

Transformation of Backward by Design Model to Designing a Curriculum

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Abstract

An educational institution needs a curriculum design to organize teaching and learning activities. All models of curriculum design have its own uniqueness. Since the curriculum design will affect to all objective, teaching, learning, assessment, and express presuppositions of how the education going on that school. In this essay, therefore backward by design model is reviewed in the biblical Christian worldview context with the approach of Creation, Fall, Redemption, and Glorification framework. Understanding as the main focus of backward by design model need to be built based on the concept of biblical truth to see the big picture of God's design for His creation. God's purposeful design will affect our worldview; the way we see all aspects in life. Accordingly, the biblical Christian worldview helps us to bring unit into context to give true meaningful experiences. As the result, reconstruction of backward by design model as the transforming curriculum design needs to be implemented in Christian education.

Keywords: *Backward by Design, Understanding by Design, Curriculum, Biblical Christian Worldview.*

Introduction

Curriculum can be defined as plans of learning experiences, educational programs, educational guidance, plan of activities, learning situation, and regulation of learning.¹ Before starting to develop a curriculum, it is important to determine the design of the curriculum and how it will be shaped. Different curriculum design largely reflects differences in the organization and consequential focus of subject matter. Curriculum design is essential preliminary ingredients in the curriculum development process. Finding the most effective model to design a curriculum for the school is not easy. Many discussions about which model is the most effective to be implemented. Designing a curriculum is really important; it might be assumed that the possession of higher levels of education is a sufficient condition for getting a job in the future.² On the other hand, we need to reconstruct the most suitable curriculum to be implemented in our school. Rather than we keep on debating to choose the

¹ İshak Kozikoğlu and Nur Uygun, "Investigation of the Relationship between Teachers' Philosophies of Education Beliefs and Curriculum Design Approaches," *Cukurova University Faculty of Education Journal* 47, no. 2 (2018): 411–38, <https://doi.org/10.14812/cuefd.404297>, 412.

² Laurie Brady and Kerry Kennedy, *Curriculum Conctruction*, Third Edit (Frenchs Forest, NSW: Pearson Education Australia, 2007), 3.

most effective one, we could enrich and reconstruct one model that we decided to be implemented according to our school's beliefs, values, objective, and the graduate profile.

Backward by design model is one curriculum designs that we can adapt to be implemented in our school. The uniqueness of this model is the focus on the understanding and plan in backward starting from identifying the desired result. Many curriculum or instructional design plan the learning method and teaching strategies before the result. However, this topic blows some issues to debate about teaching and the test. Backward by design model have a strong belief why they put identifying the desired result on stage 1. The philosophy behind the arrangement of the stages and main focus about understanding is influenced by the purpose and belief, such as anthropology³, constructivism⁴, pragmatism⁵ and progressivism.⁶ However, to build the true Christian education we need to put a strong Christian biblical context into the curriculum design, so it can be used by Christian schools to be implemented in their teaching and learning activities. Accordingly, the goal of this essay is limited to reconstruct a backward by design model of curriculum design to be coherent with biblical truth for Christian education. Discussion will be started by some approaching model used by backward by design that explains about their purpose and belief in designing a curriculum. The presuppositions about backward by design model will be reviewed theologically in the Creation, Fall, Redemption, and Glorification (CFRG) approach. Then, this model will be reconstructed by the biblical Christian worldview so that the concept for the big picture and the essential focus of understanding that will affect to all areas.

Backward by Design Model

Backward by design model was introduced by Jay McTighe and Grant Wiggins for the first time on their book with the title *"Understanding by Design" Ubd (1998)*. McTighe started the design backward by creating and imagining the ultimate learning goal, then preparing learning strategies to reach that goal.⁷ The educational purpose of this model is understanding.⁸ This model addresses learning theory underlying the understanding by design framework, they offer a framework and consensus-driven language for curriculum design, instruction, and assessment that promote understanding and transfer.⁹ They believe that educators need to design a template to be developed and refined a comprehensive set of design tools. This intelligent tool focus and guide the designer's thinking to make a high-quality work¹⁰. There are three stages to design the curriculum with this model:

Stage 1: Identify desired result

³ George R. Knight, *Philosophy and Education: An Introduction in Christian Perspective* (Berrien Springs, MI: Andrews University Press, 2006), 19.

⁴ Carol Garhart Mooney, *Theories of Childhood: An Introduction to Dewey, Montessori, Erickson, Piaget & Vygotsky* (St. Paul, MN: Redleaf Press, 2000), 11.

⁵ Knight, *Philosophy and Education: An Introduction in Christian Perspective*, 67.

⁶ Kozikoğlu and Uygun, "Investigation of the Relationship between Teachers' Philosophies of Education Beliefs and Curriculum Design Approaches", 414.

⁷ Khoe Yao Tung, *Desain Instruksional: Perbandingan Model & Implementasinya* (Yogyakarta, Indonesia: ANDI, 2017), 89.

⁸ Grant Wiggins and Jay McTighe, *Understanding by Design, Expanded S* (Alexandria, VA: Association for Supervision and Curriculum Development, 2005), 14.

