

**Epistemological thinking of college students: An engagement with the
Perry Model**
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ABSTRACT

William Perry, a psychologist from Harvard University, introduced a thinking model, which focuses on the behavior and success of students. The research that has been performed specializes on epistemological thinking of college students. Nine different stages can be observed within Perry's thinking model. The success and truth of this thinking model has been proved through testing by several universities. Students responded to questions in order to observe their stages of thinking. Epistemology is a phenomenon that can be observed in the human brain and then categorized. Several researchers and developers followed Perry's model and enhanced it. Information on how the model has been tested on college students shows a simple classification of the students' brain development. When a student realizes that epistemological thinking is closely related to critical thinking, an improvement can happen almost immediately. College students' interpretations of literature and text analysis showed different brain abilities. Students were asked to interpret several readings in order to focus on the ability to think on their own. Supported studies showed that freshman students did not have a developed ability to draw specified conclusions on their own. Instead, a text interpretation of a person was recalled and rephrased. This shows that independent thinking skills of the students have not been fully developed yet.

INTRODUCTION

The epistemological thinking theory has been created and designed by William Perry. Most of the information that has been processed in this research paper derives from sources, which have been cited in APA style in the attached bibliography. A strong focus applies to the explanation of the model itself and who influenced Perry and vice versa. The question is, however, how can the model be used? Every model has its strengths and weaknesses, but because it has been developed throughout an educational system, the usage stays in those roots. The main focus of this paper is the usage of the epistemological thinking model on college students, how it applies to them, and if they are able to use it. Several studies have been taken into consideration in order to analyze the college students' thinking behavior throughout their college education. Entering freshmen as well as graduate students will be linked with the Perry model and the effects are shown for each individual college student. A trend relating to gender is apparent as well. An overall summarization includes the profits a college student can earn from using the Perry model and how it is possible to interact within the model.

Epistemological Models

Epistemology is a term that refers to the roots from which human knowledge is derived, including its origin, nature and limits. William Perry was one of the first psychological researchers who created a thinking model in the 1970s. Perry's first thinking model contained only research on the male gender, which led later on, to follow up research by other psychologists in order to take both genders into consideration. William Perry started his research at the Harvard Bureau of Study

Counsel in the early 1950s. His models were based on the thinking processes of college students, wherein "The Development of Epistemological Theories," Barbara K. Hofer said: "how they [college students] make meaning of their educational experiences and as a platform for multiple lines of research on epistemological beliefs" (90). Perry describes the epistemological development of college students from their childhood to adulthood. The Perry model has a tremendous amount of power that has to be realized. Being able to interpret the model and build knowledge within it, makes it easier to gain and pass knowledge on to others. Retrieving knowledge is not a difficult task to master, but more difficultly is the way to understand where the process came from and what outcomes it can have; this has been demonstrated in a visual and practical way by William Perry.

METHOD

William Perry wanted to observe the different experiences of college students. In order to interview them, he developed an instrument called: a checklist of educational values (CLEV). Interviews started to take place in 1950-1951, where Perry encouraged students to talk about their college experience in an honest way, in order to encounter their development in thinking. The theory that was set up by William Perry and other staff members turned out to be based on intelligence and a satisfactory achievement in fulfilling certain requirements. This theory is also based on personality and can greatly influence the way a person can be categorized according to the Perry model. Based on the various results from the student interviews, Perry created a nine-step thinking model. By the interviews alone, Perry's hypothesis proved to be correct, resulting with his model. This thinking model became the basis for all future thinking models. It serves as a purpose to analyze the intellectual standpoint of students. With this specific model, Perry was able to hierarchically stimulate the order of epistemology. A recognizable effect of the model is that students know where they are in the model and encourage themselves to achieve higher results and more success.

