The concept of development of human resources is taking a lead over earlier thrust for development of science and technology. Human resource development falls within the purview of behavioural science for better civilization. It makes convenient placement of human resources. Vocational guidance can play a very significant role. The problems of occupation and unemployment (vocational phenomena) have existed since the dawn of civilization. Vocational Psychology is one of the branches of modern psychology which endeavours to study these problems logically and without bias. Vocational maturity and vocational adjustment are assumed to be the behavioural units of analysis of greatest importance and interest in vocational psychology. Various categories of research pertaining to different vocational criteria in the context of vocational development and maturation have existed in the history of vocational psychology. It had been concluded that mature vocational choices, preferences, interests and aspirations are important components for developing vocationally mature behaviour of an individual. Vocational choice is an unfolding process though researched indirectly, needs further depth analysis.

**Vocational Choice — A Developmental Process**

The concept of vocational choice as a developmental process has its origin in the early work of Carter (1940).
He concluded that the formation of interest patterns in adolescence progresses in the late childhood which ensures more mature realistic solutions to problems of youth and adulthood.

Ginzberg et al. (1951) introduced the idea that vocational choice, in fact, is a continuous process which remains in existence for a prolonged period. Further, several researchers confirmed the same view in their researches over the years (Super, 1942, 1953, 1954, 1955, 1956; Super et al., 1957; Super et al., 1963; Super, 1968, 1969a, 1969b; Nelson, 1962; Crites, 1969; Super and Overstreet, 1960; Tiedeman and O'Hara, 1963; Gribbons and Lohnes, 1968; Crites, 1971 and Sherill, 1973).

Vocational Psychologists have specified some terms which are equally important for discussing the vocational development and maturation. "Vocational Behaviour" refers to the responses that an individual makes in selecting an occupation and adjusting himself in it. Vocational behaviour is considered as a continuous fluid process of growth and learning including self-concepts, developmental experiences, personal history and psycho-social environment as major determinors of vocational-choice-process. "Occupational" means stimulus variables, whereas "Vocational" is used to designate response or behavioural variables (Crites, 1969).
According to Cites (1968) "Vocationalization" or vocational development can be considered analogous to a more familiar term "Socialization". The process of vocationalization denoting psychological, sociological, cultural and economic ingredients, across times results in outcomes which are effective in vocational behaviour, decision-making ability and vocational maturity. Term "Vocational Development" is usually used interchangeably with "Career Development". But "Career Development" does not encircle the behavioural development that parallels socialization whereas the term "Vocational Development" as given by Super summarizes it. Borow (1961) has signified the vocational development theory and research as a search for the psychological meaning of vocationally relevant acts including the exploratory behaviour of youth and work in human experience. Super (1957) has viewed that vocational development is one aspect of individual progress which is essential as social, emotional and intellectual development. Career development is self-development viewed in relation to choice, entry and progress in educational and vocational pursuits (Tiedeman and O'Hara, 1963). "Career Development" can be described in terms of learning tasks that are important at each stage of development. This conclusion was reached at by The Committee on Elementary, Secondary and Vocational Education - United States House of Representative - 1975.
The development of a person through stages of maturity parallels educational and vocational-choice-process. These two processes interact on each other. In the continuity of vocational development, educational and vocational choices are seen as a series of acts forming a crucial factor for personal development. The personality of an individual has an essential influence on decisions for picking up a particular occupation. Therefore, choice behaviour involves a series of inter-dependent decisions which are, to some extent, irreversible and are intimately tied to an individual. These decisions occur or are taken with determination at various stages. Super (1957) concluded "an individual is, more or less, conscious of his vocational decision-making, depending upon the stage of his development".

In the foregoing paragraphs, some terms coined by vocational psychologists were briefed. The paragraphs that follow are related to vocational maturity.

