

# Psychology of Education

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## INTRODUCTION

### Psychology of Education: Concerns

Education is a purposefully designed process aiming at fostering the harmonious and healthy development of individuals as productive, successful and well-adjusted persons in society. No aspect or component thereof can be left untouched by psychology. Almost all issues in education have a psychological dimension—even aims and objectives in their interpretation and their bearing on the development and functioning of individuals, at one end, and administration, rather management, in respect of the style of functioning of personnel and the human relations involved, at the other.

Psychology of education should be particularly concerned with

- factors that influence and shape specific components and features and different dimensions of development, and their interrelatedness, interplay and integration in different settings;
- the control or manipulation of such factors for altering the effects in desired directions;
- the nature and development of potentials of different kinds;
- the nature and range of differences in respect of variables that constitute development, especially those which impinge upon learning and adjustment, including the effects of special handicaps and disabilities;
- ways in which such variables can be assessed with functional meaning and value rather than structural details and implications (for their own sake as it were);
- ways in which process adjustments and system modifications can be made to cater to individual differences, optimally at least; and to the needs/difficulties of the exceptional;
- internal and external factors and process variables that promote or block effective acquisition or development of a wide variety of learnings relevant to human beings, at different levels and stages, especially those expected in formal education;
- factors, conditions and processes that facilitate effective retention, transfer and application;
- metacognitive factors and processes that strengthen executive control for the above purposes, in particular;
- factors, especially school-based and society-specific factors, that promote or hinder the development and functioning of balanced, healthy, strong, and well-integrated personalities, successful



adjustment and sound mental health;

- sources, nature, symptoms and effects of common problems in normal and unusual educational settings and of deviant cases and types, etc., and their treatment/solution.

Thus, the catchment area is extremely wide and so are the areas for exploration. While psychology as a science may not have social value orientations, education cannot but be so value-loaded.

### **Academic Psychology**

Academic psychology, as discussed in classrooms at any level, is said to be many years, even a few decades, behind current developments in the discipline. But academic psychology as reflected in research at the highest levels should not—cannot afford to—lag behind; in fact it should give the lead. Research and theory are reciprocally related; and sound practices ensue from both. Current developments consist in the latest researches, their findings, new theoretical formulations and their applications. If research is meant to extend the horizons of knowledge, recent researches should reflect the directions of such extension and show the areas being so extended and the aspects brought into focus for special attention; they should also contain and demonstrate innovations in methodologies and techniques. Academic psychology has also been predominantly behaviouristic, adopting the apparently prestigious stance that psychology as a science has to be empirical and should be concerned only with that which is observable; however it has accommodated Gestaltist and other cognitive, psychoanalytical, and humanistic positions and interpretations as additional possibilities that cannot be ignored. Seldom has any concerted or purposive effort been made to correct the narrowness, limitations and even distortions arising from the binding—sometimes even blinding—premises and

perspectives of different schools, especially of the dominant behaviourists. Their formulations are quoted rather faithfully, with their own interpretations and implications, without the critical outlook of a good academic or the openness of mind of a good researcher. Reinterpretations, however meaningful, are considered taboo and reconstructions are put beyond one's jurisdiction. Conflicts between schools and among theorists even within the same school are generally left intact—unresolved; earnest reconciliations are not attempted; the possible complementarities of different schools and interpretations are often missed. Selective synthesis of a purposeful and meaningful nature is seldom attempted; crude mixtures can be seen in certain efforts and textbooks. Findings of relevance from neurosciences are not often duly considered and utilised. All these affect the health, strength, soundness and vitality of the discipline.

### **GENERAL TRENDS THE WORLD OVER**

#### **Cognitive Psychology**

The most noticeable broad trend in the last two or three decades in studies in psychology of education is the increasing attention to and acceptance of cognitive psychology in its different dimensions. This is evident from journal reports, reviews and other publications from the U.S.A., Australia, the U.K., Canada, etc. They cover broad spectra like cognitive capabilities and development, cognitive and meta-cognitive processes in learning, strategies and programmes for promoting and even ensuring different kinds of learning, and the effects of early deprivation, compensation or remediation, and stimulation.