Students' Epistemological Orientations

In general, college students develop from a dualistic epistemology to a multiplistic epistemological view (Wilkinson 89). Also, it is common for graduate students to achieve a relativistic orientation. This intermediate change between phases is referred to as the "change in definition of knowledge" (Wilkinson 88). It concentrates on what the concept of knowledge is and how it can be achieved via different learning tools. The difference is that dualists consider knowledge as "absolute," those with a multiplistic view consider it as "somewhat absolute," and relativists consider knowledge as "entirely subjective" (Wilkinson 93). Perry demonstrates with the use of his model that knowledge derives from scientific experimentations. Knowledge derives from data, based on interviews, including student experiences and observations. Therefore, the Perry model has been, and still is, very successful because a meaningful conclusion can be drawn from facts, such as students being able to identify their own intellectual thinking.

Model

William Perry does not refer to the single steps as levels or stages. Rather, he refers to them as positions. Position is a more convenient term because it allows a person not to get caught up at one level. Instead, it gives each individual the possibility to move independently from one thinking position to another. The different positions are hierarchically structured. The nine different positions have been separated into four main structures: Dualism, Multiplicity, Relativism, and Commitment with Relativism. Barbara K. Hofer states that Perry's model is "an interactionist model for interpreting students' epistemological responses to the college

environment” (Hofer 123). It is obvious that William Perry was a psychologist because his terminology throughout the model has been based on a neutral standpoint. This can clearly be demonstrated by his intention to not use the word “level.” Level would indicate something that is not stable and an immediate movement has to occur. Current society believes that “level” means a short-term visit that has to be followed by a rapid change. Perry refers to a specific position, which does not identify its meaning right away. Therefore, it is harder for the society to draw a conclusion without knowing what this specific “position” means.

This information was derived from the Honors Handbook by James White in 2007:

Dualism

Dualism includes the first and second position of Perry’s model.

POSITION 1

It is the belief that only our authorities, including our parents, friends, textbooks, etc. are right and everybody else is wrong. Only those people or things have the possibility to provide guidance on the way to truth and knowledge.

POSITION 2

Simplicity is the new rule that should be followed. Authorities that differ from our own opinions are not valid anymore, and only our own beliefs can be accepted and seen as being the truth. A general shift from position one to position two occurs, when a realization takes place that there are other authorities out there which might have the ability to influence our decisions at the moment. At this moment it seems as if nobody can be trusted anymore, the only person that can be trusted is our self.

Multiplicity

Multiplicity contains positions three and four.

POSITION 3

A realization takes place that authorities do not have all the knowledge and there is suddenly an uncertainty involved. A belief in the authorities occurs again that they will find the answers to our questions. The occurred uncertainty is only seen as temporary.

POSITION 4a

After realizing that sometimes authorities are not able to find or provide the desired answers, we start to develop our own ideas and thoughts in order to find the answer.

POSITION 4b

Authorities might know the answers, but rather than “spoon feeding” them to us, they direct us with their opinions, facts and data to find the truth on our own.

A switch from position three to 4a or 4b takes place because we become aware of the fact that authorities will not hold all the answers or truth for us. It is time to understand that some effort and thinking on our own is necessary in order to solve our questions.

Relativism

POSITION 5

This stage is the hardest and most terrifying position we would have to go through. We know that right answers exist somewhere, and we know that authorities somewhere in the world would have the answer for us. However, we do not know how to process the information, and we start to question the basis of our own knowledge. A feeling of disappointment in our authorities appears and this might be very harmful.

POSITION 6

Our beliefs start to be our own because we have developed them. A commitment is made to our own answer or truth. A switch to position five takes place because we somehow must search and work on our own to find the truth. It does not seem perfectly clear how to get to the truth, and

therefore, position five can be very depressing. After staying long enough in position five, two things can occur: We either switch back to position two or three, or we make a commitment to a belief that has been formed on our own; this allows us to move up one position.

Commitment within Relativism

POSITION 7

After trying to develop the right answer, we finally accept it and carry it out. A commitment takes place.

POSITION 8

After feeling comfortable with the commitment from position seven, we develop the thought and commitment of it more deeply and start to absolutely trust in it.

POSITION 9

An absolute stage of belief in ourselves takes place, and a sense of certainty develops.