**Concept of Vocational Maturity**

Since the thrust of the present study is in vocational maturity, we will study it in some detail. Vocational maturity has emerged as a significant concept in the recent history of vocational psychology under the broader field of guidance and counselling. It has, so far, been the subject of only a few attempts in India. The concept of vocational maturity is a process arising out of Super's (1950 - 1973) and Ginzberg's (1951) works which have generated much
research interest. Vocational maturity is the degree to which one has reached a point in the development in cognitive, emotional and other psychological factors whereby one acquires the capacity of making realistic mature vocational choices. Further elaborating that vocational maturity in an individual is a specific aspect of general development and is a complex process of reflecting multitude influences on individual behaviour. A mature person must find his place within his/her vocation and after doing so, he/she must elaborate on it and consolidate his/her position therein. Vocational maturity is a goal in the direction of development which ensures attainment of satisfaction and success in an occupation.

The major point of concern in vocational maturation is the age or level of maturity which are imperative to make mature vocational choices. Certain maturing processes must be undergone before youth (ages 14 to 18). Duner (1978) has asserted that an individual's interests around the age of 15 (the budding youth) start to be organised into stable configuration and may be regarded as having settled down between 18 and 20. In India, inadequate attention has been paid in most of the cases of vocational maturity. Therefore, sufficient attention is warranted to be given for assessing the rate as well as level of an individual's vocational maturation or maturity with regard to career matters.


Definitions of Vocational Maturity

Ginzberg et al. (1951) pointed "to some degree the way in which a young person deals with his occupational choice is indicative of his general maturity and conversely in assessing the later, consideration must be given to the way in which he is handling his occupational choice problems". Extending this definition (Super, 1957) indicated that in a gross sense vocational maturity can be described as the place reached on the continuum of vocational development from exploration to decline. Crites (1961) described it "as the maturity of an individual's vocational behaviour as indicated by the similarity between his behaviour and that of the oldest individual's on his vocational life stage".

A clarification of these two definitions of vocational maturity is provided by Super et al. (1957), who differentiated vocational maturity I (VM₁) from vocational maturity II (VM₂). They define vocational maturity I (VM₁) "as the life-stage in which an individual actually is, as evidenced by the developmental tasks with which he is dealing, in relation to be in terms of his age" (Super et al., 1957). They define vocational maturity II (VM₂) "as maturity of behaviour in the actual life-stage regardless of whether it is the expected life-stage as evidenced by the behaviour shown in dealing with developmental tasks of the actual life-stage compared with the behaviour of other individuals who are dealing with same developmental tasks" (Super et al. 1957). "To establish standards for evaluating
VM I, the vocational developmental tasks characterized to each life-stage must be identified and for that of VM II, variations in behaviours in dealing with the developmental task of each stage must be identified, and the frequency of the behaviour manifested must be noted (Super and Overstreet, 1960).

Vocational maturity while beneficial for an ultimate goal, is considered to be useful for intermediate purposes universally, unless it can be fragmented into its elements. Thus, it is essential to convert the elements of ultimate vocational maturity into assimilated themes and place these along developmental line leading to vocational maturity at some point in life, e.g., high schooling.

Summing up conclusion is that the choice process of vocational behaviour, development and adjustment is not a single act rather it is continuous process. Vocational maturity may be described in terms of types of behaviour, much smaller as well as more refined units of behaviour. Human development as also maturity wherein decision-making ability is an important component, mature in the context of vocational behaviour in an individual as he/she progresses through series of developmental vocational life-stages. These stages of maturity have been classified in the Theories. In these theories, we have elaborated our earlier discussion on vocational choice and development as a choice-maturing-process in terms of vocational maturity. A deep insight into it would enable to achieve thorough under-
standing of various theoretical conceptions of vocational development. Term "Vocational choice and Development" is used here in preference to "Vocational Maturity", thereby, the developmental theories of vocational choice and development in terms of vocational maturity have been elucidated in the Theories. Only those points of these theories have been summed up which are related to vocational maturity process.

