UNIT 13 AFFECTIVE AND PSYCHOMOTOR LEARNING AND THEIR ORGANISATION

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13.1 INTRODUCTION

The goal of educational process is the total development of the learners irrespective of the level of education. Total development refers to the development in the three major dimensions- cognitive, psychomotor and affective. These are the three domains in which the development occurs as a result of the individual’s learning. The learning outcomes in these domains have some distinctive features. As a result of cognitive learning the individual acquires knowledge resulting in the changes in the cognitive structure and style of the learner. Details of cognitive learning have been discussed earlier in this block. The learning process under the psycho-motor domain relates to the acquiring of various skills. This process of learning involves both the cognitive functioning as well as muscular coordination. Because of this combination the process is known as psycho-motor learning. The psychomotor learning enables the individual to acquire mastery over various manipulative skills relating to scientific, mechanical and manual tasks etc. Psychomotor learning is very important on the part of each individual for enabling him or her to earn the livelihood.

Apart from the learning taking place in the cognitive and psychomotor domains, the individual experiences changes in his or her feeling aspects. The experiences of the individual related to changes in the feeling tone also result due to the effect of learning. Such learning processes come under the purview of affective learning. As a result of affective learning there is change in the learners’ level of awareness and feelings related to the subject of learning. Such changes in the learner’s feeling tone are exhibited through the changes in the levels of interest, motivation, attitude etc..

It may be noted here that all the three types of learning experiences are not mutually exclusive. This proposition holds good because of the fact that through most of the school learning programmes we intend to develop cognitive skills related to the learning...
content and also to bring in changes in the affective domain of the learner like interests, attitudes, values etc. It is clear that cognitive as well as affective learning take place simultaneously and with the same content of learning. Similarly, there are several learning situations in which psychomotor learning occurs along with cognitive learning and/or affective learning.

Though the three types of learning are not mutually exclusive, the differentiation among them is warranted because of the nature of the behavioural outcomes.

### 13.2 OBJECTIVES

After studying this unit, you should be able to:

- describe the concept and nature of affective learning;
- state the dimensions of affective learning and their components;
- suggest educational programmes and methods for the development of affective learning;
- discuss the concept of psychomotor learning; and
- appreciate the importance of affective and psychomotor learning in the life of the individual.

### 13.3 CONCEPT AND NATURE OF AFFECTIVE DEVELOPMENT

As discussed earlier, all learning programs aim at the development of the learner in all domains such as cognitive, psychomotor and affective. The development in the affective domain helps the learner in empowering him/her with various attitudes and values. The affective domain of the individual refers to the behavior relating to the feelings, emotions and similar other qualities. Man’s development in such areas makes him unique and different from all other creations on earth. Man is a rational animal being endowed with human qualities of love, sympathy, tolerance, cooperation, fellow-feeling and the like. All these relate to the attitudes and values that are useful in the individual’s life. The development of all such qualities results from learning in various contexts. Such learning is not confined to the classroom or to any other specific learning situation. The behavioral changes in the learner’s feeling domain may be possible outside the classroom situation beyond the scope of formal learning context. This is because the individual’s personality development takes place during ones interaction in various in-school and out of school situations.

Though learning takes place through three different channels cognitive, psychomotor and affective, it takes place as one process. The outcomes of learning also relate to those three domains. In any learning situation the behavioural changes in the learner occur in some or all the three types. But the extent of such learning outcomes may differ in degrees. The learning outcomes in the psychomotor aspects are distinctive because they are mostly associated with skill development, while the learning outcomes relating to cognitive and affective aspects are found intermingled with each other.

The idea of affective education has remained unfocussed for long (Bills, 1976). It is conceived coincidental with cognitive learning, and is found difficult to deal separately in classroom learning. Many terms are associated with affective learning. Martin and Briggs (1986) listed as many as 21 different terms associated with affective aspects of personality including self-concept, mental health, morality, attitudes, values, ego development, feelings and motivation. The term ‘affects’ has a literary meaning of feeling, emotion and having preference for some object, issue, notion and the like. It refers to a type of mental state or disposition tinged with the feelings of love and fondness.
Affective education broadly deals with the students' experiences in school and out of school situations and is mainly concerned with the programmes of the social and personal development. According to Ackerson (1991) and Beane (1990), affective education refers to educational programme and activities pertaining to learners' personal-social development, feeling, emotions, morals, ethics. It is often isolated in the curriculum. But since the sole purpose of education is to develop the individual as human, it must be mostly about the affect; it cannot be otherwise and cannot be separated from other aspects of the curriculum (Beane, 1990).

Check Your Progress 1

Note: Write your answers in the space given below.