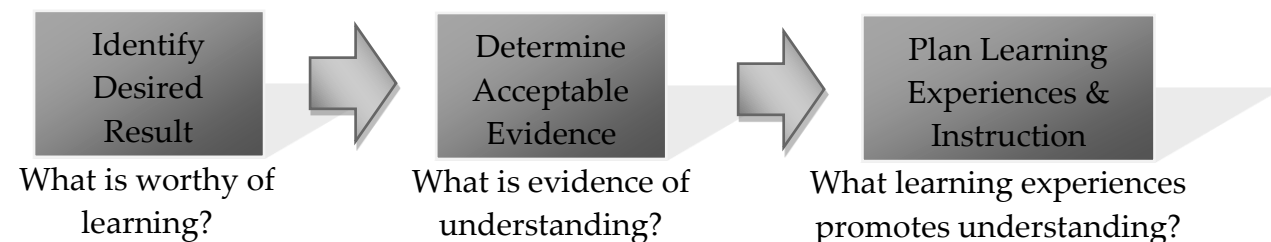
⁹ John L. Brown and Diane Jackson, eds., *Moving Forward With Understanding by Design* (Alexandria, VA: Association for Supervision and Curriculum Development, 2007), 3.

¹⁰ Wiggins and McTighe, 29.

Stage 2: Determine acceptable evidence

Stage 3: Plan learning experiences and instruction¹¹

The ultimate goal of the learning becomes an essential thing to decide the assessment, learning strategies, and materials that will be planned to reach the goal. There are some questions to help us understand the activity on every stage.¹²



In stage 1, we need to consider the goals, examine content standards, and review curriculum expectations. It is about what should students know, understand, and be able to do.¹³ This stage focus on enduring understanding, essentials questions, and the six facet of understanding.¹⁴

In stage 2, we need to consider a variety of evidence, including both formative and summative assessment. Teaching for understanding means assessing for understanding. Therefore, we need to determine the assessment according to the ultimate goal. It is about what assessment evidence will we accept as the evidence of student understanding.¹⁵ Determining acceptable evidence is include a balanced, “photo-album” approach to assessment.¹⁶

In stage 3, consider the knowledge and skill that will be learned effectively by student. We need to identify the most effective learning materials and resources to meet the goal that we set on stage 1. It is about what consequences of learning activities will lead student to an understanding of the big ideas.¹⁷ Design and sequence learning activities by applying the principles of W.H.E.R.E.T.O.¹⁸

To implement backward by design model, educators need to prepare the activities for every stage. Educators need to arrange learning activities, the framework design for assessment, estimate how long the unit take, and identify students (needs, cognitive level, their prior learning competencies, and learning material). This is the concept to solve the problem in front of us by backward thinking.¹⁹

We need to find the big idea to identify desired result. The big idea is a concept. The characteristic of a concept is often abstract, lifeless, confusing, or irrelevant to the child. Teachers usually focus on the skill and even worse textbooks, so there aren’t any big ideas in what they teach. Big ideas are abstract, and it is challenging to bring those abstractions to life

¹¹ Wiggins and McTighe, 30-31.

¹² Tung, *Desain Instruksional: Perbandingan Model & Implementasinya*, 90.

¹³ Brown and Jackson, *Moving Forward With Understanding by Design*, 2.

¹⁴ Brown and Jackson, 3.

¹⁵ Brown and Jackson, 2.

¹⁶ Brown and Jackson, 3.

¹⁷ Brown and Jackson, 2.

¹⁸ Brown and Jackson, 3.

¹⁹ Tung, *Desain Instruksional: Perbandingan Model & Implementasinya*, 92.

and make them seem vital. We struggle to grasp big ideas and see their vital values.²⁰ Meaning must be made and understanding must be earned. It is important for educators to realize that teaching is for making meaning. Teaching for meaning is an engaging idea. Students are more likely to make meaning and gain understanding when they link new information to their prior knowledge, relate fact to “big ideas”, explore essentials questions, and apply their learning in new context.²¹

Approaching Model

Teaching for Meaning and Understanding

One of an approaching model to backward by design model is teaching for meaning and understanding. The main focus of backward by design model is to develop understanding through learning. Teaching for meaning and understanding embodies five key principles:

1. Understanding big ideas in content is central to the work of students.
2. Students can only find and make meaning when they are asked to inquire, think at high level, and solve problems.
3. Students should be expected to apply knowledge and skill in meaningful tasks within authentic contexts.
4. Teacher should regularly use thought-provoking, engaging, and interactive instructional strategies.
5. Students need opportunities to revise their assignment using clear examples of successful work, known criteria, and timely feedback.²²

Three questions that should be at the heart of serious education reform: What are the big ideas and core process that student should come to understand? What will teachers look for evidence that students truly understand the big ideas and can apply their knowledge and skills in meaningful and effective ways? What teaching strategies will help students make meaning of curriculum content while avoiding the problem of aimless coverage and activity-oriented instruction?²³

The advantage of backward by design model is students can examine the detail of learning in the length of one unit. Assessment is designed before preparing the lesson, so the instruction will encourage student to understand the first thing first.²⁴ The teacher can decide the best lesson to be learned by students and what specific experience they should experience only if the teacher is clear about particular understanding about the “lesson” as the enduring understanding we want them to take home. This method focuses about what students’ learning. The teacher needs to spend their time to considering what the learner will need in order to accomplish the learning goals.²⁵

²⁰ Wiggins and McTighe, *Understanding by Design*, 75-76.

²¹ Brown and Jackson, *Moving Forward With Understanding by Design*, 17.

²² Jay McTighe, Seif Elliot, and Grant Wiggins, “You Can Teach For Meaning,” in *Educational Leadership* (Alexandria, VA: Association for Supervision and Curriculum Development, 2004), 26-30.

²³ Brown and Jackson, *Moving Forward With Understanding by Design*, 17.

