Frankfort, KY: Equipping Minds), 124.

Human Mediator-2 (D). The mediator also initiates the ability to transfer information to new situations or use it to solve real world or make personal day-to-day decisions. If A, B, and C were not adequately taught, there can be no transfer or application. In the zoo scenario, I was in the lunchroom when I heard a teacher say, "Those kids aren't very smart - I showed them a picture of an elephant and only one of them knew what it was." Christians give the same responses when they think they have taught a teen right or wrong and they make the wrong choice. When being taught a Bible story, children often do not get the main point of the story and cannot transfer the real issue to their lives. Getting them to think about and discuss what they were taught, why (a better question than how because it requires deeper thought) it fits into a biblical worldview or into their daily lives will make what they learned come alive and be real. Being used as a mediator and the Holy Spirit, the condition of the heart is, however, the goal. **Responses** (E). Responses are observable evidence of learned knowledge put into practice thus transitioning knowledge into a skill; accessing the knowledge becomes so automatic that it becomes a skill. For example, when learning to drive a car, there is a lot of knowledge that must be attained. Even though we may not understand it, we know that where the brake pedal is and what it does. Some may argue that this has nothing to do with biblical knowledge, but the scientific principle works because of laws of nature that God put into place when He created the universe in order for man to take care of it. Once such information is put into memory, processed, and practiced, the knowledge automatically and applied, thus becoming a skill. Training the mind to respond takes practice but is based on knowledge about the components of that skill.

Hebrews 5:12 tells us that "solid food is for the mature, who because of practice have their senses trained to discern good and evil."²⁶ It is reasonable to say that for the Christ-follower, skills are based on knowledge, not on cultural norms or man's empty philosophies; (2) processed in the brain enough to become a part of our working memory; and (3) transform our thinking and then are performed or applied practically as needed. These are also the goals of Christian education – to know Truth, to be able to access the Truth 24/7, and to apply it and eventually to discern all biblical truth.

It seems plausible that by utilizing human cognitive mediation the Christian community would be *training up a child in the way he should go so he will not depart from it* and *training to recognize good from evil.* Knowledge with understanding becomes a skill that can be put into practice. Training takes practice backed by knowing – not just a putting into practice as one would a religious law or rule, but biblical thinking about what you are doing and why you are doing it. Not a how to, but a knowledgeable reason from a biblical worldview behind one's actions. Not a way to earn God's favor, but a way to show Him that He is worthy of all things – mediated learning changes our brains so they are transformed into the image of Christ. Christ-

²⁶ Webster's 1828 dictionary describes skill as: "The familiar *knowledge* of any art or science, united with readiness and dexterity in execution or performance, or in the application of the art or science to practical purposes. Thus we speak of the *skill* of a mathematician, of a surveyor, of a physician or surgeon, of a mechanic or seaman. So we speak of *skill* in management or negotiation." late 12c., "power of discernment," from Old Norse *skil* "distinction, ability to make out, discernment, adjustment," related to *skilja* (v.) "to separate; discern, understand," from Proto-Germanic **skaljo*- "divide, separate" (source also of Swedish *skäl* "reason," Danish *skjel* "a separation, boundary, limit," Middle Low German *schillen* "to differ," Middle Low German, Middle Dutch *schele* "separation, discrimination;" from PIE root ***skel**- (1) "to cut." Sense of "ability, cleverness" first recorded early 13c. https://www.etymonline.com/search?q=skill

followers are commanded to renew their mind (Romans 12:2); if one's brains could not be "modified," their minds could not be changed and the possibility of becoming more like Christ would not be plausible.

Conclusion

There are three considerations to effectively implement cognitive mediation.²⁷

- Intentionality: The mediator goal is to interact with a learner so the learner changes his thought processes in order can solve problems, transmit information, or teach a skill. Such transmission, according requires work on the teacher's part mediation. It also requires a relationship with the learner –a love for him. The mediator must know his subject well.
- Understanding (Meaning): Mediating questions like "Why?" "And what for?" motivates learner to want to know more.
- Transformation (Transcendence): Not only the learners' thoughts and actions are changed, but his heart is molded into what God intended it to be.

All three of these factors are important for Christian education. Transmitting knowledge by implementing human cognitive mediation could help restore, transmit, and maintain a biblical worldview thus transforming the mind of the student and promoting biblical thinking.

Several questions that arise from this essay are:

- 1. What research can be done to show that this teaching model is more effective?
- 2. What do we need to KNOW in order to transmit the knowledge?
- 3. What do we need to do to help parents and teachers become cognitive mediators?

²⁷ S. Feuerstein. *Biblical and Talmudic Antecedents*, 67.

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