In position 7 we just start to develop our answers. There is still uncertainty present, but we try to overcome it by thinking about different solutions on our own, without the help of authorities. After we finally make a commitment, we are still not able to see a lot of certainty in our decision. By doing more research in order to reduce our uncertainty regarding our commitments, the commitments have to be rearranged in order to make them more meaningful to us. After this accomplishment, the commitments would have to be balanced out equally.

Again, throughout this well developed model, the psychologist in Perry is visible. The vocabulary used in the heading of each position does not allow the society to draw a conclusion right away. This further explains why this model cannot be changed based on its phases, because it is not really accompanied by negative motions. Negative motions refer to the feeling process of society, including scientist.

Participants

One of the problems with Perry's constructed thinking model was that his survey and model were based on Harvard students. The several interviews, which took place in the 1950s, mostly engaged white, male, elite college students at Harvard. Gilligan provided a broader perspective and new analysis of Perry's model in 1982 by focusing on females (Bizzell 450). Because of this, William Perry started a new interview session in 1970, where he interviewed women and drew conclusions about their cognitive thinking process. Thinking differs between males and females, not in cognitive ability, but that females include the question of relationship in their thinking process. Males were rather straightforward about their lifestyles, and more concerned about money than family and relationships. Although his first model was only based on males, Perry saw that it was necessary to encourage females to participate in his model. Information in other articles suggested that an outside pressure had been built up from feminists at this time because the model only concentrated on males. Perry decided to further expand his model and eventually included females.

Similar Models

Due to the fact that William Perry was the first psychologist who had a basic idea of how to construct an epistemological model, he had several important followers. Belenky et. al. were interested in studying women (Schrader 93). A model, which is very similar to Perry's, with only five positions developed, is a theory that women's knowledge is interwoven with self-concept. Baxter Magolda developed an instrument similar to Perry's, known as the Measure of Epistemological Reflection (MER) (Schrader 96). Magdola became interested in possible gender relationships that cause different positions in the epistemological model. He found that there are gender related patterns according to the thinking process. Gender related patterns include the

possibility that males and females could have the same thinking abilities. Whereas males tend to expand their abstract thinking in science and math related topics, females have the ability to do very well in social sciences. Therefore women and men would be able to develop the same thinking patterns, but females would have to put more effort into studying science and males would have to put more effort into studying social patterns.

Application

Perry's Model was used and applied to college students. In "Cognitive Growth and Literary Analysis", Thomas G. Plummer explains, "Perry found that undergraduates are predominantly multiplistic with occasional blends of dualism on one side or relativism on the other" (Plummer 73). Further analysis showed that more complex thinking was present among graduate students. A conclusion can be drawn, that college students need time to develop their thinking skills. At the beginning, information is presented to them from textbooks and professors, but in the long run, independent thinking is required and conclusions have to be drawn on their own. Plummer set up a project in order to compare the ability of thinking skills among college students by focusing on their analysis of literary texts. According to the interviews of students concerning how they interpret literary texts, four stages of thinking could be concluded.

STAGE I: The interpretations of the students were authority oriented. Students have seen everything that has been criticized in the text by an authority, including interpretations, as right. This leads to a conclusion that students who responded in this way are at the Perry position one, in the stage of Dualism.

STAGE II: This was a pluralistic experience-oriented stage. The student declares everything they develop as "right." If there is confusion present about interpretations among the textbook, the author, and the instructor, the personal belief is on a higher value, and everything else can be declared as "wrong". Sometimes agreement takes place with the instructor in order to achieve a better grade in this class. This leads to Perry position two.

