

Details of Module and its structure

Module Detail	
Subject Name	Education
Course Name	Understanding the learner
Course Code	EDU502
Module Name/Title	<i>Socio-cultural factors influencing cognition and learning in adolescents with respect to their school, community, family and religion</i>
Module Code	UTL004
Pre-requisites	Prior knowledge about cognition, learning, society, culture, adolescents
Learning Outcome	<p>After going through this lesson, the learners will be able to</p> <ul style="list-style-type: none"> • relate cognition and learning • Analyse the influence of school, family and community on cognition and learning of adolescents • Correlate the influence of culture on cognition and learning of adolescents
Keywords	Cognition, learning, adolescents, family, school, community, culture

1. Development Team

Role	Name	Affiliation
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1. Introduction

Mrs. Sharma is teaching English to class nine, in a reputed school in one of the metro cities of India. Every year, in the beginning of the class she asks her students to submit an essay on “Who am I” detailing what they think is the strength or weaknesses of their personality, influence of belonging to a particular socio-economic section of the society, speaking a particular language, following rituals specific to the cultural, religious and regional affiliations of their families and who inspires them and why. This practice is continuing since last 15 years. Each year’s reports leave her wondering what’s going through the minds of her learners.

This quest, of becoming familiar with the intricate details of thought process, thinking, learning styles, affiliations, assimilation of experiences etc. is nothing but science of cognition. The branch of psychology that studies cognition is known as cognitive psychology. The discussion in the present chapter will focus on understanding learning, cognition and how socio-cultural factors like school, family, community and culture influence learning and cognition.

Let’s begin by becoming familiar with cognition and cognitive processes.

2. Understanding cognition and cognitive processes

The term **cognition** originated from the Latin word ‘cognoscera’ which mean ‘to know’. Cognition may be defined as a range of mental processes relating to the acquisition, storage, manipulation and retrieval of information. Information here encompasses knowledge. In simpler words cognition may be understood as the mental action or process, of acquiring knowledge and understanding the same through thoughts, experiences and the senses.

Many disciplines like information sciences, philosophy, neurology, anthropology, and psychology had focused their attention towards study of cognition. Cognitive psychology in particular had attempted to inquire into how the information processing influences behavior and relation between mental process and acquisition of knowledge.

Learners in Mrs. Sharma's class in the introduction were engaged in the cognitive process of analyzing, thinking, attention, memory, reasoning, comparing, etc. of the information gathered about self from sources like experiences, peers, parents. The end product of this endeavor is consolidation of knowledge about self, in the form of written report. **Cognitive process** can be defined as the procedures used to acquire knowledge. The processes such as perception, attention, memory, thought, language, learning etc. are some examples of cognitive processes. Each of these cognitive processes can also be understood as **cognitive functions**. Say for example "thought" as a cognitive function generates new ideas but the cognitive process of generating new thought relies on the processes such as integrating the information, establishing relationship between events and knowledge, reasoning, and may be synthesis also. As an individual we may or may not be aware of the functioning of cognitive processes, say for example, as soon as the teacher enters the classroom, students stand and greet the teacher. The decision to stop the work and stand may not be consciously made by all students, yet everybody stood. Cognitive process can be influenced significantly by chemicals such as dopamine, noradrenaline (norepinephrine) serotonin, acetylcholine, glutamate etc.

3. Understanding Learning and Learning process

Learning can be understood as a relatively permanent change in the knowledge or behavior due to experience. Learning is active process, wherein an individual engages in manipulating objects, conversations and experiences to construct knowledge about the world. Learning process is built on prior knowledge and occurs in social environment. For sustenance of learning, motivation and cognitive engagement of learner is essential.

Learning starts from births and continues till grave. Depending on the ways of acquisition learning can be formal, informal or non-formal. It could be individual or group depending on the number of learners. Factors like individual, environmental and teacher, influence learning significantly.

Thorndike proposed that individuals learn best when they are ready for learning (law of readiness), practice, drill and repetitions etc. have

significant place in the process of learning (law of exercise), emotional reactions pleasant feelings and experiences strengthens learning (law of effect), first experiences must be correct, positive and right as it lays the foundations for further learning (law of primacy), students learn more from vivid, dramatic, or exciting learning experiences as compared to routine and boring activities (law of intensity) and the recent learning has more chance of retention (law of regency).