²⁴ Tung, *Desain Instruksional: Perbandingan Model & Implementasinya*, 93.

²⁵ Wiggins and McTighe, *Understanding by Design*, 19.

It is important to understand how the design of the curriculum and the teaching process links to all other aspects of students' learning (module, student's level, the program, the university, and beyond). We need value added, fitness for purpose, and fitness of purpose to consider that impact on the work that we will do with our students.²⁶ Informing students of the appropriate model of curriculum could assist them to plan their work and gain a sight of the "big picture".²⁷ Backward by design model is related to how we see the big picture as the ultimate goal before we plan to prepare learning strategies. The desired result should hint student to find the "big ideas", the core concept of the lesson. This will lead them to find the *enduring understanding*.²⁸

Essentials Questions

How could we focus to stay on the track of "the big picture". In backward by design model, this focus is accomplished in part by framing goals into *the essentials questions* to specify the desired understandings and key performance tasks.²⁹ Essential questions are open-ended, interpretive question that frame students' exploration of key ideas and principles.³⁰ The best questions point to the big ideas and open a doorway to explore key concept, themes, theories, issues, and problem within the content.³¹ What makes a question essential? The best question that will push us to the heart of things-the essence.³² The essentialness of the question depends upon *why* we pose it, *how* we intend students to tackle it, and *what* we expect for learning activities and assessments as the result. For example, the question is "What is a story?" It seems to seek and familiar answer, but we cannot say without looking at the whole design.³³ In fact, questions offer the potential to spark impressive curiosity, thought, and reflection in students, depending upon how they are posed and the nature of the follow-ups.³⁴

The Six Facet of Understanding

Facet 1: Explanation

Understanding is not about the knowledge of facts but inference about why and how with specific evidence and logic full of insightful connection and illustration.³⁵ This model believes Dewey's theory that the teachers need to help student to make sense of their surrounding and experiences as its relation to other things.³⁶ Facet 1 is about building unit through question, issues, and problems that demand students' theories and explanations.³⁷

²⁶ Christopher Butcher, Clara Davies, and Melissa Highton, *Designing Learning From Module Outline to Effective Teaching* (London & New York: Routledge Taylor & Francis Group, 2006), 19.

²⁷ Butcher, Davies, and Highton, 36.

²⁸ Brown and Jackson, *Moving Forward With Understanding by Design*, 27.

²⁹ Wiggins and McTighe, 105.

³⁰ Brown and Jackson, *Moving Forward With Understanding by Design*, 27.

³¹ Wiggins and McTighe, 106.

³² Wiggins and McTighe, 107.

³³ Wiggins and McTighe, 110.

³⁴ Wiggins and McTighe, 111.

³⁵ Wiggins and McTighe, *Understanding by Design*, 86.

³⁶ Carol Garhart Mooney, *Theories of Childhood: An Introduction to Dewey, Montessori, Erickson, Piaget & Vygotsky* (St. Paul, MN: Redleaf Press, 2000), 11.

³⁷ Wiggins and McTighe, *Understanding by Design*, 88.

Facet 2: Interpretation

A challenge in backward by design is creating a transforming understanding. When the student shows this understanding in solving some problem, they will provide a deep interpretation that brings a meaning for their life. The challenge in teaching is to bring “any text” to life.³⁸ While interpreting, student move between the text and their own experiences to find legitimate but varying interpretation. All interpretations are bound by personal, social, cultural, and historical context in which they arise.³⁹

Theories also provide various meanings and sometimes leading far from the detached conception of their founders. The stories we learn to tell about ourselves and our world point to the true meaning of constructivism.⁴⁰

Facet 3: Application

Application is the ability to use knowledge effectively in new situations and diverse which are realistic contexts. Understanding is matching ideas, knowledge, and actions to context. We show our understanding by using it, adapting it, and customizing it. In the *Bloom Taxonomy*, this is the stages for synthesis to be their own understanding. Facet 3 emphasis work that focuses on and culminates in more authentic tasks, supplemented by more conventional test.⁴¹

Facet 4: Perspective

Perspective is critical and insightful point of view. This is about mature recognition to a complex question that involves a point of view. Perspective as an aspect of understanding is a mature achievement of how ideas look form different vantage points. Facet 4 promotes the ideas that instruction should give opportunities for student to confront the alternative theories and diverse point of view for the big ideas.⁴²

Facet 5: Empathy

It is the ability to get inside another person’s feelings and worldview. Empathy is different from seeing in perspective, but to see from critical distance to see more objectively. To ensure greater understanding of abstract ideas, student must have simulated experience than a textbook driven.⁴³

Facet 6: Self Knowledge

A deep understanding is related to wisdom. To understand the world, we must first understand our self. Metacognition refers to self-knowledge about how we think and why. Our intellectual blind spot influence us toward intellectual rationalization; it is the ability to unendingly assimilate experiences to beliefs and categories that seems not merely plausible

³⁸ Wiggins and McTighe, 90.

³⁹ Wiggins and McTighe, 91.

⁴⁰ Wiggins and McTighe, 91.

⁴¹ Wiggins and McTighe, *Understanding by Design*, 92-94.

⁴² Wiggins and McTighe, 95-97.