More specifically, many studies relate to:

- confirmation of, and differences (if any) from, the sequential stages and specific capabilities outlined by Piaget and others in cognitive development;



- development of more testing and training tasks for different cognitive capabilities at these stages, on Piagetian-Brunerian lines (marking a shift from the psychometric normative approach to testing, and stressing qualitative aspects);
- training to foster, even accelerate, the development of specific capabilities at different stages;
- extension of Piagetian theory in terms of further details of features and further analyses of the structure of logical thinking;
- cognitive preferences and styles, learning styles, etc., viewed in different ways;
- cognitive processes and strategies in learning of different kinds at different levels (especially of discrimination, concepts, principles or rules, problem-solving, etc.) and of specified forms of curricular contents (in general) and 'process outcomes';
- information processing for intermediate and long-term memory, retrieval, and transfer;
- knowledge as a useful and necessary base for further learning; and also interference effects;
- sequential and simultaneous processing, as they develop naturally, function complementarily and are strengthened through training (in particular);
- mediation processes and strategies in learning (3/2 dimensional, imaginal, verbal, symbolic, thematic, etc.) and effects of schemata, mental models, analyses, metaphors, etc;
- discovery learning and meaningful reception learning;
- metacognitive processes making for effective executive control in learning (analyses, selection of tactics, planning, execution, monitoring and evaluation,

modification, etc.)—especially in problem-solving;

- componential and total training in problem-solving and in different kinds of thinking;
- effects of cognitive feedback in different forms and ways and in differing strength;
- effects of goal/task orientation, affiliation orientation, responsibility for learning and adjustment, etc.

### **Further Thrusts in Research in the Areas of Learning**

These relate to individualization of instruction using PLM and enriched multi-media packages, individually programmed learning (following Glaser's lead and Keller's PSI), computer aided/assisted/managed learning programmes, (optimising branching, graphics and inter-actions), other strategies for promoting mastery learning (following Bloom's lead) in different areas and at different levels, group learning or cooperative learning (with free/interest-based/sociometric grouping) with developmentalist and motivationalist paradigms, application of strategies like the above for the benefit of different categories of exceptional children, etc. Matching curricular goals and treatments (learning tasks and procedures) to capabilities has become a vital concern; cognitive preferences and learning styles also figure in this context; some major projects in cognitive capabilities-based curriculum planning and treatments are prominent too. So, too, the continuing fascination with testing and developing creativity, in general, and with more narrow divergent thinking and lateral thinking. Application of Skinner's behaviour modification theory and Bandura's modelling in developing proper social behaviour and discipline on an experimental basis has been quite noticeable; it has been followed by wider absorption in the field. Development of moral judgment and behaviour in successive stages as described by Piaget, Kohlberg and others separately and



strategies thereof have attracted many researchers; so, too, development of aesthetic sensibilities, artistic competencies, psychomotor skills, etc. (artistic, musical and athletic intelligences as Howard Gardner would call them) apart from scientific attitude (temper) and scientific aptitude (marked by logico-mathematical intelligence). Improved strategies and methods of teaching/learning different curricular components at different levels continue to engage many researchers; tested innovations result. There have also been studies on 'summer losses' and the benefits of summer programmes, especially for the disadvantaged and the low-achieving. It is important to note that many of these studies have a direct bearing on learning and development, (the central concerns in educational psychology), especially those to be achieved in and through formal education; further, they are of an experimental nature, conducted under adequately controlled but realistic situations, and thus establishing relationships and proving effects fairly convincingly. Their applicability or consumption potential is high. However, they might need replication in different cultural and otherwise varying situations for further confirmation and generalisation and wide utilisation or adoption.