Learning processes has six interactive components—attention, memory, language, graph motor (writing), higher order thinking, processing and organizing. Each of these sub-processes not only interacts and influences each other but also with emotions, classroom climate, behavior, social skills, teachers, family, society, etc.

Learning theories majorly falls into three groups –behaviorist learning, cognitive information processing and cognitive constructivist. Stimulus and response are the most important process of learning according to behaviorist school of learning. Behavior modifications, classroom management and management of instruction are the implications of behaviorist's theories of learning that has metamorphosed the way learning was understood and practiced. Cognitive information processing theory of learning, advocates that for learning to occur information inputs are received from the environment, which are then processed and stored in the memory, there after the output is in the form of learning. The entire process is similar to the information processing function of computer. Sensory memory, selective attention, pattern recognition, short term memory, rehearsal and chunking, encoding, long term memory, and retrieval are key concepts of cognitive information processing. Cognitive constructivist theories may be further divided into social and developmental constructivist theories. The social constructivist believes in authentic problems, mind, team choice (common interests), social dialogue and elaborations, group processing and reflection, teacher explanations, support and demonstrations, multiple viewpoints, collaborations and negotiations, learning communities and assessments. On the other hand, the development constructivist believes in raw material, student autonomy, mind, meaningfulness and personal motivation, cognitive

framing, prior knowledge and misconceptions, questioning, general connections and self-regulated learning.

From the discussion above, it may be inferred that cognition and learning are closely related to each other. Both are related to information, enhancement of human skills, growth and development.

Before moving ahead, it is important to understand that persons with ***cognitive impairments*** or challenges exhibit significantly different cognitive abilities and may experience difficulties in learning, which may or may not be managed with the help of special education or inclusive pedagogic practices. Specific learning disabilities (dyslexia, dysgraphia, dyscalculia, etc.) and intellectual disabilities are two major manifestations of cognitive impairments. The lived experiences of learners with and without cognitive impairments have innate diversity due to the way information is accessed, processed, perceived, experienced, and manipulated.

4. Factors affecting cognition and learning

- Meditation
- Physical exercise
- Stress level
- Motivation
- Environment –family, school, community, nature, manmade etc.
- Individual Characteristics- age, intellect, motivation, interest, social status, etc.

5. Effect of school on cognition and learning of adolescents

Adolescent is that stage of human development which is just before adulthood and is marked with emotional turmoil, hormonal activity, quest for identity, physical changes, role identification as male and female, peer pressure, tension related to future, career aspirations, consciousness about body image, self-prestige, academic performance and much more.

School comprises of much more than mere building. It has teachers, administrators, curriculum, sports & games, competitions of various nature, clubs, outings, peers belonging to diverse background etc. The

experience called schooling may be perceived as holistic interaction with human and non-human resources available in the school such as building, teachers, teaching methods, administrators, peers, support staff, teaching learning aids, curricular and co-curricular activities etc. Schooling influence all dimensions of the personality of a child as after home, this is the place where a child spends maximum time of his/her growing up years.

Let's now, list influences of school on adolescents—

- Creativity – everybody has the potential to be creative. Creativity pursuits are directly associated with cognitive functions, and may flourish in supportive environment. The pedagogy used in school, if supports and encourages creative tasks may have positive influence on the level of creativity of adolescents, which in turn also affects learning.
- Academic Achievement -- school environment which is free from trauma, fear and harassment supports and affects cognition and learning positively. Same also applies to teachers, teaching learning methods, aids and equipment's, and professional competency of teachers. Academic achievement may also get affected by the architecture of school say for example deplorable conditions of building, crowded classroom with insufficient space, can negatively affect the student motivation to learn and achieve.
- Problem Solving Skills—school can instill the feeling of either mastery or helplessness with respect to problem solving among students. Students who have mastered the problem solving skills may look at every new problem as challenge that needs to be addressed by self-instruction and efforts. The students who fail to master the skills of problem solving may perceive new problems as test of their abilities in which they may not perform as desired.
- Prioritizing and Goal Settings –school with focus on sports or arts or culture may nurture the view that academics need not occupy the prime space. The priorities of students in such school would differ from the priorities of students studying in traditional school focusing on academics.
- Formation of beliefs about Intelligence, Abilities, Efforts, Academic Self-Concept, and Self-Efficacy – these all are significantly influenced by the

schooling. Praise from teachers, acceptance by peers may lead to positive beliefs about self which may affect entire behavior later in life. Belief that intelligence is only associated with academics may have its roots in experiences gathered in school.