1) What do the channels of learning refer to?
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2) What are the characteristic features of affective learning?
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3) Give any five examples of the themes of affective learning.
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Development of the affect has been considered either overtly or covertly as a part of schooling. It has taken different forms like humanistic education, moral development, value orientation etc. The programmes on value education and/or moral education in some instances take the form of character education also. Affect is also treated as a response to different social, political and economic issues in the form of attitudes. The individual has to develop and nurture desirable positive attitudes and interests for his/her better adjustment in the society.

Effective monitoring of the educational process is needed for proper development of the affective domain of the learner. Presently, the emphasis in school curriculum is on academic subjects, which are usually mistaken to help the cognitive development of the learners only. But the hidden agenda of such academic programmes is to develop affect of the individual alongwith the cognitive aspects. Almost all the themes of the academic subjects have the potentiality for developing the affective domain in some form or the other. But the transactional modes followed in the curricular programmes do not usually favour such development. For example, in a language subject prescribed for any grade, there may be a number of themes in the form of prose or poetry lessons. Each of such lessons may be intended for inculcating, strengthening certain morals essential in the learner's life situation in the present as well as in future context along with the purpose of developing competencies in language and to acquire certain factual information. But in the classroom transaction of such themes as well as in the programmes of learner evaluation, the teachers usually place emphasis on the later two aspects almost completely neglecting the first one. This is the case not only with the language, but also in other curricular areas.
In the learning of the affect or any educational programme intended to achieve some affective objective, certain important issues need to be considered because of the philosophical and social nature of the learning outcomes. For example, the learning situations where the affective objectives are explicitly defined or not, stated or unstated, planned or unplanned raise issues like what to teach, what methods the teachers should follow to ensure the attainment of expected learning outcomes, and what is the reaction and level of acceptance of the contents and methods of affective education by the students, parents and the community or the society at large. The following issues may be considered relevant in this context.

- Affective education takes a long time to achieve its objectives. For example, any desirable change in the learner’s affective behaviour cannot be accomplished through a singular learning situation. More specifically, a change in the learner’s attitude towards certain social issues may occur only after their understanding and realization of the pros and cons after having adequate exposure to it over a long time.

- A change in the learner’s affective behaviour can be possible in shorter duration through certain processes, like indoctrination or brainwashing. But such methods are not usually adopted for ethical reasons.

- In some instances absence of certain unsocial behaviour in the individual is the indication of affective development. For example, absence of drug or alcoholic addiction, or habit of intoxication are the indicators of good affective behaviour. At times, confusion prevails about the affect as a means to cognitive ends. The processes of both classical and operant conditioning, and the approach of persuasive communication may prove to be powerful methods for inculcating some affective behaviour.

Golemann (1995), suggested that the individual’s emotional and rational components of the brain are somewhat independent of each other and operate separately. But there are times when both the components work in harmony with each other. When the individual is faced with a problem or dilemma and is required to make a decision, the emotional center of the brain functions first while the rational brain is yet to start functioning. Therefore, the person in a dilemma situation is likely to take a decision more with emotional touch than with a rational consideration. This implies that the educational process should provide the individual with adequate knowledge about the situation to enable him/her to use reasoning to mould the emotional behaviour in a desirable form. Golemann (1995) calls this type of mental functioning ‘Emotional Intelligence’, which enables the individual to deal intelligently with various social problems that one faces in life situations.

From the above discussion one may conclude that individual’s affective behaviour or learning is influenced by both emotional intelligence and cognitive learning. Therefore, the implication for the educational process is that cognitive learning and affective learning should be planned to go hand in hand.

Check Your Progress 2

Note: Write your answers in the space given below.

1) How does affective learning facilitate social adjustment?

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2) What is the place of affective education in the present school curricula?

3) What are the basic issues that affect affective education?

4) What is emotional intelligence and how is it related to affective development?

13.4 SCOPE OF AFFECTIVE DEVELOPMENT

In view of the above discussions, the need and importance of affective education in life cannot be underestimated. Its importance has to be recognised in the educational process. As observed earlier, the present educational system neglects the education of affect. Neither it finds a structured placement in the curricula at different levels of education, nor is this area recognised in the curriculum transaction and learner evaluation programmes. In case of the evaluation, it is very much neglected. Proper planning to redesign and restructure the curricular programmes is needed in our school education system to this end.

Restructuring of the curricula for including affective education is not an easy task as it may appear at the outset. This requires consideration of different facets of the affect in human personality. A brief mention of these facets of affective learning has been made earlier. We may further consider the facets of affective education by using the criteria of levels and dimensions.

