Building a Model of Employee Training through Holistic Analysis of Biological, Psychological, and Sociocultural Factors

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ABSTRACT

While theories of adult learning and motivation are often framed as being either biological, psychological, or sociocultural, they represent a more complex, integral process. To gain a more holistic perspective of this process, a study was designed to concurrently investigate relationships between a biological factor (age), psychological factors (motivation for training, perceived work limitations), and sociocultural factors (occupation, purpose of training, and work habits). The Assessment of Adult Literacy (NAAL) was used to elicit information about these factors in regards to work training. Data obtained was statistically correlated to age using the Spearman rank correlation coefficient. Results suggest that the interaction of multiple variables governs several shifts in motivation and need for training as adults age. Contrary to traditional theories of adult education, data suggest that a mixture of pedagogical and andragogical teaching styles is necessary for adult learners.

Keywords: Andragogical, Biological Factor, Cultural, Legal, Literacy, Psychological Factor, Sociocultural Factor

INTRODUCTION

Views about what constitutes an adult learner often differ considerably depending upon the social and cultural contexts in which the term is defined (Hansman & Mott, 2010). American society legally defines an adult to be 18 years of age, while researchers such as Johnstone and Rivera (1965) define it as someone who is twenty-one years or older, married, or the head of the household. Still others, such as Knowles (1975), have attempted to define adults as human beings who have reached maturity. This view is in stark contrast to that of Houde (2006), who

DOI: 10.4018/IJAVET.2015070101
describes adulthood not through age and maturity accumulated from birth, but through proximity to death and immediacy of educational goals.

In reality, disparities of definitions reflect major issues within the andragogical field that must be resolved. The contemporary corpus of educational literature does not include enough empirical evidence to clearly define adulthood, nor does it provide the data necessary to firmly establish the importance of andragogy as a discipline (Clardy, 2005; Taylor & Kroth, 2009). More quantitative and experimental research must be conducted to establish clear influences of age on the learning process. As a first step, a more objective and operationalizable definition about what constitutes adulthood must be developed. Contemporary descriptions that utilize age or marital status are purely arbitrary, man-made measures, while those utilizing maturity level are far too simplistic to accurately assess the process of human development. Furthermore, past definitions have treated maturity as a binary variable which may immediately be triggered, propelling the learner from childhood to adulthood. Concepts concerning adult growth are actually continuous variables which range in degree along a continuum. Individuals may develop along this continuum at different rates, explaining why universities offer both highly dependent (pedagogical) and self-directed (andragogical) curricula to members of the same university population (Yoshimoto, Inenaga, & Yamada, 2007). Because growth and maturity of an individual may vary according to a variety of biological, psychological, or sociocultural factors, it is essential that more holistic research be conducted. Such inquiry may allow educators to tailor instruction to the unique needs of each adult learner.

**Learning Influences from Childhood to Adulthood**

A great deal of research has emerged to examine and assess the learning processes of both young and adult learners (Edmunds, Lowe, Murray, & Seymour, 2002; Knowles, 1975; Kuhn & Pease, 2006; Ozuah, 2005; Paiget, 1959; Reynolds & Kamphaus, 2003; Wang, 2012). Some early inquiry by Piaget (1952) and Inhelder and Piaget (1958) recognized clear biologically-driven patterns that emerge as humans grow from childhood to adolescence. Learners develop abilities to utilize reasoning and logic as they get older. Young children from the ages of two to seven only utilize simple mental schemata to assign symbolic meaning to nearby objects; they are unable to use logic or mentally manipulate items to perform psychological operations (Inhelder & Piaget, 1958). From seven to eleven years of age, learners begin to use logic, but rely on physical objects when reasoning. Finally, from the ages of seven to adulthood, learners begin to consider abstract concepts and use sophisticated logic. Not only does this allow for the performance of mental operations, it allows the learner to monitor his or her own learning.

Although traditionally adapted to child learning and development, the stages recognized by Piaget (1952) and Inhelder and Piaget (1958) have several implications for the adult learner. Overall, the developmental patterns reveal that, like young children, adults must utilize mental conceptions, called schemata, to interpret and interact within their environment. Such mental representations will expand as additional environmental stimuli (e.g., work tasks) are encountered. As learners grow, the conceptualizations of objects or procedures are more logically and abstractly considered. Biologically mature learners also become more highly aware of what and how they learn. This is significant, since it allows for the consideration of cognitive strategies and thinking processes that promote learning. Adult learners reflecting on their ability to perform a speech in public, for example, may cognitively monitor and assess their performance as they rehearse (Brown, 2007). In essence, biological maturity ensures that learners can analyze and evaluate their own performance on a task, paving the way for more self-directed learning.
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