Theories of Vocational Maturity

Theories describing vocational development and maturation are complex. Thus, it is useful to separate these into five major approaches viz. (i) Trait-and-Factor theories; (ii) Need-drive theories; (iii) Decision theories; (iv) Sociological theories; and (v) Developmental theories. For the purpose of convenience first four approaches are discussed briefly whereas the fifth developmental theories are discussed in detail as under :-

a) Trait-and-Factor Theories

This approach is influenced by Parson (1909) and Kitson (1925). It describes the factors by which people differ and the degree to which these factors are important in learning or in job performance. Human personality is a constellation of traits e.g. aptitudes, interests, values, psychomotor abilities, energy levels, temperament, which can be observed or measured. Different occupations or learning situations can be described in terms of their unique require-
ments for different combinations or "quantities" of these individual characteristics. In short, different occupational or educational options can be profiled in terms of those levels of individual behaviours or potential behaviours which are essential to performing whatever is required in such situations. Occupational choice (vocational development) is primarily a function of matching the person's profile characteristics with that set of occupational or educational requirements most closely related to it. The closer the congruency between an individual's characteristics and the requirements of occupational or educational options available, the more likely it is that adjustment and success will result.

b) Decision Theories

Decision theories (Bross, 1953; Katz, 1963; Hills, 1964 and Clarke, Gelatt and Levine, 1965) postulate that an individual chooses an educational or occupational goal that will maximize his/her chance of loss. Obviously what each person values or considers gain or loss is likely to be different in degree and kind. The gain or loss is not confined to money but can be anything of value to a particular person. A given occupation or an educational opportunity might be considered as a means of achieving many different possibilities — among them greater prestige, security, social mobility, leisure time — when compared to another course of action.
c) Sociological Theories

Sociological theories (Lipsett, 1962; Borow, 1966 and Locasio, 1967) suggest that narrowness or wideness of an individual's culture or social class boundaries have much to do with the choices a person is likely to consider, make or implement (vocational development). Encouragement and information poor receive in relation to educational opportunity or occupational alternatives are different from those met by the middle or upper socio-economic classes. Vocational and life preferences of people across social and economic class lines may be similar, but their expectations of being able to achieve such preferences are likely to differ. Sociological view is concerned with the nature of transactions a person (chooser) has with his/her personal environment e.g. family, community, social class and belief systems or values they present.

d) Need-Drive Theories

The major assumption of need-drive theories (Maslow, 1954; Roe, 1956; Holland, 1966 and Zaccarcia, 1970) is that because of differences in personality structure, persons develop specific needs and seek satisfaction of these needs through occupational choices (or vocational development). It is further assumed that different occupational or, indeed, curricular areas are populated by people of different need and personality type.
None of these four types of theories has focused very directly on the characteristics of vocational development over the times. Apart from these theories, there have been other formulations and speculations as to how vocational maturity is attained over periods of time. In comparison to these four types of theories, the developmental theories are more comprehensive and cater for the longitudinal character of vocational development. These have made some distinctive contributions to an understanding of choice as a maturational process and consequently the same are illustrated below:

e) Developmental Theories

There are different opinions as to the detailed interpretations and durations of developmental stages and their exact names. According to Dunner (1978) "The progression of different stages is universally accepted: the fantasy period lasting from 6 to 10 years of age; the tentative period begins at the age of 17 or 18 and ends, for most of the youth at 21 or 22 with a choice of specific occupation which they can enter".

i) Ginzberg, Ginzburg, Axelrad and Hermann's Theory (1951)

Ginzberg et al. (1951) founded the base for current conceptions of vocational or career development which construe the vocational choice process as a specific behaviour based on the adolescent maturational development pattern. They have identified the "maturational stages"
phenomena in which certain systematic and predictable series of tasks relating to choice-maturing-processes are ultimately faced as a function of the changes in maturity that occur during adolescence by individuals. These stages were called fantasy, tentative and realistic. Each of these was split into sub-stages e.g., the tentative period is divided into interest, capacity, value and transition sub-stages which emerge sequentially. These are followed by the realistic stage which is bifurcated into exploration and crystallization sub-stages. The predominant point is that as an individual matures, he copes with the tasks, self-insights and information about alternatives available to him in different life periods. There is a persistent compromise between wishes and possibilities. This synthesizing and compromising process defines and narrows down the range of choices of a particular individual likely to be considered. In addition to the phenomena of stages of vocational maturity, Ginzberg et al. (1951) also identified four sets of factors which interplay to influence vocational-choice-maturing process. These factors are individual values, emotional factors, the amount and kind of education, and the impact of reality imposed by environmental pressures.