13.4.1 Levels of Affective Development

A change in the learner’s affect, since it is concerned with his/her feeling and emotional aspects, cannot be expected to occur in one shot. It may take place gradually in a phased manner. Krathwohl, Bloom and Masia (1964) had developed a taxonomy in affective domain, which indicate that affective learning results in changes in the learner’s affective behaviour gradually from initial phase of receiving the formation of value complex through responding, valuing and organization.

The materialisation of affective development through the above levels in a hierarchical order is based upon the principle of internalisation (Martin and Reigeluth 1992), the process by which interests, attitudes and values etc. become parts of the individual behaviour. In other words, the more the affect is internalized, the more is the change in the individual’s affective behaviour. The hierarchical order in affective development is receiving, responding, valuing, organization and characterization of a value or a value complex. Such a taxonomy of affective behaviour helps the teachers to formulate the objectives in these categories and also to help them in designing strategies for curriculum transaction.
The category of receiving relates to the learner’s willingness to attend to the stimuli of affect. The stimuli may be in terms of some object, institution, activity, issue etc. In the teaching-learning situation this refers to a situation through which the learner’s attention is drawn to the stimuli. The expected learning outcome may be in terms of generating awareness of the learner towards the stimuli. However, it is the lowest level of affective learning.

Responding relates to the learner’s active participation in matters concerning the stimuli of affective learning. At this level, the learner, because of his/her awareness of the learning theme, tends to react to it in some form or other. The learner shows willingness to respond and react to the learning stimuli. The learner voluntarily participates, and engages in completing the given assignment. At this level of learning, the learners’ response may be exhibited in the form of his/her interest in matters relating to the learning stimuli.

The category of valuing refers to the worth or value the learner attaches to the stimulus of learning. The behavioural changes may be in terms of the learner’s belief, faith, appreciation, and commitment in matters related to learning stimulus. The instructional objectives related to attitudes and appreciation also come under this category of affective domain. The behavioural demonstration of affective development here may be in terms of appreciating some literary contribution, demonstrating commitment to some social reform measures, and belief in some political ideology etc.

The highest level of development in the affective domain relates to the formation of a value system or a value complex, which helps the person to take an appropriate decision regarding life style. As a result of such stabilization of values and development of a value system the person’s behavioural patterns are influenced in situations of dilemma. It helps the person to be more self-reliant, and objective in solving problems as well as in adopting suitable measures in dilemma situations.

The taxonomy of affective learning helps the classroom teachers in adopting suitable method(s) for developing the learner’s affect using a spiral approach as each level has a base of its development in the previous level.

**Check Your Progress 3**

**Note:** Write your answers in the space given below.

1) What is the need for restructuring the school curricula for affective education?

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**13.4.2 Dimensions of Affective Development**

The affective taxonomy is criticized because of its general nature, abstractness and limited scope. Moreover, the nature of taxonomy shows that affective learning is more close to cognition. It needs to be pointed out that the rating of taxonomy of affective development suggested by Krathwohl et al. (1964) is in a spiral and hierarchical order. This levelwise taxonomical order is similar to the taxonomy of cognitive learning. The taxonomical order in cognitive development is related to various subjects and themes of learning. Likewise, the taxonomical order in the affective development may be related to its different aspects as suggested by a number of authors like Hoepfner (1972), Gephart and Ingle (1976), Brandhorst (1978), Foshey (1978) and Nunnally (1978). By way of reviewing all such taxonomies Martin and Briggs (1986) reported...
that such taxonomies are of varied nature. Some of them cover certain physiological aspects, whereas some others are concerned with certain psycho-social aspects like self-concept, motivation, attitude, interest and the like. Foshey (1978) had suggested a taxonomy of learning having six objectives intellectual, emotional, social, physical, aesthetic and spiritual. The newness in the taxonomy was the inclusion of the last two aspects, that is, aesthetic and spiritual which were not part of the other taxonomies suggested earlier.

Briggs and Martin (1986) included social competence, values, morals and ethics, motivation, attitudes, interest, emotions and feelings as subcomponents of one affective construct of self-development.

An alternative way of considering the categorization of affective dimension may be in terms of goals or the outcomes cutting across different constructs. The affective goals in the educational process need be translated as positive attitudes, interest and motivation, related to various themes under different subject areas in the form of knowledge, understanding, skills which would help the learner in his/her life situation. The goals of affective education may be related to the development of a rational basis for attitudes and values. This means that the person is required to examine the qualifications for developing positive attitude towards certain issues or objects, and also to take the right decision in adapting to certain values, morals or such other ethical practice. Affective goals may be related to affective process indicating proper directional movement as perceived by the person. This may be in terms of the levels of affective development. The goals of affective education may also be defined in terms of developing the levels of interest and motivation in educational, vocational as well as personal pursuits.