⁴³ Wiggins and McTighe, 98-100.

ideas but objective truth. Self-knowledge is a key facet of understanding because it demands that we consciously question our way of seeing the world when we more understand it.⁴⁴

Any curriculum designed for understanding must help students realize that their job is to take in what lies below the surface of the facts and to ponder their meaning. The six facets should permeate our thinking about all three stages of backward by design model.⁴⁵

Planning for Learning

A plan for learning must be engaging and effective. By engaging, we mean a design that the diverse learners find the truly thought provoking, fascinating, and energizing. By effective, we mean that the learning design helps learners become more competent and productive in worthy work.⁴⁶ Key instructional design principles should focus on W.H.E.R.E.T.O elements, which usually use to guide the assessment process.⁴⁷

Where they are going?

Hooked and Engaged that imagined by students at the beginning

Exploratory instruction and equip all learners for success

Rethink and Revise their learning process

Evaluate their level of understanding

Tailor teaching or teacher should differentiate learning based on students' readiness, interest, and learning style preferences

Opportunities to learn experientially should be presented in learning activities.⁴⁸

There also some critics for W.H.E.R.E.T.O element, because these elements represent a way of testing lessons and units rather than a formula for building them. It is not only an analytical tool for checking the elements of the design, but we need to think how those elements should be fashioned into the most engaging and effective whole.⁴⁹

A goal of learning is for student to be able to extend their knowledge and apply it in new situation. Making connection and constructing meaning are integral to teaching for both transfer knowledge and robust understanding.⁵⁰ The assessment design for backward by design model are formative and summative assessment. Formative assessment must reconstruct the teaching contract. On the summative assessment, the teacher should foster the classroom culture to challenges students to make connection and apply what they have learned to a board range of problem. To provide a meaningful understanding, teachers should provide a feedback for every assessment.⁵¹

⁴⁴ Wiggins and McTighe, 100-102.

⁴⁵ Wiggins and McTighe, 103.

⁴⁶ Wiggins and McTighe, *Understanding by Design*, 195.

⁴⁷ Tung, 93.

⁴⁸ John L. Brown and Diane Jackson, eds., *Moving Forward With Understanding by Design* (Alexandria, VA: Association for Supervision and Curriculum Development, 2007), 28.

⁴⁹ Wiggins and McTighe, *Understanding by Design*, 198.

⁵⁰ Brown and Jackson, *Moving Forward With Understanding by Design*, 63.

⁵¹ Brown and Jackson, 63-64.

The Philosophy of Backward by Design Model

The philosophy of backward by design model is influenced by pragmatism, because it focuses on the experience to build knowledge and emphasized empirical science, the changing world and its problems, and nature as the all reality beyond their faith in science.⁵² In metaphysic point of view, reality is not an abstract thing. It is a transactional experience that is constantly undergoing change. What is real today may not be real tomorrow. As the world goes by with every invention which is based on humanity's limited experiences, the invention will also have many limitations. Knowledge is the result of transactional experiences with the world around them.⁵³ The curriculum according to Dewey and other pragmatists should be built around natural units that grow out of the pressing question and experiences of the learners. The unit lesson should innate the curiosity of the student to learn and work on current interest in their daily experiences.⁵⁴ The important thing about student from pragmatism's point of view is they have experiences. The way they learn at school is not qualitatively different as the way they learn at the other part of life.⁵⁵ The pragmatic epistemological position gives no place to prior concept and absolute truth.⁵⁶ But, backward by design model still care about their prior knowledge to be linked with the new information they got to gain understanding.⁵⁷

Related to the stages of preparing the lesson and learning strategies, the problem that student may encounter are presented to the student and they are expected to produce solution. This is what pragmatism belief that experience to build the knowledge itself. To construct the knowledge by experience, the teacher must ensure that the student that are expected to be active in the process gain as much as experience as possible.⁵⁸

What we require is an epistemology that helps us think holistically as Christian⁵⁹ and what educational philosophies and curriculum design approaches do teachers adopt most. Every curriculum design has some educational philosophies that influenced the most learning strategies, material, and activities. The teachers as the designer and also as the philosopher need to adopt the suitable curriculum to be compliance with the educational process.⁶⁰ Teachers must have confidence to see an insight in the right worldview.⁶¹

Theological Review

In principle, Christian perspectives are all-redeeming and all-transforming which raise the idea of integrating faith with learning. Integration is an ideal never fully accomplished by

⁵² Knight, 67.

⁵³ Knight, 68.

⁵⁴ Knight, 72.

⁵⁵ Knight, 71.

⁵⁶ Knight, 69.

⁵⁷ Brown and Jackson, *Moving Forward With Understanding by Design*, 17.

⁵⁸ KOZİKOĞLU and Uygun, "Investigation of the Relationship between Teachers' Philosophies of Education Beliefs and Curriculum Design Approaches", 414.

⁵⁹ Duane Litfin, *Concieving the Christian College* (Grand Rapids, MI: Wm. B. Eerdmans Publishing Co., 2004), 113.

⁶⁰KOZİKOĞLU and Uygun, 415.

⁶¹ Litfin, *Concieving the Christian College*, 119.

anyone but God himself.⁶² What others have put asunder, we want to *reintegrate*, so that we can see it for harmonious. Backward by design concept is based on the understanding. They are going to make a meaningful learning by identify the goal at the beginning. As this model believes that meaning must be made and understanding must be earned,⁶³ we need to reconstruct this model into the context to make it meaningful as its purpose. The purpose of the curriculum must be in line with the ultimate of Christian faith, which is to glorify God. The Christian faith enables us to see all things in relationship to God as the creator, the redeemer, and the Lord. The difficulty inherent in both of these tasks is thinking Christianly and communicating effectively in order to not create confusion.⁶⁴ Understanding God's revelation should lead to understanding the joy of knowing the God who made the world and declared it very good. Theological studies equip us to obey the Great commandment (Matt. 22:37-40) and fulfill the Great Commission (Matt. 28:19-20).⁶⁵ Creation, Fall, Redemption, and Glorification as the approaches to Biblical Christian Worldview to review the backward by design curriculum model.

