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CHANGE IN EPISTEMOLOGICAL BELIEF OF STUDENTS IN CURRENT ERA

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Abstract:

Epistemological beliefs among students about the nature of knowledge and knowing, are the topics of target currently and has become a field of increased research interest specially among educators. The present study tries to understand the change that has occurred among students in regards to their epistemological beliefs in the current era. Student epistemological beliefs are viewed as important as teachers' epistemological beliefs since it will influence their behavior in classroom and help in determining their learning strategies. Thus, it is important for a teacher to determine the change in students' epistemological beliefs that has occurred due to technical advancement and development of new learning strategies in order to cater individual differences among learners and develop higher order thinking.

Keywords: *Epistemological beliefs, learning strategy, teaching-learning process*

Introduction

Education is the aggregate of all the processes through which a person develops skills, attitudes and forms of behavior of practical value in the society in which he lives the social process whereby people are subject to the influence of a selected and controlled environment, especially that of the school so that they acquire social skills and optimal individual development. Education in a general sense is a form of learning in which the knowledge, skills and habits of a group of people are transferred from one pupil to another. Education often takes place under the guidance of others.

Epistemology is the study of knowledge. Epistemologists deal with a series of tasks, which we could divide into two categories. that is, what does it mean to say that someone knows, or doesn't know, something? It is about understanding what knowledge is and how to distinguish between cases where someone knows something and cases where someone doesn't know something. Although there is general agreement on some aspects of this problem, we will see that this question is much more difficult than one might imagine. Second, we must determine the extent of human knowledge; that is, how much do we know or can we know? How can we use our reason, our senses, the testimony of others, and other resources to gain knowledge? Are there any limits to what we can know? For example, are some things unknowable? Is it possible that we don't know as much as we think we know? Should we have a legitimate concern with skepticism, the opinion that we do not know or cannot know anything?

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Epistemology is an area of philosophy that deals with the nature and justification of human knowledge. An area of growing interest for psychologists and educators is that of personal epistemological development and epistemological beliefs: how individuals come to know, the theories and beliefs they hold about knowing, and how such epistemological premises are part of and affect cognitive processes of thought and reasoning.

We begin with the observation that knowledge is a state of mind; that is, knowledge exists in one's mind and things that do not think can know nothing. Furthermore, knowledge is a specific type of mental state. Although "that" clauses can also be used to describe wishes and intentions, they cannot constitute knowledge. Rather, knowledge is a kind of belief. If you have no convictions about a particular issue, you cannot have knowledge of it. For example, suppose I want to get a pay raise and intend to do everything possible to earn one. Suppose further that I doubt that I will actually be granted a raise, due to the complexity of the university budget and the like. Since I don't think I'm going to be given a raise, you can't say you know I'm going to. Only if I am inclined to believe something can I know it. Likewise, thoughts that an individual has never entertained are not among his beliefs and therefore cannot be included in his body of knowledge. Some beliefs, those that the individual actively entertains, are called recurring beliefs. Most of an individual's beliefs are non-recurring; these are beliefs that the individual has in the background but is not entertaining at a particular time. Consequently, most of our knowledge is non-recurring or basic; only a small part of one's knowledge is always active in one's mind.

Concept Epistemological Belief

Hofer and Pintrich (1997) define it "to beliefs about knowledge". Brownlee, Purdie and Boulton-Lewis (2001) define it as "beliefs about knowledge that reflect an individual's views on what knowledge is, how it can be acquired, its degree of certainty, the limits and criteria for determining knowledge"Marlene Schommer (Schommer, 1990) and others have advocated an alternative approach to the conceptualization of people's epistemologies. Schommer argued that epistemologies could be separable into independent beliefs. Schommer has proposed three beliefs that would be called epistemological beliefs: a belief in how complex knowledge is (ranging from complex to simple), a belief in how certain knowledge is (ranging from highly certain to highly uncertain), and a belief in the source of knowledge (e.g. knowledge coming from authority). These beliefs were independent of each other. For example, a person might believe in complex but certain knowledge, complex but uncertain knowledge, simple and certain knowledge, or simple but uncertain knowledge. Schommer's Epistemological Beliefs Questionnaire (EBQ 1998) highlighted five dimensions on which beliefs about learning and knowledge are based. These dimensions are the starting point for this study and include:

1) Omniscient authority (beliefs about the validity of the source of knowledge)
2) Certain knowledge (beliefs about the reliability of knowledge)
3) Simple knowledge (beliefs about the structure of knowledge)
4) Fast learning (beliefs about speed of learning)
5) Innate skills (beliefs about learning ability)