Martin and Reigeluth (1992) through a cross cultural project on “Education for Affective Development” identified five aspects of it such as, intellectual, aesthetic, physical, spiritual and social. The social aspect was further subdivided into two categories: (a) emphasis: the moral, legal, political and conventional (for example; manners, etiquette, social protocol), and (b) perspective: the individual, family, school, community, society, nation and the world.

The above categorization of affective development indicates the difficulties inherent in the taxonomy of affective domain. The difficulties are not only due to the inter-relatedness of the major personality domains but also due to the overlapping nature of different aspects. Martin and Reigeluth (1992) presented another model for taxonomy of affective development. They suggested in this model six major dimensions of affective development. They are emotional, moral, social, spiritual, aesthetic and motivational. In respect of such dimensions the authors suggest three components having instructional significance. These components are knowledge, skill, and attitude. There may be other components also. But they like to restrict to three to avoid confusion.

Check Your Progress 4

Note: Write your answers in the space given below.

1) What are the dimensions of affective development as per the taxonomy suggested by Foshey?
13.5 ORGANISATION OF CURRICULA FOR AFFECTIVE EDUCATION

In view of the importance of the development of affects in individual's life, there is need for giving due weight to various components of affective education in a structured manner in our educational process. Such education should start from the early years of child's life through various curricular and co-curricular programmes.

13.5.1 Approaches for Development of Affective Education

Curriculum

As we have discussed earlier, the nature of affective development is such that it would be difficult to isolate affective education from learner's cognitive development. This is because of the fact that education of the affect, in many instances, largely depends upon cognitive education. For example, in education in different curricular areas like language, sciences and social sciences there is much scope for training the learners in development of their affects. Through different themes or contents of subjects the learners can be trained to acquire different components of affective development as required in their life situations, may be in the present or future context. The teachers need to be quite conscious of the instructional objectives in respect of such development. The most unfortunate thing in the current instructional system is that the majority of teachers emphasize such instructional objectives the least. While teaching, the teacher's foremost consideration is to impart instruction in the respective subjects and themes with emphasis on the instructional objectives related to the cognitive and psychomotor domains.

Organisation of curriculum is of vital consideration in the context of affective education. The infusion of the education of affect in the totality of school education programme should be carefully attempted. The nature of development of the affect is such that infusion of the affective education component can be placed in the curriculum primarily in two ways; such as, integrated approach and affect approach. In the integrated approach of curriculum development, curriculum relating to one aspect is integrated with the curricula aspect(s) or subject(s) of the school programme. The integrated approach of affective education curriculum entails its treatment in the planning, structuring and transaction of curriculum relating to various subjects as well as different co-curricular programmes and activities of the school. For example, in the structuring of language curriculum for a class, grade or level, the curriculum framers may consider the scope of integrating suitable components of affective education into the themes to be included in the language text. In such curricular planning to give scope for education of the affects, the most important consideration would be to identify the components.
Organising Learning

of affective development, which can be accommodated in a natural and normal way in the themes of proposed language text. The infusion of the affective components with the objective of inculcation and development of attitudes, interests, motivation and values, relating to the content specifications of the text should not be seen as imposed. It should be logical and natural. As discussed earlier, it is important to see that the organization and arrangement of the content should be treated by giving sufficient scope for affective aspect. For example, in the treatment of a topic on effects of environmental degradation in language, the contents are to be organized in a way so that there should be scope for learning activities in the related areas to bring in changes in learners’ attitude.

A similar treatment is required for the infusion of affective components in other curricular subjects like science, social studies, mathematics etc. While integrating the affective components, the curriculum designers and the classroom teachers should keep in mind that too many affective ideas should not be clubbed in one content unit. Integration of affective aspects with the objective of content arrangement is not enough. Emphasis is to be given to the effective transaction of the affective component along with the cognitive aspects. In this context Martin and Reigeluth (1992) said, “The affective domain may be equally, if not more, important than the cognitive domain in promoting student learning, and the domain has overlapping dimensions of development that promote growth. These include emotional, moral, aesthetic, social, spiritual and motivational development”.