STAGE III: This is an objective stage and seems to be text oriented. The text itself makes a definite interpretation impossible, and therefore other opinions from the instructor and students will be accepted. People at this stage have the capability, according to Plummer to "weigh and range alternative interpretations of the text, they can apply methodological practices to textual analysis, use evidence from the text to support assertions..." (Plummer 83). At this stage students are also able to make judgments about what they believe is "right" or "wrong" about a specific textual analysis. This behavior indicates that students are in the Relativism stage of Perry's model. They already understand that there are uncertainties present; therefore, they are in position 4a and 4b. Students in position 4a, according to this research, are able to try to find their own answers and interpretations of the text. They have discovered that there are other possibilities to interpret the literary text. Students in position 4b have discovered that the instructor interprets the literary text in only one way, and directs the students to find out other possible interpretations on their own.

STAGE IV: This is an objective and theoretically-oriented response. Students would be able to criticize the text and various interpretations of it. Students would be in Perry's position 6, but none of the students indicated that they were at this thinking level. This again proves college students need time to develop their thinking skills. Plummer suggests instructors should challenge the critical thinking skills of students more. They can do this by addressing students' critical thinking levels and by teaching lessons of thinking development about literature in order to help students to move on to a higher "thinking position". Instructors should also take into consideration the choice of literary texts for undergraduate students, where the text itself establishes authority.

In this study, the Perry model worked very well because that is what it has been developed for. Students' epistemological thinking is a skill that has to be expanded. In order to successfully interpret the intellectual ability of students, it is very important to stay very close to the Perry model. According to students, a slightly different interpretation of the model can result in misinterpretations of the model; therefore, a wrong conclusion can be drawn regarding which position a student might be in.

Piaget vs. Perry

Jean Piaget was a Swiss psychologist who developed the Theory of Cognitive Development (Richards 30). He was concerned with the growth of intelligence and different mental stages and developments in children. The theory states that we develop our cognitive abilities via self-motivation. Perry follows the model of Piaget, by saying there are parallel structures of cognitive thinking visible in adolescents and young children. In "William Perry and Liberal Education," Patricia Bizzell describes differences between Piaget and Perry (450). Perry describes the thinking stages that a student undergoes. It is important to point out that the student is conscious of the way he or she thinks. In contrast, Piaget describes the cognitive development as "only occasional awareness on the child's part that changes are occurring, and without much possibility of anyone, child or observing adult, altering the course of development" (Bizzell 33). Another main difference between these two psychologists is that an undergraduate student bases a lot on "philosophical assumptions." Therefore, Perry does not see the average undergraduate student as a cognitive thinker. It is true to state that with time comes knowledge, although Perry does not make this standpoint very clear. By developing his particular thinking model, Perry has developed an unbiased thesis regarding college students. Several research studies show that intellectual levels of college students differ. This shows that a student can be seen as a cognitive thinker. Perry's view that undergraduates are not cognitive thinkers has been generalized, but it is important to keep in mind not everybody can progress at the same pace in epistemology.

College Students in General

College students are present in different stages of the Perry model. Influences on the thinking skills of students are different brain complexities and study habits. It is important to identify that every student has his or her own way of observing information. Students can absorb the information as a set of data; students can be either active or passive receptors of knowledge. This type of student wants to be told exactly what will be on an exam. Some students tend to be more contextual and assimilate new wisdom to their present knowledge. Other students might be visualizers or have a photographic memory. Different study skills can influence the position of a Perry model because it influences the way somebody thinks. Memorization is a good example. A student might succeed at a test by memorizing specific terms, but the challenge of understanding the context is not given. Memorization in the long run is not a successful tool of studying because the information is only temporarily present in the brain. No thinking on its own is necessary because the new information just has to be repeated over and over again in order to keep it locked up in our brain cells. Perry suggests students should start to engage their knowledge in the long-memory "storage," and as stated by Knepfelkamp, "students are not potted plants to be watered in some academic hothouse" (136). Active participation in lectures, discussion and homework can help to process and adopt long term-memory storage skills of knowledge. Various studies suggest that teachers that use discussion strategies and address specific and detailed questions "have been more successful than others in promoting higher- order thinking" (Camille 210). This suggestion should be taken seriously. Due to the fact that Perry devoted his entire life to setting up a successful model and revising it over and over again, the resulting effects of the model can be seen as ideally right. Knowledge is a broad term that can be used in many different ways, and

often society uses it the wrong way. Knowledge cannot be equated with intelligence. A main difference between these terms occurs distinguishing between what somebody knows and how it can be used versus what can be used in order to achieve successful results.