This implies that epistemological beliefs constitute a subsystem within one's belief system and are considered to have multiple dimensions. Schommer (1990) explained epistemological beliefs with a five-dimensional model that

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included Stability (tending towards immutability), Structure (isolated to integrity), Source (authority to observation and reason), Speed of acquisition (rapid or gradual), Acquisition of control (fixed at birth or permanent improvement). Many other models arose from Schommer's dimensions

Review of Epistemological Models

Psychological research on epistemological development began in the mid-1950s, and in the following decades there were three simultaneous and intersecting strands of research spanning the six general problems. Guided by the early work of Perry (1970), most researchers in the field have postulated models that are to some extent structural and developmental sequences. On group has been extensively interested in how individuals interpret their educational experiences (Baxter Magolda, 1987, 1992; Belenky e6; Perry, 1970, 1981). Perry pioneered these efforts with a champion who was almost entirely male; in response, Belenky et al. studied "ways of knowing women" with an exclusively female sample. Baxter Magolda, intrigued by the gender implications of these two lines of research, chose to investigate similar concerns for both men and women.

A second group of researchers has been interested in how epistemological hypotheses affect thought and reasoning processes, focusing on reflective judgment (Kih'g - and Kitchener, 1994; Kitchener and King, 1981; Kitchener, King, Wood, and Davison, 1989; Kitchener, Lynch, Fischer and Wood, 1993) and argumentation skills (D. Kuhn, 1991, 1993). Theories and models differ somewhat depending on the objective of the survey and the populations studied, but there have been some points of convergence on what individuals believe knowledge is and how they know it.

The third and most recent line of work has adopted the approach that epistemological ideas are a belief system that may be more or more independent of Jess rather than reflecting a coherent evolutionary structure (Ryan, 1984a, 1984b; Schommer, 1990, 1994b). These beliefs can affect understanding and cognition for academic tasks and this work has been the most concerned with classroom learning.

Reviews on Epistemological Belief Among Learners

Cano (2005) conducted a study to investigate changes in epistemological beliefs among Spanish secondary school students in the middle, middle and upper classes using the Schommer questionnaire (Schommer, 1990). The results indicated that during secondary education, epistemological beliefs undergo a change, becoming less naive and simplistic and more realistic and complex. Schuyten (2005) examined the influence of the school level on the development of epistemic beliefs in Southern California using multiple measures of the Schommer-Aikins Questionnaire (Schommer-Aikins, Mau, Brookhart and Hutter, 2000) and Conley et al. (2004)) questionnaire among pupils of the 6th and 8th grades of an urban middle school. The findings indicated little evidence that epistemic beliefs develop significantly during the middle school years. A study by Eren (2007) examined the differences between the epistemological beliefs of first- and second-year Turkish university students who were pursuing fine arts teaching, physical education and business administration using Schommer's epistemological questionnaire (Schommer, 1990). The results indicated that the first years had more sophisticated beliefs about effort than the second years, while the second years had more sophisticated immutable beliefs about truth than the first years. Topkaya (2015) investigated how epistemological beliefs vary according to school level using

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Schommer's (1990) scale of epistemological beliefs among Turkish pre-service teachers. The results revealed significant differences between 1st and 4th grade students in favor of 1st grade students for social studies and science and technology teachers before service. Yenice (2015) conducted a study to investigate the relationships between student teachers' epistemological beliefs and school level using an adapted Turkish version of Schommer's (1990) epistemological beliefs questionnaire. The results showed that the grade level did not have a significant impact on the participants' epistemological beliefs and their beliefs did not change based on grade level. The results of these studies on the influence of school level on epistemological beliefs are conflicting and inconclusive.

Present Situation of Education And Epistemological Beliefs

In the 21st century, everyone needs to understand and use the basic forms of scientific rationality. Students must be able to think critically and monitor their own thinking so that they can actively construct, evaluate, discuss and use their knowledge in diverse multicultural contexts. It is possible that students have been encouraged, through the use of relational pedagogy, a develop more sophisticated epistemological beliefs. It is possible that students have been encouraged, through the use of relational pedagogy, a develop more sophisticated epistemological beliefs. It is possible that students have been encouraged, through the use of relational pedagogy, a develop more sophisticated epistemological beliefs. It is possible that students have been encouraged, through the use of relational pedagogy, a develop more sophisticated epistemological beliefs. Encouraged students through the use of various methods to increase knowledge. The students explicitly reflected on their epistemological beliefs. There is a growing body of evidence indicating that individuals' beliefs about the nature of knowledge and learning, epistemological beliefs, affect their academic performance. Contemporary researchers in epistemological beliefs have emphasized the significance of this construct in influencing the cognitive and non-cognitive variables of learning, directly or indirectly, in specific disciplines and general domains. At the same time, scholars of epistemological beliefs have sought in many cases to establish that changes in epistemological beliefs are the result of age, school level, and time, among other variables.