- Social Responsibility and attitude towards society—school being the first formal institute after home, with which the child engages itself, serves as place of social learning, inculcation of social etiquettes, sharing of social responsibilities, engaging in social causes etc.

6. Effect of community on cognition and learning of adolescents

Traditional definition of community--a group of people living in the same space, here space was defined by physical boundaries. Space is now perceived as beyond physical boundaries. We all have virtual space, and spent most of our time on social media and internet. Just like community members living in spaces bounded by physical boundaries, members of virtual communities also affect each other. Adolescents, (the young adults), engages with social media more than the children, and adults and elders. The reason for this can be found in the effect of hormonal changes, on the physical, cognitive and emotional life, which manifest as risk taking behavior, experimentation with the world around, attempt to find meaning in the event and activities around and trying to understand the self.

Antonishak et al (2005) identified peer, neighbors and media as three major components of community that play critical role in shaping the attitude, learning and perception of adolescents.

Listed below are few effects of community on the adolescents—

- Value Inculcation—the prevalent values guiding behavior associated with environment, usage of ICT, manual work, gender issues, rituals, respect for elders, etc. is imbibed through observing the behavior of significant adults in the community. The adolescents belonging to upper socio-economic strata, having maid and army of servants at home may imbibe that manual work is beneath them whereas those belonging to lower socio-economic strata may imbibe the value that it is cool to spend money on eating out.

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- Attitude Toward Learning and School –the prevalent attitude and perception about academics, in the community to which the adolescent belongs may influence first the development and later crystallization of the attitude of adolescents towards academics, school, teachers and learning. Religious minority communities where knowledge of religious scriptures imparted through religious institutions is preferred and respected over formal school curriculum may instill similar beliefs among adolescents. This in turn may affect their attitude towards learning, their work habits and also their overall academic performance along with cognitive functioning such as logical reasoning. Adolescents belonging to such communities may look at reality through the lens of religious scriptures.
 - Gender Stereotypes—every society has its own perception and comprehension about the socially appropriate gender stereotype roles. Please note that gender, is to be understood as a broad based issue not limited to only girls/females. In a community where adolescents observe male and female respecting each other, without any associated hierarchies and taboos related with work are not strictly complied to, the learning of appropriate gender role flows from the observed realities around. In contrast where adolescents observe males indulging in violence against females in the form of physical, sexual, financial and emotional abuse, they tend to internalize the values that it is all right to abuse females, as this appears to them the norm of community.
 - Aspirations for Career and Future—in a community where, entrepreneurial activities are valued over working for salaries, adolescents might get inspired to begin their own venture. On the other hand, in a community, where jobs are perceived as financial security adolescents might get motivated to earn their living accordingly.
 - Indulgence in Leisure Activities—some communities tend to indulge in dance, theatre, story-telling, games, sports etc. regularly. In such communities’ adolescents have role models encouraging indulgence in leisure activities, valued by the significant adults in the community. On the other hand, if the adolescents observe adults in their community indulging in alcohol and other forms of substance abuse they may

themselves start experimentation which may lead to habit of substance abuse.

- Understanding of Social Problems—issues like substance abuse, dowry, pollution, judicious use of natural resources, harmony, brotherhood, scarcity of educational resources, prevalence of superstitions etc. are usually perceived by adolescents from the lens of understanding and behavior of community elders. Lot of courage and divergent thinking is required to look for solutions demanding action contradicting the prevalent beliefs in the community.
- Usage of Media—adolescents indulgence in the traditional social media and modern ICT based social media may not reflect the patterns of its usage by significant adults. This might be especially true for modern media which has come into picture recently. Adolescents may require guidance in using social media judiciously for ease of day to day life such as booking of tickets, paying bills, weather alerts, news update, advance learning, results etc. Media may also help in gathering relevant information concerning a social cause, which in turn may promote self-learning and enhanced cognitive functioning.