### **Personality Development, Adjustment and Socio-cultural Aspects**

McClelland's n. ach. still holds a fascination for many researchers—but as a stable personality trait rather than 'affective arousal'. It has in a way been subsumed under Maslow's esteem needs, which along with the higher self-actualisation invite descriptive (correlational, causal-comparative and case studies) and experimental (intervention or training) studies. Many other personality qualities like self-concept, confidence, assertiveness, aggression, cooperation, emotional stability, ego-strength, extraversion, optimism-positivism, risk-taking, locus of control and leadership seem to be continuing foci of both types of studies; so also

adjustment problems, levels of adjustment, and tactics for coping with anxieties, conflicts, frustrations and other tensions in the changing and varied socio-cultural contexts. The influence of—and integration with—sociology is evident in ethnic studies and cross-cultural studies which seem to be quite fashionable of late. Methodologically, these trends have raised the popularity of case studies, ethnographic studies, etc., and also the acceptability of subjective data (through self-reporting and analysis, thought-sampling, etc.), phenomenology, qualitative data and analyses, and situation-related/specific 'naturalist inquiry' in general—marked by 'reasonable subjectivity', without unduly compromising on objectivity.

Researches on teacher characteristics and behaviours and classroom interactions had their peak period in the sixties and seventies; the focus then shifted to optimal facilitative interventions and guidance and learner responsibility. That seems to be true of the institutional or organisational climate and the social-emotional climate in the classroom too. There has been increasing emphasis on the effects of early deprivation of relevant socio-cultural inputs, on the one hand, and of particular kinds of stimulation on the other. (Certain animal studies on deprivation of perceptual stimulation indicate missing of the opportunity for developing the potential once and for ever.) These led to studies on strategies and programmes for compensation, remediation and enrichment aimed at strengthening particular components and dimensions of development, especially cognitive development, language development and social-emotional (personal-social) maturity development. They are obviously as comprehensive and multi-dimensional as curriculum research and systems development, but the underlying psychological dimension (along with the philosophical-sociological one) is of vital importance.



## OVERVIEW OF RECENT TRENDS IN RESEARCH IN INDIA

### General Picture

The story of educational research of any noticeable proportions at high levels in India starts only in the 1950s. Till then there were only a few stray studies here and there. The trends since then have been analysed in the earlier four Surveys. The relevant chapter in the first three Surveys was titled "Personality, Motivation and Learning" as most of the studies reported were in these areas — the majority in personality, a few in motivation, and some in learning. 'Personality' includes adjustment and problems, and 'Learning' covers teaching strategies and methods as well; 'motivation' could be subsumed under 'personality'. Only from the Fourth Survey has the chapter been rechristened, more broadly, as 'Psychology of Education'. The Fourth Survey reported many studies in learner characteristics (personality traits—especially self-concept, motivation, intelligence, interests, attitudes and aspirations, values and moral development), some on correlates of achievement, some on cognitive growth and processes and on learning processes, a few each on classroom climate, teacher characteristics, teacher behaviour, teacher expectancies, adjustment, mental health, and stress management in schools, student activism and leadership behaviour; some on ecology, ethnicity and behaviour development too; there were quite a few intervention (experimental) studies and 'cross-cultural' studies. It is significant that many of the studies were reported from departments of psychology. While it is apt and good to consider them as potentially contributing to our understanding of educational issues and processes and improvement of practices, one might express the apprehension that their relevance might tend to be indirect and remote. This may be so, but their relevance is enhanced to some extent by the fact that the subjects in these studies

(conveniently) are often students at different levels; further, we can be more selective in accepting those with clear relevance or implications than we have been, if only we are more discerning and discriminative. Again, many studies reported from departments of education are very similar in nature, and still others have only limited practicality or actual applicability in the field. Even where it is clearly moderate or high, the 'consumption rate' is low and the impact marginal. It may be largely because most of the studies are designed primarily for obtaining a degree or making a quick and acceptable publication, and 'safety precautions' seem to weigh heavily with the researchers, as also factors of ready availability, access and other kinds of convenience. The field is also not generally responsive to the demands of research, especially experimental studies with 'manipulations' and 'controls' and differing 'treatments', however sound and promising they might seem to be to us.

