

Sample literature review on online learning

Psychology, Success



Online Learning

Introduction

Online learning is defined as the use of web to access learning materials; to interact with the content, online tutor, and other fellow learners; and to obtain the necessary support during the learning process; in order to gain knowledge, to construct personal meaning and grow with the learning experience .

Personality is a set of important characteristics which determine how people interact with others . The five essential components of personality include physical, social, intellectual, value system and emotional . Hans Eysenck developed a model made up of three personality traits - 1)

Introversion/Extraversion which involves directing attention towards inner experiences or focusing attention outwards towards other people; 2)

Neuroticism/Emotional stability which relates to moodiness vs even-temperedness; and 3) Psychoticism that relates to individuals that are suffering from mental illness .

Personality and learning styles are quite likely to play a significant role in influencing academic achievement . The quality of student's thoughts is critical to academic learning and could potentially determine their academic achievement . The college students essentially differ in how they process, encode, recall, organize and apply the information they learn . Some college students are thoughtful learners, while others may be superficial learners .

Big Five

The big five framework of personality traits has emerged as a robust model to understand the relationship between personality and various academic behaviors . Conscientiousness is defined as being disciplined, organized and achievement oriented . Neuroticism refers to the degree of emotional stability, impulse control and anxiety . Extraversion is displayed through a higher degree of sociability, assertiveness and talkativeness . Openness is reflected in a strong intellectual curiosity and a preference for novelty and variety . Agreeableness refers to being helpful, cooperative and sympathetic towards others . There are research evidences of existence of a possible intimate relationship between motivation and individual differences in learning styles .

Personality traits have been found to have a significant impact on achievement in academic learning . For example, conscientiousness has consistently emerged as a stable predictor of exam performance and GPA . Conscientiousness and openness predict course performance, and agreeableness, conscientiousness and openness predict an overall academic performance . Extraversion, openness and conscientiousness have also been found to predict GPA when students apply the previously acquired knowledge to real life situations . Neuroticism or emotional instability is found to negatively impact academic achievement .

In addition to the Big Five, perseverance trait is also predictive of academic performance .

Academic literature supports the existence of a relationship between self-directed student learning and academic achievement . As online learning has

gained a lot of momentum at secondary level, there is a growing interest to understand the characteristics of good and successful learners . Since government agencies are encouraging students to enroll for online learning programs, there is a critical need to understand the circumstances which may lead to student success in online classrooms . According to Dabbagh, successful online learners are those students that exhibit self-directed learning skills . Studies have suggested that students who are not self-directed learners have a greater risk of failure when placed in the rich and complex environment of online learning . Self-directed learning has been studied as a personality trait which has been close related to the Big Five Personality Traits . Successful online learners were found to be those who exhibited self-directed learning skills .

Theories of Learning

Piaget Stage Theory of Cognitive Development

Jean Piaget devised four developmental stages of cognitive development in children to show how mind processes information . According to this theory, the cognitive development in children occurs in four stages sensorimotor, preoperational, concrete and formal .

Ausubel's learning theory

David Ausubel focused on the learning of school subjects and placed considerable interest in what the student already knows as being the primary determinant of whether what student shall learn next . Ausubel viewed learning as an active process and not a simple response to one's

environment . The key concept for this learning theory was cognitive structure .

Gagne learning theory

Gagane advocated that different variables influence the learning of the different types of tasks . Gagne identified five variables of learning outcomes which included information, intellectual skills, cognitive strategies, motor skills and attitudes . According to this theory, intellectual skills are placed in an increasing order of complexity .

Bruner's theory

According to this theory, the outcome of cognitive development is thinking . An intelligent mind creates from experience generic coding systems that permits an individual to go beyond the data to make fruitful future predictions . Bruner proposed three methods of representation which include Enactive or action based representation; Iconic or image based representation and Symbolic or language based representation . Bruner views symbolic representation as crucial to cognitive development and considers language as a crucial element in determining cognitive development .

Social Cognitive Theory

According to Social Cognitive Theory, people can practice enactive or observational learning where learning takes place through observation within a social environment . When people learn through observation, they use internal mental processing but they may not necessary change their behavior as a result of what they have learnt . The student actions during the

learning process reflects their beliefs about their own abilities and their expectation of success . Social cognitive theory distinguishes aiming three modes of agency-direct personal agency, proxy agency which relies on others to act on one's behalf to secure desired outcomes and collective agency that is exercised through socially coordinated and interdependent effort .

Self-regulated Learning

Self-regulated learning is an active construction process where learners set goals for their learning and then attempt to monitor, regulate and control their cognition, motivation and behavior that is guided and constrained by their natural environments . Zimmerman and Campillo conceptualized the process of self-regulation as a reciprocal cycle composed of forethought, performance and self-reflection .

Self-directed Learning (SDL)

Lindemann and Knowle have been credited with the coining of the term andragogy that is defined as the art and science of helping adults learn . Adult learners have a self-concept which tends to be independent and self-directed . Adult learners tend to be more internally motivated for learning . SDL plays a critical role in the process of adult learning .

Self-directed learning as a personality characteristic

According to Long, SDL consists of three dimensions that are pedagogical, the sociological and the psychological . The critical component in SDL is the psychological component . A self-directed learner is defined as a learner who has a high degree of self-efficacy, is intrinsically motivated, identifies

personal learning needs, sets goals, makes strategies to achieve those goals and self-evaluates goal achievement on the basis of internal evidence and external feedback . The narrow traits that have been associated with the academic achievement are optimism, aggression, tough-mindedness, work-drive and self-directed learning . SDL is a personality trait that cannot be observed directly, but the tendency to SDL is associated with academic achievement, high self-efficacy, conscientiousness, epistemological beliefs and beliefs about internal control .

Academic Achievement

The academic achievement for online students can be quantified through the course completion rate and the final online course grade . GPA can be considered as a traditional measure for academic achievement . Students who take responsibility for their own learning and exhibit a narrow personality trait SDL seem to have greater academic achievement and perform well in the online learning environment .

Impact of Online Learning on Students

The direct impact of online learning is seen on the learning achievement of students . Results of large, cross-national research studies show that the impact of learning is complex and is closely related to how technology is used as an online learning tool . Students who used computers tutorials in the subjects of mathematics, natural science, and social science scored higher than their peers who did not use computer tutorials . Students who used simulation software in science also scored higher . Primary school students who used tutorial software in reading scored higher marks in

reading tests . Students that utilized computers for writing skill scored better marks in writing tests .

Impact of Culture on Online Learning

Flowerder and Miller proposed a cross-cultural interface composed of four elements or cultures: 1) Ethnic culture, 2) Local culture; 3) Academic culture; and 4) disciplinary culture . Collis, Parisi and Ligorio have composed a list of barriers to effective online learning which may include cultural and environmental problem; teaching style differences; language and semantics problems; and technical problems . To assess the potential impact of cultural differences on online education, education quality can be considered as a parameter .

Research Questions

- What are the different personality traits which have a significant impact on student achievement in online learning?
- Is there a relationship between various personality traits of students and their academic achievement?
- Does self-directed learning exist among students enrolled in online learning?
- Is self-directed learning associated with significant difference in academic achievements for final grades of students enrolled in online learning?
- Does the use of e-learning software/technology have a significant impact on academic achievements?

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