ii) **Tiedeman and O'Hara (1963) Theory**

Tiedeman and O'Hara individually and together (Tiedeman, 1952; 1958; 1961; Tiedeman and O'Hara, 1958; O'Hara, 1959; 1962 and O'Hara & Tiedeman, 1959) have validated many
of Super's concepts on the staging of vocational development and maturation. According to them, a person comes to an occupation with a set of ideas as to how he will like to work in that occupation. These ideas have evolved through the stages of anticipation, exploration, crystallization, choice and clarification. The basic point is whether these ideas are congruent with the reality of an occupation when that person is induced into it. Expectations and realities are never entirely congruent meaning thereby that there is always some reciprocity between a person and his/her environment (these involve the processes of reformation and integration). A person modifies his/her self-concept to accommodate job expectations and the job tendency is as per person's style. If these demands are not so dramatic, induction is successful. If, on the other hand, induction requires accommodations beyond the limits of a person's tolerance or beyond those permitted by the self-concept, the process of exploration and anticipation will likely to be reinstated as an individual moves towards occupational maturity.

Other reflections of Tiedeman and O'Hara theory includes as assertion on vocational development and maturation as a continuing process of differentiating ego identity. They have used Erikson's model (1963) of psycho-social crises encountered at various developmental stages as an explanation for differences in vocational maturation. They have also indicated that a person's personality is
shaped by career choices in conformity with norms and values of his/her vocational maturity. Thus, there is a force in this view that the intimate intersection of the self-concept and career concept develop as also mature over times through a number of small decisions.

iii) Dysinger's (1950) Theory

Dysinger (1950, pp. 219-220), in addition to outlining of stages in vocational development which parallel those of Ginzberg, has emphasized the idea that negative decisions play an important role in a person's progress towards the choice of an occupation. He has focussed his attention upon the fact that the making of a vocational choice is not necessarily a good criterion as to whether an individual is developing normally in his vocational planning since persons make their choices prematurely. At each stage, there are negative decisions. These are of importance in vocational planning. When a person has grown to the point that he no longer plans to be a cowboy, he has developed. At the later stages of development, negative decision continues to be an important factor. Entire field may be eliminated, and the possible choices may in this way be reduced. Positive choices often follow a series of negative decisions. One of the most ticklish situations in vocational planning occur when fairly mature persons have made a few negative decisions.
iv) **Gribbons and Lohnes (1968) Theory**

They have done research on vocational development over the years (Gribbons and Lohnes, 1964a; 1964b; 1965; 1965b; 1966; 1966a; 1968 and Gribbons et al. 1966). They have examined the concept of readiness for vocational planning used as a measure to identify a person's stages of maturity during adolescence. Their research has identified eight dimensions which correlate to a high degree with this measure at the eighth grade and at post-secondary school levels which otherwise might be subsumed by the concept of vocational maturity. These eight dimensions have the following emphasis: (1) Factors in curriculum choice, (2) Factors in occupational choice, (3) Verbalized strengths and weaknesses, (4) Accuracy of self-appraisal, (5) Evidence for self-rating, (6) Interests, (7) Values and (8) Independence of choice. Gribbons and Lohnes found that vocational maturity increased from grades VIII to X. These two grades showed that some eighth grade students had already achieved considerable vocational maturity while some tenth grade students evidenced a considerable lack of it. The levels of eighth-grade vocational maturity are predictive of educational and occupational planning, educational aspirations, and level of occupational aspirations in the XII grade; of field and level of actual occupation two years after high school; and of two years post-high school career adjustment. The Readiness for Vocational Planning scales failed to discrimi-
nate among those students manifesting Differential Career process - constant maturity, emerging maturity, degeneration, and constant immaturity - but these did demonstrate a trend from idealism in the eighth grade to realism in the twelfth grade, with brighter students appearing to choose more consistently with their measured intelligence than less bright students.

v) **Beilin's (1965) Theory**

He has attempted to demonstrate as to how developmental principles, such as the pre-eminence of behaviours at certain points in a person's life, level of maturity, differentiation and integration of behaviour etc., apply to the analysis of changes in vocational behaviour with the increasing age.