Martin and Reigeluth (1992) suggested an application model for affective education curricula, which is theme specific. In their application model, the authors pointed out seven primary design issues for the curriculum designing in affective education. These are topics, orientation, breadth, integration, duration, personal focus and instructional methods for the curriculum. With regard to the topics for affective education the authors are of the opinion that the topics are primarily affective or cognitive. As both the domains are highly interrelated, almost any topic can be taken up from either of the domains, through this approach the authors show a supportive view for the integrated approach for curriculum planning. But according to them, there are certain affective aspects which can be directly taken as themes of affective learning. For example, love for democracy, human rights, social justice etc. are some of the specific themes through which learning and development of the affect(s) can be planned. In the affect specific approach, the curriculum designers and the classroom teachers may be first required to identify and select suitable affects for training the learners. Such selection of affects must be appropriate to the learners’ level of education. Along with the selection of affects there is need for designing suitable learning activities, which may be mostly of extra-curricular nature for imparting training to the learners.

The curriculum for affective education should be planned for rightly infusing appropriate educational programmes into the schooling system. Such infusion may require the placement of such programmes in the school time table, organizing the learning activities, teachers’ role in facilitating the students’ participation in the training activities, and the process of development of the affect, and finally providing scope for learner evaluation. It may be marked here that the proposed scheme of action mainly concentrates on development of selected affects. Cognitive or any other learning becomes subsidiary in this context. Furthermore, in such affect specific educational programme, the themes or the affects identified can either be addressed separately or in combination of different aspects like moral and social, social and emotional, or emotional and moral etc., as discussed above.

Both the approaches of organization of affective curriculum have advantages and limitations. The integrated approach, facilitates transaction of the affective component of the curriculum with the same theme or content identified for cognitive development. Therefore, this approach has the advantage over the other strategy in terms of a reduced curriculum load for the learners. The teachers in this case have to relook at
the transactional mode of the affect laden content of the curriculum. They have to give due weight to realizing the affective part of the instructional objectives. They have to design appropriate learning activities for this purpose. However, integration of affective component in all the content units of all the curricular subjects with equal weight cannot be possible. The integrated approach of affective education does not need any new curricular subject to be added. It only needs to have more emphasis in the transaction of affective component for which the existing curriculum may be redesigned.

The affect specific approach of curriculum organization has the advantage of giving importance to development of specific affective aspects among the learners. In such a case affective education is likely to be taken up as a separate curricular subject. This would involve designing of separate curriculum and development of instructional materials and other things.

Check Your Progress 5

Note: Write your answers in the space given below.

1) Write briefly (in about 150 words) the basic approaches for infusion of affective components in school curricula.

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2) Write (in about 100 words) the feasibility of affective development of learners through the specific educational programmes.

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3) What are the advantages and limitations of affect specific approach in organising school curriculum? Answer in about 100 words.

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13.5.2 Selection and Arrangement of Content

All the teaching-learning programmes addressed for affective development have their focus on two aspects. These two aspects are development of the affects concerning the individual’s own self (intrapersonal), and related to the other categorized as interpersonal or social programmes. The intrapersonal type of affective learning programmes are addressed to the development of the learner’s self-concepts, attitudes, motivation, interest and the like. The reference to the learner’s own self development contributes to shaping his/her personality. On the other hand, the interpersonal or social type of affective programmes are directed to enabling the learners to acquire and develop the affective characteristics, which would assist in establishing and strengthening healthy and desirable interpersonal or social relations. Such affective development is found to help the individual grow as a better social being. In a broader perspective, these also assist in achieving the values like national integration and universal brotherhood.
Keeping in view the above two broad areas of affective development, the curriculum designers should select appropriate contents for different curricular subjects, and also for various co-curricular programmes undertaken by the schools or the educational institutions concerned.

The term ‘appropriate contents’ refers to the affect(s) intended to be developed. It may be of interpersonal or intrapersonal nature. For example, we may consider the development of affects of self-esteem or the love for unity, assuming responsibility, self-confidence among the learners. These are the examples of affects of intrapersonal type. The primary concern of development of such affects as already mentioned, is to shape the individual’s personality to be able to function effectively in situations where such affective behaviour is desirable to meet the individual’s personal needs. The affects like team spirit, teamwork, sense of social responsibility, social service, national integration, fellow-feeling, democratic behaviour, co-operation etc. come under the category of interpersonal type of affective development. The development of such affects enables the individual to behave effectively as a member of a social group and also as good responsible citizen of the nation.

As a first step in an affective education programme such affects should be identified according to the grades of the learners. There are several affects such as assuming responsibility, love for healthy and hygienic habits, personal and environmental cleanliness, honesty, truthfulness etc. the development of which need to be initiated at the lower grades and continued through subsequent stages. The teachers have the responsibility of infusing, arranging and organizing such affective education programmes in the structure of the curriculum prescribed for the learners. Such exercises can be taken up both through integrated approach as well as through affect specific approach.