Creation

By His powerful Word, God created the entire universe out of nothing (*ex nihilo*). He merely spoke to create the world. The reason things are the way they are instead of the way they are not is that God created them that way.⁶⁶ If everything is from Christ and for Christ, it is true that He holds everything together; therefore He is directly relevant to everything there is.⁶⁷ God in Christ has created all things; He is the sovereign creator, setting up mankind for a loving, responsive relationship with Himself.⁶⁸ Christ is the "image" and the "firstborn" is that God is always in association with Jesus, whether as agent or local (sphere) in creating all things.⁶⁹ The explanation of "all things" indicates that nothing is an exception in the creation.⁷⁰ The continuation of creation by God in association with God tells how all these creations were created for.⁷¹ To identify the desire result on the stage 1 of backward by design model, it is important to understand the *chief end* of man. The *chief end* of man is to glorify God and to enjoy Him forever. Every unit of the lesson must be relevant and related to Christ. What content is worthy of understanding? What *enduring understanding* is desired?⁷² The enduring understanding that are desired in stage 1 must bring to the understanding of God in relation of He is the true knowledge and the essential of creation.

⁶² Arthur F. Holmes, *The Idea of a Christian College*, Revised Ed (Grand Rapids, MI: Wm. B. Eerdmans Publishing Co., 1987), 45.

⁶³ Brown and Jackson, *Moving Forward With Understanding by Design*, 17.

⁶⁴ Litfin, *Conceiving the Christian College*, 130.

⁶⁵ Michael J. Wilkins and Erik Thoennes, *Biblical and Theological Studies: A Student's Guide*, ed. David S. Dockery (Wheaton, IL: Crossway, 2018), 85.

⁶⁶ Philip Graham Ryken, *Christian Worldview: A Student's Guide* (Wheaton, IL: Crossway, 2013), 45.

⁶⁷ Ryken, 47.

⁶⁸ Dr Ken Dickens et al., *Transformation by Design: The Big Picture: A Curriculum Development Resource For Christian Schools* (Penrith, NSW: National Institute for Christian Education, 2017), 11.

⁶⁹ Chandra Han, "Christ's Supremacy: Colossians 1:15-20 and Its Implication in Education," *Diligentia: Journal of Theology and Christian Education* 1 (2019): 6.

⁷⁰ Han, 6.

⁷¹ Han, 7.

⁷² Wiggins and McTighe, *Understanding by Design*, 17.

Talking about creation is also talk about the crown of the creation, man. God created man in His own image (Gen. 1:26; Jam. 3:9). We cannot categorize this life as the spiritual and the secular, because God call us to serve Him in everything we do. John Dewey believe that social life as the main focus of this life, so the curriculum must prepare the student to contribute more for this social economic life. But they forgot that Gad created man as a holistic human being who has a religious heart to manage all aspect of life (spiritual, moral, politic, economy, social, language, reason, aesthetic, emotional, physic, etc.).⁷³

Fall

All things have fallen as a result of sin, there is distance and fracture.⁷⁴ We do live in a good world, but the reality of sin becomes crucial. When thinking on education can have adverse effect on students, sin truly affects our faculties of knowing and abilities, but also it provides a context in which the student is encouraged to be conformed to the image of Christ.⁷⁵ On the stage 2, Backward by design model believe that determining acceptable evidence will help teachers or educator to stay on the track of how student attained the desired understandings.⁷⁶ This thing becomes a drawback for many conventional educators. It is difficult to accept the concept about deciding the assessment before learning activities. "Teaching to the Test" or "Teaching the Test" is a term that usually trapped educator to miss the main point of the design. Teaching to test is a test that determines the process and the result of learning. But as the day goes by, it also brings some negative assumption that teaching is to teach the how to solve the test, the teacher teaches about the test itself. Teacher teaches instead of learning objective but a guidance to solve the test.

Implementing backward by design is not about "Teaching the Test", it is about how the teachers develop understanding through learning experiences. Teacher as their nature cannot only teach the tips and trick for the test, they need to teach principle and concept of the content knowledge according to the learning objective.⁷⁷ Teachers create summative assessment on the beginning in order to give chance for improvement on formative assessment and design the experiences to give meaning and connection to the enduring understanding.

If the designer already set the right goal at the beginning, we will be more careful with gentleness and respect to decide the most effective assessment to achieve learning objective. The right assessment should reflect how they will be judged before God. On the final judgement, Christ will judge all people by the testimony of their faith the good works of the righteous in evidence of their faith, and the evil works of the wicked in evidence of their unbelief.

⁷³ Harro Van Brummelen, *Berjalan Dengan Tuhan Di Dalam Kelas* (Tangerang, Indonesia: Universitas Pelita Harapan Press, 2009), 88-89.

⁷⁴ Dickens et al., *Transformation by Design : The Big Picture : A Curriculum Development Resource For Christian Schools*, 11.

⁷⁵ David S. Dockery and Gregory Alan Thornbury, eds., *Shaping A Christian Worldview* (Nashville, TN: B&H Publishing Group, 2002), 66-67.

⁷⁶ Wiggins and McTighe, *Understanding by Design*, 18.

⁷⁷ Tung, *Desain Instruksional: Perbandingan Model & Implementasinya*, 93.