7. Effect of family on the cognition and learning of adolescents

Home is a place of residence that is shared with members of one's family. Family members are usually related to each other by birth, marriage or law. Home may also be perceived as a place that provides mental and emotional refuge or comfort. Living condition in a home constitutes family environment. Family environment is influenced by various factors such as physical (infrastructure, economic conditions, urban rural location etc.), social circumstances (nuclear or joint or single parent family), educational status, parenting style and so on. Family environment influences the behavior, emotions and overall mental health of a person and vice versa is also true. All the family members (parents, children and extended family members) make their unique contributions to the family environment and also experience the family environment in their own unique way. Say for example, the news of mother's promotion might bring joy to the teenage daughter as that might be interpreted as more absence of mother from

home which in turn may provide more 'me' time to adolescent girl. On the other hand, for a younger son, this news may bring joy due to the party at home but he may be feeling little sad, assuming mother's time may now not be freely available.

It is a common experience that people tend to become homesick when they are away for long from their homes. Home and family environment may also trigger self-reflection that is thoughts and feelings about the future possibilities and life journey so far etc. Traditionally working inside the four walls of home used to be predominantly the responsibility of the female of the family whereas the work outside was considered to be the domain of the male of the family. With the changing times, the boundaries between the stereotypical divide in tasks based on gender is merging as more and more males are shouldering the responsibility of household management with females. Similarly, as discussed above, more and more women are also contributing in the family income by indulging in work outside the four walls of home.

In this scenario, the teenager or adolescent in the family who is struggling to find his/her own identity, manage relations, explore the social rules and regulations and understand the physical and emotional changes occurring within, is hugely influenced by the family environment. Emotionally warm atmosphere, space and acceptance for communication, appropriate involvement of parents in the child's life and mutual respect for each other generates a family environment that prepares an adolescent for facing life ahead, meaningfully.

The following factors related with family and home environment affect the adolescents directly or indirectly—

- Family Structure—whether nuclear, joint single parent, adopted children, step children/parent, foster parents, guardians
- Financial Status—below above poverty line, middle class or above middle class etc
- Parental Characteristics—management of emotions, level of education, dutifulness, attitude towards society, politics, elders, money, religion, etc.
- Bonding Between Parents and Children—in terms of sense of security and attachment

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- Parenting Style
 - Mental Health of Parents
 - Marital Relations
 - Relation with Extended Family and Community
 - Social Status
 - Work Status
 - Sibling Relationship
 - Presence of Person with Disability

The paragraphs below present the major effects of family on adolescents.

- **Communication Skills**—communications both verbal and non-verbal are essential for establishing and sustaining relationships, in all situations. In families where communications are positive and constructive, and conflicts are resolved through discussions and decisions are made democratically after consulting all family members, adolescents learn effective communication skills.
- **Relationship Management**—adolescents belonging to families where members are struggling with mental health issues such as depression or alcoholism or drug abuse or violence may have the possibility of having low self-esteem, physical and mental health issues, personality concerns, problems related with education and undesirable impact on well-being, which in turn may affect the adolescents understanding of interpersonal relations and their management.
- **Ability to Think Rationally**—Adriana et al (2012) found that teenagers belonging to problematic or not so congenial family environment may tend to assess themselves based on irrational beliefs, and may have difficulty in building tolerance towards rules and work ethics, and may have absolutist requirement of justice say for example teachers must always be impartial.
- **Coping Strategies**-- parent adolescent relationship plays essential role in shaping the self-esteem of an adolescent. If self esteem is low than chances are high that adolescent may cope with day to day life pressures by indulging in more risk taking, substance abuse, impulsive behavior, compulsive shopping or buying behavior, withdrawal from socially

appropriate behavior etc. as compared to adolescents having high self-esteem.

Apart from the major affects listed above, healthy family environment also affects adolescent mental health, education level, tendency to substance abuse, attitude towards opposite gender, life skills and value.