Writing Skills of College Students

William Perry does not categorize the performance of a college student in the classroom, such as writing skills. Perry only constructs his model from what a student tells the interviewer about his or her life experiences. From this information, Perry draws a general conclusion about the student's attitude towards schoolwork. In the follow-up process, Perry links the writing skills of a student to his or her thinking skills. Analyzing the organization of the student's paper can filter out dualistic students. A typical Dualist student does not show strong sentence connections, or a thesis throughout the entire paper. Some studies show that Dualist students would make more progress to move up to a higher Perry position, if teachers would nurse them instead of challenge them (Bizzell 449). Some students need to have a feeling of comfort in order to develop more critical thinking skills. If a challenge would take place right away, it might lead to disaster and confusion. Therefore an opposite result would have been achieved. The challenge shifted the student into reverse "gear," so no sufficient results can be achieved. Patricia Bizzell states that "Perry's analysis describes the changes in a students thinking that result from their socialization into the academic community" (448). The main focus of this argument is to teach students not how to grow up, but rather on teaching a student some adolescent thinking skills. This prepares them for life with a certain set of intellectual habits. Intellectual habits are the main part of the Perry model. For some members of today's society it is very hard to change habits. Habits become a routine. At a certain point in life, people are sick of arguments and return to Perry position number two. Only their opinion counts and everybody else is wrong. A demonstration of text interpretation shows how students are unaware of how they use their knowledge. Therefore, it is very important to make use of the Perry model. Self-encouragement can be a positive result if a realization of one's own intellectual position takes place.

Phenomenological Study

In "Evaluating intellectual development of horticultural students", Erine Camille Lavis said that "Perry's theory of intellectual development helps describe the progression in college student thinking from simple to complex" (210). The study took place with 60 undergraduate students at Kansas University who had been enrolled in a horticultural course, and tests were done in order to measure their intelligence. Hands-on learning is a new strategy that has already been used by many colleges in order to improve and enrich thinking skills of students. This specific teaching method became a study habit of many college students who were enrolled in a horticultural class. The study concluded that college students who were engaged in hands-on projects scored higher on the Perry model. It also showed that many students have to follow the process in real life in order to understand it and that no memorization is necessary. After fully understanding the presented information, individual students have an easier time thinking on their own and drawing possible conclusions. Therefore, the Perry model has been applied in a successful way.

Intellectual Safety

In "Intellectual Safety, Moral Atmosphere, and Epistemology in College Classrooms", Drawn Schrader stated that "I believe there is a dynamic interaction between the students' epistemological level, their perception of what is intellectually safe, and the moral climate of a classroom, and a like-wise dynamism between the teachers' epistemological level, the task demands in the classroom, and aspects of morality they create in the classroom that influence the

atmosphere" (92). Dualistic students tend to feel more unsafe than students who are already at their multiplicitic stage in Perry's model. A situation in the classroom has been created as a safe and intellectually satisfying place for students with relativistic reasoning. A conclusion can be drawn that dualistic students need to familiarize themselves with the classroom environment. Thinking skills will differ for students with relativistic reasoning and a feeling of discomfort might apply because an equal knowledge base does not exist among the students in the same classroom. Students will also feel unsafe if the professor shifts his or her authority towards the student, and therefore the authority fails to be the authority. Due to this reason a dualistic student will feel lost and unsafe. Instead professors should engage students in their personal experience to help and engage the dualistic student in order to make them understand the phenomenon of epistemology. The knowledge of a student can only grow if a feeling of comfort is present with a harmonic atmosphere. The Perry model should be used more often in the college classroom and at different work environments because it has the ability to show the society their skills. It is like a manual that does not necessarily give guidelines of how to improve, but rather simulates a path than can be followed in order to succeed with one's own knowledge in life.

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