Redemption

Christ came to earth to redeem all things, so the relationship can be re-established.⁷⁸ The heart of God's redemptive purpose is the renewing of the human mind (Rom. 12:2). We are commanded to *be* transformed. In Rom. 12:2 Paul focuses on the essential means of transformation that is the renewal of your mind. The problem with our minds is not merely that we are finite, but that we are fallen. Our blind minds cannot see the supremacy of Christ, so the Holy Spirit renews the minds. Our efforts follow His initiative and enabling. Paul says this "(God) saved us, not because of works done by us in righteousness, but according to his own mercy, by the washing of regeneration and renewal of the Holy Spirit". Therefore we must work out our salvation, but in the very same time that is God who is at work in us.⁷⁹ "For it is God who works in you, both to will and to work for his good pleasure" (Phil. 2:13 ESV). The more we understand how bad things are, the more we rejoice for all God has done to make all things new. Theology is ultimately about restored relationship with God through the finished work of Christ.⁸⁰ The way we work out our salvation can be seen on how we experienced the learning activities on stage 3 of backward by design model. What will count as evidence on the field is what they really get and are ready to perform with understanding, knowledge, and skill.⁸¹ The knowledge they got not because of they built it from their own experiences, because it will be subjective. God reveals Himself through general and special revelation, their understanding of knowledge built in the context of God's revelation. God has decided to reveal Himself to frail creature like us and has entrusted refinement of the revelation to us. This can be a painful and messy process, but God likes to show himself in the messiness of relationships in time and history because that makes it real and relational.⁸²

In His redemptive purpose, as educator we need to help our student to develop their passion and talent. The role of educator is really important here to take the guidance and give feedback on the formative assessment. The meaningful feedback will help them to feel the love of God through us and make them feel appreciated when they contribute in their learning community to show the image of God in all aspect of their life.⁸³

Glorification

"And God saw everything that he had made, and behold, it was very good" (Gen. 1:31 ESV). If God created everything good, then His people must pursue His purpose in every sphere of life. God made us to glorify Him in His good creation. God made us, God made all things, Therefore God made us and all things for His own glory. All we need to do is to extend the goal of glorifying God to every aspect of life.⁸⁴ In response to Christ's act we are called to work in partnership with God as all things are renewed, so we can be a part of the renewed relationship.⁸⁵ In backward by design model, the glorification concept related to stage 1 about

⁷⁸ Dickens et al., *Transformation by Design : The Big Picture : A Curriculum Development Resource For Christian Schools*, 11.

⁷⁹ Dockery and Thornbury, 69.

⁸⁰ Wilkins and Thoennes, *Biblical and Theological Studies: A Student's Guide*, 90.

⁸¹ Wiggins and McTighe, *Understanding by Design*, 19.

⁸² Wilkins and Thoennes, *Biblical and Theological Studies: A Student's Guide*, 107.

⁸³ Brummelen, *Berjalan Dengan Tuhan Di Dalam Kelas*, 91.

⁸⁴ Ryken, *Christian Worldview: A Student's Guide*, 52-53.

⁸⁵ Dickens et al., *Transformation by Design : The Big Picture : A Curriculum Development Resource For Christian Schools*, 11.

determines the desire result. All the way stage 2 and stage 3 is to achieve the goal on the stage 1. Determining the desire result must be pursuing God's purpose in every sphere of life.

By understanding the grand narrative (*Creation, Fall, Redemption, and Glorification*), it should help us to bring backward by design model into the Christian curriculum context and make it have a meaningful and purposeful understanding to be achieved. Along the way of the learning process, it should shape the mind of the student to be renewed and transformed in Christ, so they could develop their passion in glorifying God.

A meaningful understanding can be created when we are willing to know the source of the knowledge. Relationship with God depends on correct knowledge of Him. We are learning to think God's thought after Him, so that our mind, heart, and actions conform to His images.⁸⁶

On the facet 3 of backward by design model, understanding in application facet is matching ideas, knowledge, and actions to context. In the *Bloom Taxonomy*, this is the stages for synthesis to be their own understanding.⁸⁷ But, to gain the true understanding we need synthesizing our Christian worldview into everything around us, a synthesis of thought and understanding. The Christian worldview places all things within the real-life context and giving the right reason for existence and become related to all truth.

Any restoration of true belief and knowledge must involve in the work of the sovereign God. Since the sovereignty of God is the central doctrine of Scripture and knowledge is a gift from God, any partial before the Fall must include the recreative work of the Triune God. The recreative work of the Triune God take place to the work of man, man is called to work in the restoration. Our definition of education must involve the relationship between God and man, between man and fellowman, and between man and the physical universe. All those understanding and all those relationships must be focused on Him if they are to be true.⁸⁸

The most relational context between Christianity and the learning process is the all-encompassing world and life view.⁸⁹ It sees things as a whole, so Christian worldview must be holistic and integrational. Holistic means considering whole things and integrational means involving, relating, and affecting several generations. It is a systemic understanding and appraisal of life.⁹⁰

Reconstruction for Backward by Design Model

The Christian worldview affects everything. The way one views the world determines the way one thinks about the world. ⁹¹ A Christian worldview built on a universal that all-embracing system principle that shape religion, natural and social science, law, history, health care, and arts, the humanities, and all disciplines of study with application for the whole life.⁹² A transformation should be done on backward by design model to create a meaningful context for Christian education. A framework called "transformation by design" develops by the community of schools that birthed the National Institute for Christian Education. They believe that it is necessary to have a framework for understanding how to interact with the

⁸⁶ Wilkins and Thoennes, *Biblical and Theological Studies: A Student's Guide*, 86.