8. Effect of culture on the cognition and learning of adolescents

In layman's terms culture may be defined as shared values, beliefs and norms of a group of people. Culture has significant effect on shaping our personalities and formation of work habits, and the way we learn and perceive the world around.

Effect of culture on adolescents might be evident from their—

- Style of dressing
- Attitude towards environment, cleanliness, GOD, nature, work, etc.
- Ideas about life and world in general
- Values
- Gender differences
- Maturation patterns
- Conscientiousness
- Openness to new experiences

The everyday experience tells us that persons belonging to a particular culture are easily recognizable, through their language, behavior, work habits, personality traits and attitude towards life in general. The culture plays an important role during the stage of adolescence in shaping the personality for life in adulthood.

9. Conclusion

Adolescent is that stage of development in humans which is known for its turbulence in the form of discovering him/herself, crystallizing the personality traits, coping with physical, emotional and social aspects of life, molding self into the socially appropriate mould of behavior, (without losing individuality or self identity). At this stage the influences gathered as a result of interaction with school, family, culture and community play lead role in shaping the cognitive functioning and way of learning. These

influences initiated at the stage of adolescents continue to affect the whole adult life.

10. Summary

Originated from Latin word 'cognoscera' which mean 'to know', **cognition** may be defined as a range of mental processes relating to the acquisition, storage manipulation and retrieval of information. The procedures used to acquire knowledge are known as **Cognitive process**. Cognitive process can be influenced significantly by chemicals such as dopamine, noradrenaline (norepinephrine) serotonin, acetylcholine, glutamate etc. Learning is active process that brings relatively permanent change in the knowledge or behavior due to experience. **Learning processes** has six interactive components—attention, memory, language, graph motor (writing), higher order thinking, processing and organizing Cognition and learning may gets affected by meditation, physical exercise, stress, motivation, environmental factors such as family, school, community, nature etc. and Individual characteristics- age, intellect, motivation, interest, social status, etc. School may influence adolescent's creativity, academic achievement, problem solving skills, prioritizing and goal setting, social responsibility and beliefs towards intelligence, abilities, efforts, academic self-concept, and self-efficacy. Belongingness to a particular community affects adolescents' attitude towards school and schooling, value inculcation, gender roles, aspirations for career and future, indulgence in leisure activities, understanding of social problems and usage of social media. Factors like family structure, financial status, parental characteristics, bonding between parents and children, parenting style, mental health of parents, relation with extended family and community, marital relations, social status, work status, sibling relationship and presence of person with disability affects the development during adolescence. Family environment has significant effect on communication skills, relationship management, rational thinking and coping strategies. Culture and cultural practices affect the adolescents dressing style, attitude towards environment, cleanliness, GOD, nature, work, etc., ideas about life and world, values,

sensitivity towards gender issues, maturation patterns, conscientiousness and openness to new ideas.

EDU502

Assessment for Learning

UTL004

Quadrant-III

Learn More/Web Resources/Supplementary Materials

Books, articles, research papers, journals, case studies etc.:

Singh, Rashmi., & Nayak, Kumar. Jogendra. (2016) Effect of family environment on adolescent compulsive buying: mediating role of self-esteem. *Asia Pacific Journal of Marketing and Logistics*, 28 (3), 396-419 available at www.emeraldinsight.com/doi/abs/10.1108/APJML-05-2015-0082?journalCode=apjml accessed on 13.11.2018

Adriana, Elena. Tomuletiu., Doina, David., Monica, Filpisan., Anca, Nemes., Gabriela, Buicu., & Florin, Buicu. (2012) Impact of family environment on adolescent's irrationality. *Procedia—social and behavioral sciences*, 46, 2528-2532

Antonishak J., Sutfin E.L., Reppucci N.D. (2005) Community Influence on Adolescent Development. In: Gullotta T.P., Adams G.R. (eds) *Handbook of Adolescent Behavioral Problems*. Springer, Boston, MA available at https://link.springer.com/chapter/10.1007/0-387-23846-8_4#citeas accessed on 12.11.2018