All these observations are largely true of the studies reviewed for this *Fifth Survey* as well; in other words, the major trends continue — and in respect of the types of studies, as well. Most of the studies are of the descriptive type. There are some local-specific surveys and comparisons, and more of correlational studies, a few attempting prediction through regression analysis and some others being upgraded into causal-comparative studies of 'effects' (rather than relationships), thanks to ANOVA techniques that use terms like 'main effects' and 'interaction effects'; and a rare case study. The experimental studies are limited in number and nature, and even here in some cases the claim of being experimental is made because there is some 'action' on the subjects in producing effects or may be in testing or exploring, and not necessarily because they are set to good experimental, at least quasi-experimental, designs with adequate or reasonable control of the factors that affect internal and external validity.

The researches reported for this Fifth Survey



number over 135, including about 28 on selected personality traits, some with certain correlates, 20 on personality correlates of achievement and certain other educational outcomes or dimensions, 15 on adjustment problems and delinquency/crime, 12 on descriptions of personality patterns in students (with their own foci), 15 on other student characteristics, including abilities, attitudes, values and leadership, 12 on teacher characteristics, 8 each on specific kinds of learning and of development, 6 on 'helplessness', stress, working life, etc., and a few other 'stray studies' on different 'problems' including punishment. Quite a few are predominantly sociological and a few would qualify as women's studies. Motivation has probably ceased to be a major area of fascination and thrust and has only crept into a few studies as one of the traits focused on; teaching-learning strategies and methods in curricular areas are taken up elsewhere. A few relatively new concepts like, 'learned helplessness', 'deprivation effects', 'goal structure', 'persistence', 'learning styles/preferences', 'coping through humour', 'invulnerability', 'self-disclosure', 'alienation' and 'burn-out', have caught the imagination of a researcher or two, as variables worth exploration.

Apart from the continuing—and slightly modified—trends in respect of the broad areas of study and types of research and their utility, as outlined above, few trends are discernible in respect of vital issues and urgent concerns, new foci and fascinations, persistence with thrust areas and crucial issues, concerted or continuing efforts with concern for greater applicability and utility value, substantive additions to knowledge or contributions to methodology. (How long will this 'purposeless straying' and attention to 'isolated bits' continue?)

### **Common Weaknesses in Researches Reviewed**

A researcher ought to be open-minded, though

specific researches and even lines of research might start with certain basic positions consisting in axiomatic assumptions, postulates and accepted theoretical formulations. These often tend to conform narrowly and strictly to one school of thought; and this, in turn, imposes constraints and limitations on problem perception and definition, selection and assessment of variables, even designs and procedures, kinds of data and their analyses, and, above all, the interpretation of findings. Rarely do researchers adopt an eclectic approach, or set forth a broad and inclusive perspective. Artificialities and distortions arising from narrowing down a complex multidimensional problem, chaining it to a closed set of basic premises, isolation of a few variables of interest and possibly convenience, poorly stated objectives and hypotheses, reduction—if not distortion—of such variables through operational definition, their measurement employing readily available or hurriedly constructed tools with transparent weaknesses, dilution of techniques, defective sampling by convenience (sometimes claimed to be 'random', meaning unbiased), weak designs and controls, application of multiple statistical techniques, sometimes for the sake of a sophisticated look, twisted or biased interpretations, unwarranted—and sometimes irrelevant—conclusions and implications, etc., creep into the apparently 'scientific, empirical' researches. It is all the more so in researches undertaken for obtaining degrees after an unpredictable examination of the theses by unknown examiners (though safe arrangements and manipulations look possible); there is a perceptible tendency to adopt safe designs and follow set procedures. Attempts at qualitative studies often fail to make in-depth probes into complex situations with multiple factors in their interplay, rather interpenetrations, and end up with superficial descriptions.