⁸⁷ Wiggins and McTighe, *Understanding by Design*, 92-93.

⁸⁸ Norman De Jong, *Education in the Truth* (Phillipsburg, NJ: P&R Publishing, 2003), 118.

⁸⁹ Holmes, *The Idea of a Christian College*, 57.

⁹⁰ Holmes, 58.

⁹¹ Dockery and Thornbury, 359.

⁹² Dockery and Thornbury, 2.

curriculum and ensure a worldview shaped by the Bible.⁹³ The transformation by design reviews the lesson by *Creation, Fall, Redemption, and Glorification* approaching context. Within transformation by design, there are four parts that provide direction:

1. A track that provides a directional pathway for understanding the task and purpose of Christian education.
2. A big picture model for curriculum development. This model consists some elements that join together (like jigsaw) to shape a 'curriculum big picture'.
3. A Biblical perspective in the form of set of explanations and tools that assist teachers to understand the unit in the light of biblical story.
4. A selection of threads, which are biblically-guided response to the area being studied.⁹⁴

Knowledge of God in Christ should be our greatest desire and aspiration. God has provided knowledge of himself that is personal, relational, and sufficient for fruitful, faithful, godly living.⁹⁵ The literature on curriculum design approach and educational philosophies are related to each other. It is important to realize that our dependence upon the Holy Spirit (John 14:26 "But the Helper, the Holy Spirit, whom the Father will send in my name, he will teach you all things and bring to your remembrance all that I have said to you"). We need to strive to see the big picture from God's point of view, struggle and dependence on God to find the objective perspective. The only way to seek for the understanding is depend in the Holy spirit in all works and decision making. The Holy Spirit initiative and enables us to find the true guidance. John 16:13 "When the Spirit of truth comes, *he will guide you into all the truth*, for he will not speak on his own authority, but whatever he hears he will speak, and he will declare to you the things that are to come", He will help us to see the relationship of science and the Scriptures. It will not happen automatically, but the Holy Spirit will enable us to understand it progressively.

To develop a Christian based curriculum, we need to begin with the big picture. The big picture provides an overall plan of learning, but also includes a guidance of Christian worldview that biblically inspired. Worldview is the structure of understanding that we use to make sense of our world.⁹⁶ It is about what we know and what we teach.

In Christian education, student-centred is not our main focus, but we must really consider who is student as the image of God. Learning will bring us into meaningful lesson if we can understand about God's calling in our life that influences our act and response.⁹⁷

A meaningful learning happened not by coincidence, but with a careful plan of learning. As an educator, we need to consider all aspect in teaching and learning factor; we need to determine the characteristic of our students and their needs, to be sensitive with their background and prior knowledge, learning style, and the issues around them. We need to plan learning and create the atmosphere for learning. Set the objective and explain to students what are they expected to be achieved. But, the most important support and guide them to

⁹³ Dr Ken Dickens et al., *Transformation by Design : The Big Picture : A Curriculum Development Resource For Christian Schools* (Penrith, NSW: National Institute for Christian Education, 2017), 3.

⁹⁴ Dickens et al, 3.

⁹⁵ Wilkins and Thoennes, *Biblical and Theological Studies: A Student's Guide*, 31.

⁹⁶ Ryken, *Christian Worldview: A Student's Guide*, 19.

⁹⁷ Harro Van Brummelen, *Berjalan Dengan Tuhan Di Dalam Kelas* (Tangerang, Indonesia: Universitas Pelita Harapan Press, 2009), 88.

come to the Holy Spirit and ask for the guidance, sustainability, and consolation to walk in the light of the truth while they are learning.⁹⁸

Our commitments to seeing all truth as God's truth influence us to see the truth as it is. It means all truth exists to display more of God and awaken desire and delight in us for God. The desire and delight will be complete until it leads into actions that display the worth of God. We test what people say according to the truth that God has revealed in the world and through His Word, both written and incarnate.⁹⁹ Biblical Christian worldview context will help student to pursue the true knowledge as a meaningful experience in their life.

Understanding the Unit in The Light of Biblical Story

Establish the big picture is to understand where our topic of lesson fits into biblical story and where the story speaks into our topic area. There might be topics that are not specifically related to the biblical story, but it must be have the relation with the biblical context, because all things were created in God. God already reveals the truth and He comes first, our job is to unpack the meaning that He has place in the creation and His revelation.¹⁰⁰ To know one subject for what is truly is, we need to go to our source of all knowledge and learn from His revelation. To know a student for what he truly is, we need to go to the Creator of man, and ask Him. To know our subjects and to know our students, we need to turn to God's revelation of Himself. Scripture become the repository of all knowledge and source of determining quality, because Scripture contains the true knowledge itself and God's word is truth (John 17:17). If the teacher knows the student as God wants Him to know that the student according to His Word, and if the teacher knows his subject as God wants Him to know them according to His Word, then the teacher has met two qualifications for quality work.¹⁰¹

A Biblical Christian perspective ensure the educator to think about how this area of study sits within the broader world of revelation and learning, it is really a critical shaping piece of the overall big picture. Biblical Christian framework related to its pattern of understanding that all learning is a basic religious response to whom or what is being served.¹⁰²

The lesson unit must be reviewed by *Creation, Fall, Redemption, and Glorification (CFRG)* approach as the context of the lesson. The biblical narrative of redemption and the coming of God's kingdom is the story that informs and shapes every aspect of the life of the school.¹⁰³ Here are the schema of *Creation, Fall, Redemption, and Glorification* from Dr. Dickens¹⁰⁴ that will help us to use the framework in our unit lesson:

⁹⁸ Brummelen, 110.