Sylva. Katha, (1994), School influences on children's development, *Journal of child psychiatry and psychology*, Association for child psychology and psychiatry, Greta Britain, 35 (1), 135—170 available at <http://birbhum.gov.in/DPSC/reference/57.pdf> accessed on 11.11.2018

C. Kenneth Tanner, (2000) "The influence of school architecture on academic achievement", *Journal of Educational Administration*, Vol. 38 Issue: 4, pp.309-330, available at <https://doi.org/10.1108/09578230010373598> accessed on 11.11.2018

Mudassir I.B., Norsuhaily B.A., Ado A.B. The Influence of School Environment on Academic Performance of Secondary School Students in Kuala

Terengganu, Malaysia. The American Journal of Innovative Research and Applied Sciences.2015; 1(6): 203-209. Available at: https://www.researchgate.net/publication/305659360_INFLUENCE_OF_SCHOOL_ENVIRONMENT_ON_ACADEMIC_PERFORMANCE_OF_SECONDARY_SCHOOL_STUDENTS_IN_KUALA_TERENGGANU_MALAYSIA accessed 11.11. 2018

Beasoncon. Maud., Fenouillet. Fabien., & Shankland. Rebecca, (2015) Influence of school environment on adolescents' creative potential, motivation and well-being, Learning and Individual Differences, Elsevier, 43, 178—184 available at <https://www.sciencedirect.com/science/article/pii/S1041608015001946> accessed on 11.11 2018

Links to web sites giving additional readings:

1. <https://explorable.com/culture-and-personality>
2. https://www.2knowmyself.com/how_culture_affects_personality
3. <https://www.ncbi.nlm.nih.gov/pubmed/11752482>
4. <http://www.sociologydiscussion.com/society/role-of-culture-in-the-development-of-personality/2828>
5. <https://www.cs.ucy.ac.cy/~nicolast/courses/cs654/lectures/Learning Theories.pdf>
6. <http://www.cdl.org/articles/understanding-the-learning-process-to-effectively-differentiate-instruction/>
7. https://www.oregon.gov/oprd/ATV/docs/handout_the_learning_processes.pdf
8. <https://teaching.berkeley.edu/resources/learn/what-learning>
9. <https://www.cognifit.com/cognition>
10. <https://www.wigan.gov.uk/Business/Professionals/SEND/HEFA/Chapter-6.aspx>
11. <http://www.cambridgecognition.com/blog/entry/what-is-cognition>
12. <https://www.degruyter.com/downloadpdf/books/9783110402490/9783110402490.3/9783110402490.3.pdf>

Quadrant IV**Self-Assessment**

Description: In self-assessment Question No. 1 to 14 has statements in which learner has to identify about true/false statements and Question No. 15 to 21 give answer in 50-60 words.

1. Cognition is nothing but mental processes related to the acquisition, storage manipulation and retrieval of information ()
2. Change in behavior due to some accident is learning ()
3. Cognition and learning doesn't get affected by meditation, physical exercise, stress, motivation ()
4. Ability to solve problems and be creative has major influence of school followed by community ()
5. Presence of a person with disability in the family doesn't affect adolescents learning and cognition ()
6. From personality traits, person's belongingness to a community can be identified ()
7. Sensitivity towards gender issues develops predominantly as a result of adolescent's interaction with culture ()
8. Family environment is generated by contribution from each member of the family including the extended family members ()
9. Adolescents learn usage of ICT and attitude towards usage of ICT from the society to which they belong. ()
10. The three major component of community are peers, family and media including virtual media. ()
11. School has no influence on prioritizing skills of adolescents. ()
12. Adolescence and childhood are two stage of rapid physical growth ()
13. Cognitive abilities of persons with and without cognitive impairments are same ()
14. Law of intensity is law of cognition. ()
15. What is the difference between knowledge and information?
16. Write short note of learning and learning processes
17. List the factors affecting learning and cognition
18. Define community and discuss how it affects adolescents
19. Family environment plays major role in adolescents coping and communication skills
20. Giving examples from daily life discuss how culture affects adolescents
21. How the experiences of schooling would differ for adolescents with and without disabilities?

Answers

1. True 2. True 3. False 4. True 5. False 6. True 7. True 8. True 9. True
10. False 11. False 12. True 13. False 14. False