Determining the contribution of age and education to epistemological beliefs will serve to inform epistemological belief theory, as well as identify the potential impact education can have in improving individuals' beliefs about the nature of knowledge and learning. As epistemological beliefs appear to influence many aspects of learning, it seems essential to begin to understand how these beliefs originate and subsequently change. Anderson (1984) has suggested that epistemological beliefs are a product of both home and formal education. Children not only gain experience, they acquire interpretations of experience. It stands to reason that the beliefs about knowledge a child develops will be influenced by those of these parents. Parents' beliefs about knowledge will be conditioned by the educational and working status. Thereafter, teachers become expert mediators. Much evidence of the family's influence on epistemological beliefs comes from cross-cultural studies. The motivation behind learning is group success. These earning traditions are cultivated in the home, as well as in other social institutions, such as religion. Epistemological beliefs influence their ways of approaching and solving problems, especially if new approaches and heuristics are needed. Classrooms should be supportive environments where students learn to write as a way to participate in activities, discussions and communities.

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References

- Barbara K. Hofer and Paul R. Pintrich(1997) The Development of Epistemological Theories: Beliefs About Knowledge and Knowing and Their Relation to Learning , Epistemological Theories.pdf http:// https://www.cedu.niu.edu/~walker/research/Epistemological%20Theories.pdf
- Cano, F. (2005). Epistemological beliefs and approaches to learning: Their change through secondary school and their influence on academic performance. British Journal of Educational Psychology, 75(2), 203–222
- Christian Harteis,et.al (2007)Epistemological Beliefs and Their Impact on Work, Subjectivity and Learning, https://link.springer.com/chapter/10.1007/1-4020-5360-6_8
- Dr. Marlene Schommer,(2011) The influence of age and education on epistemological beliefs,College of Education #123, Wichita State University, Wichita, Kansas 67260-0123, USA.
- Eren, A. (2007). Examining the differences among undergraduate students' epistemological beliefs. Education and Science, 32(145), 71–84
- https://www.scirp.org/journal/paperinformation.aspx?paperid=101888
- King, P. M., Kitchener, K. S., Wood, P. K., and Davison, M. L. (1989). Relationships across developmental domains: A longitudinal study of intellectual, moral, and ego development. In M. L. Commons, J. D. Sinnott, F. A. Richards, and C. Armon (Eds.), Adult development: Comparisons and applications of developmental models (pp. 57- 78). New York: Praeger.
- Richard Owino Ongowo (2020.) Science Epistemological Beliefs from the Perspective of Culture and Gender in Co-Educational Secondary Schools, Kenya, Department of Curriculum Instruction and Media, Rongo University, Kitere Hills, Kenya.
- Schommer, M. (1990). Effects of beliefs about the nature of knowledge on comprehension. Journal of Educational Psychology, 82(3), 498 504. https://doi.org/10.1037/0022-0663.82.3.498
- Schommer, M. (1990). Effects of beliefs about the nature of knowledge on comprehension. Journal of Educational Psychology, 82(3), 498–504.
- Schommer-Aikins, M., and Easter, M. (2006). Ways of knowing and epistemological beliefs: Combined effect on academic performance. Educational Psychological, 26 (3), 411–423
- Schommer-Aikins, M., Mau, W.-C., Brookhart, S., and Hutter, R. (2000). Understanding Middle students' beliefs about knowledge and learning using a multidimensional paradigm. The Journal of Educational Research, 94(2), 120–127.
- Schuyten, P. S. E. (2005). The relationship between epistemological beliefs and academic achievement goals in middle school children. Theses Digitization Project 2738 https://scholarworks.lib.csusb.edu/etd-project/2738
- Topkaya, Y. (2015). Examining social studies and science and technology pre-service teachers' epistemological beliefs regarding different variables. Educational Research and Reviews, 10(18), 2550–2557.

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- Yenice, N. (2015). An analysis of science students teachers' epistemological beliefs and metacognitive perceptions about the nature of science. Educational Sciences: Theory and Practice, 15(6), 1623–1636.

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