vi) **Super's (1953) Theory**

Super's approach has attempted to integrate insights from differential, developmental, social and phenomenological psychology to explain vocational behaviour. As such it embraces many of the concepts from the trait-and-factor, sociological & need-drive approaches. Super has used the staging phenomena described by Buehler (1933) and Ginzberg et al. (1951) to create a maturational structure covering the whole of the life span. The most comprehensive research concerning vocational maturity has been conducted by Super and his associates and students over the years (1957, 1960, 1961a, 1961b, 1963a, 1963b, 1963c, 1969a 1969b). Super described that human maturational process
first leads to primary self-concepts and then the secondary precepts. As the maturation grows, the systems of self-concepts become even more complex and abstract. Super (1951) proposes that a person strives to implement his self-concepts by choosing to enter an occupation which he finds most suitable to permit self-expression. As an individual matures, his self-concept becomes stable. The vocational self-concept is implemented by an individual, depending upon the external conditions available to him. Super (1953) considered that vocational development or career development is a continuous process of maturation involving formation and implementation of vocational self-concepts. It is a compromising process affected by biological heritage, personal and social determinants, opportunity to play various roles, and feedback. Maturation of self-concept takes place in stages of maturity relating to approximate ages - growth (birth-14), exploration (15-24), establishment (25-44), maintenance (45-64 onwards). These stages may be split up in to (a) the fantasy, tentative and realistic phases of the exploratory stage and (b) the trial and stable phases of the establishment stage. These stages comprise of developmental tasks indispensible for an individual's achieving and maintaining vocational maturity. Vocational maturity refers to the manner in which people cope with the tasks commensurate with their life-stage. Possible dimensions of vocational maturity for adolescents are orientation to vocational choice, information and planning
about the preferred occupation, consistency of vocational preferences, crystallisation of traits and wisdom of vocational preferences. Five dimensions examined by different indices indicate mature vocational behaviour. These dimensions of vocational maturity were found to be intercorrelated to a significant degree. The nature of dimensions may change with age factor. It is quite possible that some of these may not even exist. "An individual's vocational maturity can be defined by his standing along these dimensions in relation to either chronological age and expected life stage or the behaviour of others coping with the same developmental tasks" (Super et al., 1957).

Super's model of vocationally mature behaviour is the same as Baldwin's (1955) model of mature behaviour. Baldwin refers to the quality of behaviour (accuracy of information) whereas Super's concern is with the occurrence of relevant behaviour (having or seeking information).

Super's probe has demonstrated that the levels of vocational maturity attained at grade twelve are predictive of the levels of vocational success in young adulthood. Super and Overstreet (1960) suggested that "bright" students are able to plan more effectively in general and vocationally mature than less "bright" ones. Super and Overstreet (1960) concluded that vocational maturity in the ninth grade boys is related to their degree of intellectually able to respond to that stimulation, their aspiration for
higher rather than lower socio-economic levels, as also their ability to achieve reasonably well in a variety of activities.

vii) Crites' (1965) Model

Crites (1965) has elucidated the hierarchical model of vocational maturity, as conceptual scheme which is based on Super's (1955 & 1957) dimensions of vocational maturity. It is displayed in Fig. 1 and is based on Vernon's (1950) model of intelligence. It is also based upon the assumption that the factorial structure of the correlations among variables and groups is oblique rather than orthogonal. It has been hypothesized that developmentally the trend should be towards greater differentiation of specific behaviours (Super and Overstreet, 1960 and Crites, 1973). At the highest level is general factor representing common variance among the groups and define overall "degree of vocational development". At the intermediate level, group factors constituted from the inter-relationships among the variables. At the most specific operational level are the vocational behaviours which mature during adolescence.

This model comprises of career choice attitudes and career choice competencies. These were formulated from Super's (1955) original dimensions of vocational maturity viz. orientation to vocational choice, information and planning as also certain components of crystallisation of traits and dimensions with certain amendments and modifications. The contemporary theories of vocational development
have been centralised on these and these are presumably the vocational behaviours which are subjected to maturational processes during adolescence. The theoretical prediction is that these represent career decision-making processes in this period.