The National Council of Educational Research and Training (NCERT) has made some attempt to impart value education at the school stage. These values form the major components of affective educational programme. They have identified as many as 83 values to be inculcated and strengthened among the children by the end of their schooling. It may be pointed out that all these values need not be attempted to be inculcated in children simultaneously. The easier ones and those having importance in the learner’s current life situation should be attempted first, while the complex ones having significance in the context of learner’s future adult life can be taken up gradually in the higher grades.

Check Your Progress 6

Note: Write your answers in the space given below.

1) Differentiate between intrapersonal and interpersonal affective developments.

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2) How can the values to be reflected in the instructional materials be identified?

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13.5.3 Transaction of Curriculum

The importance and difficulty in transaction of affective curricula can be realized by the purpose and nature of the education of the affects themselves. These have also been discussed earlier. A major consideration in affective education is the question of the internalization of the affects concerned (Hopkins and Stanley, 1981). This needs a complete transformation in the individual’s feeling tone towards the theme or object concerning the affect(s) in question. The nature of learning outcomes in affective education is not the same as that of cognitive or psychomotor education. The affective learning outcomes are mostly value laden and relate to the modification of the emotional behaviour of learners. The teacher has a very crucial but delicate role in transacting the curriculum in affective education. Essentially the teacher has to have deep faith and belief in the affect(s) to be inculcated and strengthened among the learners. Such affective behaviour must have been internalized by the teacher. It has to be reflected in one’s behaviour inside and outside the school and in the classroom or any other situation. Overall, teacher’s behaviour with regard to affective education should be exemplary before the learners. It has often been argued that the values, which form a major component of affective education, are not to be taught but to be caught. Therefore, the teachers’ behaviour should be of demonstrative nature in the most exemplary way so as to make it possible for the learners to learn and imbibe such behaviour by imitating the ways and dealings of the teacher. It is because of this requirement from teachers that most of them fail to inculcate the desired affects among the learners.

It follows from the discussion that the methods of transacting the curricula in affective education cannot be prescriptive. They should be mainly activity-based and demonstrative in nature. Emphasis is to be placed on project approach. Such projects cannot be suggestive, rather these should be in the form of co-curricular and extra-curricular activities/programmes to be innovatively designed by the teachers concerned.

It may be kept in mind that affective education, in most of our teaching-learning situations, is imparted through integrated approach. The education of affects is taken up along with the cognitive education programmes. In the treatment of cognitive content or themes, the affective learning objectives are integrated. The teacher has to identify such integrated situations while dealing with the content related to cognitive learning objectives and devise suitable learning situations for realizing the affective objectives.

Teachers’ own exemplar behaviour as well as those of the parents are important for affective education. These are essential for training the child in desired affects during the early phase of his/her education. The teachers can narrate appropriate learning episodes for training their learners in desired affective behaviour through role play and dramatization methods in simulated learning situations. Such exercises should however, not be in isolation of the general curricular programmes of the school.

One of the characteristic features of affective learning is that the development of any affect is a time consuming process. It cannot be easily acquired by most of the learners as one or a few slots learning like cognitive learning in majority of cases. Because it deals with the learner’s behavioural change (feelings and emotions) the teachers need to be careful and closely vigilant for the gradual change taking place in the concerned affective behaviour of the learners for necessary follow up action and for providing them feedback. There may even be need for regular recording of such behavioural changes, which would necessitate regular observation of the learner’s affective behaviour to be incorporated as an essential component of instructional strategies.

Martin and Reigeluth (1992) have cited some models of affective education programme such as, ‘celebration of learning’ (Lambert and Hinsl 1993), ‘Mentorship Model For students at Risk’ (Sapone 1989), ‘Paths Project’ (Greenberg and Kusche 1993). Out of these the programmes which suit the parameters of affective education may be considered and tried out in the designing and transaction of affective education at elementary and secondary school stages in the Indian context.
Check Your Progress 7

Note: Write your answers in the space given below.

1) Expand the idea ‘values are to be caught, not taught’.
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2) What is the integrated approach in affective education? Give an example to illustrate.
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3) Why does affective education need longer intervention?
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4) What is meant by affect specific approach?
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5) Why do most of the teachers fail to inculcate the desired affects among the students?
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6) Briefly indicate the needs of exemplary behaviour of teachers and parents in affective education.
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13.6 THE CONCEPT OF PSYCHOMOTOR LEARNING

The third type of learning described by Bloom is the psychomotor learning. This kind of learning involves motor, muscular activities. Just as in cognitive and affective learning, psychomotor learning also occurs in combination with the other two types of learning. It is demonstrated by physical skills which are acquired through practice in response to cues and stimuli from the surroundings. Riding a bicycle, driving a car, playing tabla,
kicking a ball, hitting a ball with a bat, typing, and drawing the sketch of a building are
some of the examples of psychomotor learning.