⁹⁹ Ryken, 84.

¹⁰⁰ Dickens et al., *Transformation by Design: The Big Picture: A Curriculum Development Resource For Christian Schools*, 43.

¹⁰¹ De Jong, *Education in the Truth*, 131.

¹⁰² Dickens et al., *Transformation by Design: The Big Picture: A Curriculum Development Resource For Christian Schools*, 43.

¹⁰³ H. Burggraaf, ed., *Transformational Education: A Framework for Christian Education* (Melbourne, Australia: Mount Evelyn Christian School & The Brookes-Hall Foundation, 2014), 67.

¹⁰⁴ Dickens et al., *Transformation by Design: The Big Picture: A Curriculum Development Resource For Christian Schools*, 45.

Table 1. Creation-Fall-Redemption-Glorification Schema ¹⁰⁵	
<p>CREATION God has created all things</p> <ul style="list-style-type: none"> • What is God’s created intention for (for this area)? • Because God is the creator of the universe and all that is in it, think about the topic for your unit. • Why did God create (this area)? • What form did it take in the beginning? • What is God’s purpose for (this area)? • How have human been involved in this creation? 	<p>FALL All things have fallen as the result of sin</p> <ul style="list-style-type: none"> • How has sin distorted God’s intention (for this area)? • Considering the fall and that the whole creation has fallen and that human have messed up God’s plan (distortion and rebellion) for this area of study, think about the topic for your unit. • What has humankind done, or what have we done, to mess up, distort and misuse (this area)? • How do we consequences of sinful rebellion in this area contrast with God’s original intention?
<p>REDEMPTION Christ came to earth to redeem all things</p> <ul style="list-style-type: none"> • What has the cross achieved in confronting brokenness (in this area)? • Considering that Christ’s act of redemption laid the foundation for the restoration of creation, think about the topic for your unit. • How has Christ redeemed (this area)? • How has the cross brought new life to our understanding of this part of God’s creation? 	<p>GLORIFICATION In response to Christ’s redemption we are called to work in partnership with God’s so all things are renewed.</p> <ul style="list-style-type: none"> • How do God’s people express their desire to be Christ’s hands and feet in bringing renewal to (this area)? • Considering that we can partner in God’s glorification plan, think about the topic for your unit. • Because we know Christ, what hope for this topic can we experience now? • Being conscious of God’s original purpose/design for this area, what action can we take to help renew (this area)? • What does an obedient response to (this area) look like? • How does the coming restoration of all things affect the way we think about (this area)?

¹⁰⁵ Source: Data adapted from Creation-Fall-Redemption-Renewal Schema, “Transformation by Design: The Big Picture: A Curriculum Development Resource For Christian Schools”, Dickens, Dr Ken, Martin Hanscamp, Alice Mustin, Chris Parker, Jacqui Stok, and Tim White., 2017.

Sometimes educators find the topic they taught not specifically mentioned in the scriptures, but it may be simply indicate that the topic is a sub-set or contextual example of a bigger concept. For example, when it comes to the integral topic on Mathematics subject, teachers and students sometimes difficult to find the relation with God because it is not specifically mentioned in the Scripture. But, we need to learn the basic concept of integral is to describe the length and volume area within a certain range. The bigger concept of that is nature and handiwork of God. Teachers need to help student to see the big picture and the greater design of God. At the end, integral can show us that Mathematic concept can be used to determine the volume of the mountain, lake, and sea which are God's handiwork and we should be have ability and wisdom to nurture His creation. Sometimes, clarity comes as we adjust the focus of the lens with which we look at topics.¹⁰⁶ As disciples, students and teachers will understand themselves to be participants in God's work; the total renewal of creation which started with the resurrection of Jesus, demonstrated in the faithful activity of his follower and which will come to completion when Jesus come again in power.¹⁰⁷ God's revelation in history is rich, personal, and wedded to real life. It is usually more difficult to understand because revelation of God is personal and historical, the biblical understanding of God progressive and cumulative.¹⁰⁸

The mission of Christian education must be clear and do not compromise our confessional commitment with some issues. Christian education must be shaped by certain things: a commitment to the core of Christian realities of creation, fall, redemption, and the lordship of Christ, as well as such central themes as revelation, Scripture, and the possibility of knowledge, the truth of things, faith seeking understanding, the possibility of communication, the importance of the past, and the centrality of a telos, or goal.¹⁰⁹ These are the commitment as a Christian educational institution to work on a mission. For Christians to respond to these challenges, we must hear the word of Jesus from what is called the Great Commandment¹¹⁰ on Matt. 22:37-40 ESV "You shall love the Lord God with all your heart and with all your soul and with all your mind. This is the great and first commandment. And a second is like it: You shall love your neighbour as yourself. On these two commandments depend all the Law and the Prophets."

¹⁰⁶ Dickens et al, 48.

¹⁰⁷ Burggraaf, *Transformational Education: A Framework for Christian Education*, 19.

¹⁰⁸ Wilkins and Thoennes, *Biblical and Theological Studies: A Student's Guide*, 93.

¹⁰⁹ Dockery and Thornbury, *Shaping A Christian Worldview*, 91.

¹¹⁰ Dockery and Thornbury, 3.

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