

Selected Readings
in Educational
Psychology

Nor Azian Md. Noor

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SELECTED READINGS IN EDUCATIONAL PSYCHOLOGY

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GOMBAK



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TABLE OF CONTENT

Selected Readings in Educational Psychology

CHAPTER 1: MOTIVATION FROM THE WESTERN PERSPECTIVE <i>Nor Azian Mohd Nor</i>	1-12
CHAPTER 2: HISTORICAL AND PHILOSOPHICAL DEVELOPMENT OF PERSONALITY STUDY <i>Mohd Abbas Abd Razak, Nik A. Hisham, Nik Suryani Nik Abd. Rahman and Ssekemeya Siraje Abdallah</i>	13-38
CHAPTER 3: CONSTRUCTIVISTS' VIEWS ON HOW CHILDREN LEARN MATHEMATICS <i>Nik Suryani Nik Abd Rahman</i>	39-50
CHAPTER 4: BASIC CONCEPTS IN EDUCATIONAL PSYCHOLOGY <i>Hasan Langgulung</i>	51-72
CHAPTER 5: HUMAN NATURE IN ISLAM <i>Mohd Abbas Abd Razak, Nik Suryani Nik Abd Rahman, Nik A. Hisham and Ssekemeya Siraje Abdallah</i>	73-92

CHAPTER 3

Constructivists' Views on how Children Learn Mathematics

Nik Suryani Nik Abd Rahman

1. Introduction

Mathematics is universally accepted as one of the core academic subjects, taught from the earliest grades, regularly included in high-stakes assessments, and understood to be gateways to future learning opportunities particularly in the economically vital fields of science, engineering, and technology. Despite the importance placed on this subject, the study of mathematics education is still haphazard. Mathematics educators and researchers were and are still struggling to find a solution to why children have difficulties in learning mathematics taught at school (Kouba, et al., 1988; Moss & Case, 1999; Vaiyavutjamai, & Clements, 2004; Warren, & Pierce, 2004; Chinnapan, 2005; Falle, 2005; Gould, 2005; Diezmann, & Lowrie, 2006; Drake, 2007; Van den Heuvel-Panhuizen, 2008).

2. Constructivists vs Traditionalists Views

Constructivism offers a sharp contrast to the traditional view of teaching and learning mathematics. Traditionalists are of the opinion that students passively "absorb" mathematical structures invented by others and recorded in texts or known by