Harrow (1972) has developed a taxonomy for psychomotor domain with six levels. It
is arranged in order of simple observable movements to the most complex.

**Reflex Movements**

These actions occur in response to stimulus without conscious awareness (e.g., blinking).

**Basic Fundamental Movements**

Movements that are due to a combination of reflex movements (e.g., walking, climbing).

**Perceptual Abilities**

Following stimuli into appropriate action (e.g., following verbal instruction, dodging a
ball).

**Physical Abilities**

Movements and abilities required for highly skilled movements. These movements
have characteristics like endurance, strength, flexibility, and agility (weight lifting,
distance running, yoga, typing).

**Skilled Movements**

Complex body movements with a degree of proficiency (e.g., performing a classical
dance, playing tennis, aerial swing stunts performed in circus).

**Nondiscursive Communication**

This level of movements involve communication through teachings, needs, or interests
to another individual (facial expressions and dance movements).

Another version of psychomotor domain is proposed by R.H. Dave (1968).

**Imitation**

This is the lowest level of the objectives in the psychomotor domain. When children
are exposed to observable situations, they attempt to imitate the action.

**Manipulation**

This is the ability to perform certain actions by following instructions and practising.
At this level children are able to differentiate between different sets of act and are
able to select the required act.

**Precision**

At this level the proficiency of performance reaches a higher level of refinement in
producing a given act. The act becomes refined and more exact. At this level children
reproduce an act without instruction or a model. They are able to introduce variations
according to the requirements of situations.

**Articulation**

This is about coordinating a series of actions, accomplishing harmony and internal
consistency among different acts.

**Naturalization**

Complex performance becomes natural at this level without using much psychic energy.
The act is done without much conscious thinking. The act gets automatised and is
carried out unconsciously.
Gagne proposed motor skills parallel to Bloom's psychomotor domain. Motor skills are physical capabilities to do such things as riding a bicycle, typing or using a music organ keyboard. However, motor capabilities do not develop in isolation of other areas of learning.

13.7 ORGANISATION OF PSYCHOMOTOR LEARNING

One tends to associate psychomotor learning with physical activities. Such an idea is valid too. The problem with such a perception is that psychomotor learning seems to take place in isolation of cognitive or and affective learning. In fact, the cognitive/ affective processes of learning are always present in any kind of psychomotor learning. Owing to the common perception about psychomotor learning, physical education is instantly recognized as psychomotor learning by anyone concerned with children's education. But there are various other activities that take place in school which come under the purview of psychomotor learning. In this section, let us discuss the organization of different psychomotor learning experiences provided in school.

Physical Education Activities

Physical development of children is a crucial aspect of their overall development. The physical well being of the child is important for the cognitive development too, as the saying goes, a sound mind in a sound body. Sports, games, and athletics are some of the common physical activities taken up in school. Why should we organize physical activities for children? Is it because, children enjoy playing, therefore, we should create opportunities for them? That could be one reason. However, there are other reasons for organizing physical activities for children. Some of the objectives for conducting physical activities are:

- for physical fitness;
- for developing mind, body coordination;
- for developing discipline;
- for developing values of cooperation, fairness, healthy competition, respect for rules etc.;
- for developing appropriate attitude for working in team; and
- for developing leadership qualities.

While organizing physical activities teachers have to keep in mind some important considerations. Physical activity has to be selected according to the age group and physical development of the children. It is important to ensure that before taking up certain physical activities children have attained certain level of physical development. Otherwise such activities can be detrimental to the child's harmonious future development. For example, whether very small children should be allowed to run long distance that will tire and harm their muscles. Another point for consideration in selecting physical activities is that it should match with the cognitive development of the child. For example, to play football, throw ball, basket ball or cricket, children should have developed a sense of speed, time, direction and space. In unit 2, you have learnt that cognitive development is a process, and age maturation is a crucial factor. Therefore, if children who are not cognitively developed to handle the concepts of speed, time, direction and space are mixed with an older group of children who have attained those cognitive development, the younger children would not only find the game frustrating as they are unable to cope with but also may physically harm themselves as they would be unable to judge the nature of the ball and act accordingly (dodge the ball in order not to get hurt or hit or kick the ball with appropriate estimation). Another key
factor that teachers should keep in mind while organizing physical activities is the interest of the children. For various affect reasons, the child may prefer a particular sport/game to the other. Therefore, it is important to know the interest of the children and include different activities to involve all children. In brief, we can say that it is imperative to organize physical activities that are physically, cognitively and affectively appropriate. So, let us say, the following points should be kept in mind while organizing the physical activities:

- age appropriateness
- physical development
- cognitive development
- interest

Co-curricular Activities

Earlier, any activity other than the textbook related activities was known as extra-curricular activity. Such activities included physical education as well as literary and cultural activities. Now, sports, games and athletics are described under physical education. And literary and cultural activities are by and large referred to as co-curricular activities. Many of the literary and cultural activities can be categorized under the domain of psychomotor learning. Here, too, often the three domains of learning are interwoven.