The model as outlined in Fig. 1 supports the greater psychological cogency and shows useful as well as meaningful distinctions of career choice content and career choice process (Crites, 1974).

The variables in Fig. 1 have been revised from an earlier version of the model in order to make these more consistent and logical or to fit these more precisely in research efforts. Consistency of vocational choice by "Family of Occupations" has been omitted; "Activities" as a criterion of Realism (earlier called "wisdom") of vocational choice has been supplanted by "personality". "Self-knowledge" has been renamed as "Self-appraisal" to reflect more accurately the evaluative nature of the process involved.

The career choice competencies and career choice attitudes have been elucidated as under: First part of this model is composed of five sub-tests known as career choice competencies. Test 1 is "Problems", which intends to assess the ability to resolve conflicts among the factors usually involved in vocational decision making. Test 2 is "Planning", which evaluates the task of logical and temporal inconsistencies in the steps leading to various
Fig. 1: A Model of Vocational Maturity in Adolescence
(Crites, 1973)
vocational goals. Test 3 is entitled as "Occupational information", which includes items on job duties and tasks, trends in occupations, and future employment opportunities. Test 4 is captioned as "Self-appraisal", which involves a process of making hypothetical judgements of a person's assets and liabilities for vocational success and satisfaction. Test 5 is "Goal selection", which requires an examinee to choose the "best" (most realistic) occupation for a fictitious individual, who is described in terms of his/her aptitudes, interests and personality characteristics. The functions or processes which are involved in taking the competence sub-tests, may be designated as comprehension and problem-solving abilities pertaining to the vocational choice process.

The second part of this model is the attitude scale. The attitude scale in an individual elicits the conceptual or dispositional response tendencies of vocational maturity, enabling him for making a career choice to enter the world of work. The attitudinal scale is non-intellective in nature and may mediate both career choice consistency and realism as well as career choice competencies. The items of the attitude scale are described as conative aspects of decision-making. The attitude scale has five dimensions viz. (1) Involvement in the career choice process, (2) Orientation towards work, (3) Independence in decision making, (4) Preference for career choice factors, (5) Conceptions of the career choice process. Crites (1965)
states that vocational choice attitudes and competencies mature in an individual as he/she progresses in his/her life through a series of vocational stages of development and maturity.

Above mentioned theories highlight that vocational behaviour is complex like all human behaviours and is a part of the total fabric of personality development. It finds its roots in the early life of a person and develops over a period of years. Individuals will differ in their readiness for various elements of vocationalization in developing vocationally mature behaviours. Individuals will neither reach the same point of maturity at the same time nor will they proceed at the same pace. Vocational behaviours become increasingly reality oriented and more specific as one moves towards maturity. It can be pointed out that vocational maturity is a fabric of many threads composed of individual's personal history, extrinsic and intrinsic factors in environments conveying values and encouragements differently about educational and occupational options. Thus, vocational maturity is a maturing process of learning about oneself, one's choice options or the both.

As reflected in the foregoing developmental theories of vocational development and maturation, their purpose has not only been to influence systematically the vocational development but also to describe it in numerous stages of vocational maturity. Their main objective was to devise a
reliable and standardized technique for identifying a person's different life-stages and developmental tasks, and then to introduce experiences to facilitate the growth of various aspects of vocational maturity. To focus on life-planning and self-exploration which get support from vocational education as well as counselling interventions in the context of vocational maturity, is indicative of the developmental viewpoint. Thus, vocational maturity is a concept which encompasses vocational education, counselling and guidance. Finally, it is significant to conclude that the existing theories of vocational maturity are incomplete, not fully illustrating behavioural development and maturation, the point at issue. Although some of the longitudinal researches have been formulated, yet these have got serious drawbacks in not using the samples of subjects from female and disadvantaged populations in sufficient magnitude. As such one can feel confident of the similarities or otherwise across sub-cultures that are implied in some of these theories. But some of the shortcomings have been pin-pointed and studied scientifically in the chapter of "Review of Related Research" dealing with the heterogenous samples.