Literary activities are those activities that are related to literature. For example, debate, elocution, recitation, writing poetry/essay/plays/stories, study circle, film club and many such other activities come in the category of literary activities. Cultural activities include, music, drama, dance, folk songs, painting, religious, social and national festivals and many such activities. Cultural activities are based on our social and cultural traditions.

Before discussing the issue of organizing these activities in school, let us examine some of the objectives for conducting these activities in school.

- To develop interest in the past and contemporary world of literature.
- To understand and empathize with others feelings and emotions.
- To develop critical thinking.
- To develop the skill of collecting data or gathering information.
- To express one’s feeling and emotions through different literary and art forms.
- To develop the skill of communication.
- To develop the skill of working in team.
- To develop the skill of planning and organizing.
- To develop values of empathy, cooperation, and appreciation for art, literature, tradition and culture.

The objectives stated here are not conclusive in nature. Knowledge of the objectives of conducting literary and cultural activities would help the teachers in organizing them. The following points may be considered for better planning and organization of these activities.

- Activities should be age appropriate.
- Activities should be planned taking into account the cognitive and affective development of the child. For example, to write a critical appreciation essay on a literary work, the child should have attained the cognitive development of critical thinking.
Activities should be selected keeping in mind the varied interests of children.

Some of the activities can be organized to enhance the curricular learning. For example, if a particular play is a curricular topic, activities along the line of staging the play can be organized. This will help in achieving objectives that are not directly addressed in the curriculum.

Group as well as individual orientated activities should be organized.

Activities should not only be organized inside school but also outside school to provide field experiences to students. Such field trips can be related to curricular subjects. For example, field trip/excursion may be organized to gain first hand experience of classroom learning, like collecting or observing artifacts presented in science or social science curriculum.

Activities should be planned and organized in such a way that children are given responsibility and they participate in decision making activities.

In most schools, cognitive learning is the major focus of the school activities. However, you might have noticed during the discussion in this section that a lot of psychomotor learning occurs during the regular school activities and some planned activities. Teachers only need to revisit and reorganize the various activities in the school to interweave the three domains of learning in day to day school activities.

13.8 LET US SUM UP

The change in learner’s behaviour related to the feelings like, love, sympathy, tolerance, co-operation, fellow feeling etc. refer to the affective development. Development in the affective domain of the individual accelerates his/her personal-social development. Change in the learner’s affective behaviour is a very slow process. It needs prolonged well planned educational activities. In this context, the processes of both classical and operant conditioning and the approach using persuasive communication prove to be powerful methods. The change takes place gradually, proceeds from the initial phase of receiving to the formation of value complex through responding, valuing and organization. Various components of affective education can be included in the curriculum through integrated and affect specific approaches. Martin and Reigeluth considered seven primary issues like topics, orientation, breadth, integration, duration, personal focus, and instructional methods for affective curriculum. The teaching-learning programmes for affective education focuses on intrapersonal and interpersonal development. The teacher is supposed to help the students in the internalization of affects, the appropriate strategy for which needs long term intervention. Psychomotor learning is demonstrated by physical skills. It ranges from simple observable movements to the most complex. The cognitive/affective processes of learning are always present in any kind of psychomotor learning.

13.9 UNIT END EXERCISES

1) Suggest from your experience a graphical presentation to illustrate the hierarchical order in the development of affects.

2) Make a critical analysis of a curricular subject of your choice from any level of school education regarding the scope of affective and psychomotor education through the subject.

3) Plan out a scheme for affective education for the elementary level education in your state.

4) Make an analysis of the course content with regard to provision of affective education as prescribed in the subjects of language and social sciences for the secondary level education in your state, and make necessary suggestions for improvement.
5) Examine the issues concerning teacher education programme for preparing effective teachers for efficient transaction of affective education.

6) Prepare twenty items for an attitude scale to measure attitude of students in secondary grades towards transaction of affective curriculum.

7) Identify the cognitive and affective processes of learning involved in any kind of psychomotor learning you have organised for your students.

### 13.10 REFERENCES AND SUGGESTED READINGS