Even some of the titles are not aptly-worded, clear and crisp; a few are too general and vague and some others too long and complex, with



indications of different delimitations, and sometimes redundancy too. Even after naming 'personality' as part of the focus, personality variables like self-concept, n. ach., level of aspiration and locus of control are separately added (because the personality test in mind does not measure these). The word 'effects' in the title does not necessarily imply an experimental study that might establish them, but only a prior decision to employ ANOVA techniques. And a claim of an experimental study might imply not a good experimental design, but only 'action' through training or testing tasks. Studies marked as normative surveys do not often yield norms in any form; either they are factual surveys ending up with descriptive statistics for the total sample and for different sub-groups by way of comparison (in some cases employing 't' test/CR on differences too), or they go into correlations and ANOVA! Even case studies and 'ideographic analysis' employ such statistics! Wherever potential correlates are brought in, there is a tendency either to resort to regression analysis for prediction, or to employ ANOVA for converting it into a causal-comparative study of 'effects' (main effects and interaction effects, rather than relationships). The point is often missed that not only correlations but even cause-effect relationships are reciprocal. ANOVA only indicates the possibility of such relationships—it does not establish them; but terms like effect, contribution, determinants/propellants, dependence are used freely, in a unidirectional way and in highly conclusive tones. It is not uncommon that conclusions and implications go beyond the data and the specific findings from their analyses. Delimitations and limitations are not always conceded—or even recognised.

Objectives and/or hypotheses are not often stated with clarity, proper wording, correct focus, appropriateness and adequacy. Hypotheses are not sometimes in testable form and are not always stated in terms of significant relationships or differences. There seems to be an obsession with the null form; even in

experimental studies and other cases where accepted theory and/or common observations or logic clearly indicate the direction of the relationships involved, null hypotheses are formulated (to 'play safe' as somebody said). Very few studies seek to make it an extension beyond known theory and available research findings. Issues and problems are not defined, analysed or tackled in their totality and integration, or at least with their inherent multidimensionality, comprehensiveness and complexity; a few variables of immediate fancy or convenience are isolated for study. Relevance, meaningfulness and utility are lost—at least greatly reduced—in the bargain.

Replication studies should be welcome, especially on problems with a socio-cultural bearing, where such variations are likely to affect the relationships and effects; but imitation and repetition beyond reasonable limits would generate disgust. It is heartening that some researchers bring in new concepts and variables, fresh thrusts and innovative techniques, or different combinations thereof. But some studies are too narrowly conceived, highly localised, or quite superficial. While some researches may generate new theoretical formulations or establish their validity, at least tentatively and conditionally, others may seek further confirmation on their validity or on their applicability and productivity in different situations. All have utility value only to the extent that they do—or can—contribute to improvement of practices and systems in the field of education. Most of the studies in India are descriptive in nature (generally surveys and correlational studies, causal-comparative at best, and, rarely, case studies). They may reflect actualities and, in some cases, suggest possibilities of planned control and improvement of systems or practices but the findings are seldom utilised for the purpose. Substantial experimental studies in realistic settings in the field are few, partly because of their inherent difficulty and partly because the field's general



reluctance to appreciate and accommodate such efforts; there may be a few more studies of the laboratory type or in contrived situations. In either case, the adoption of the findings and formulations and their implications and applications for wider consumption to improve systems and practices are rather rare. (To that extent it seems to be a case of research for its own sake; possibly even otherwise.)

#### **AREA-WISE ANALYSIS OF STUDIES/ TRENDS DURING 1988-92**

A brief area-wise analysis of studies reported during the period 1988-92 is presented below. Possibly the only significant trend is that there is no clearly discernible trend in respect of new thrust areas, focal issues and themes, research designs and methods, or findings that make substantial and valid additions to knowledge in terms of theoretical formulations or their applications. Old trends continue, more or less, in respect of the broad areas and types of researches; however, studies relating to personality and development seem to be more and those concerning cognitive processes and learning processes considerably less in proportion. The areas are delimited slightly differently; obviously they are not mutually exclusive but are interrelated and overlapping, and some studies might stretch across to more areas than one.

#### **Development**

Of the 8 studies reported, 4 are Ph.D. theses, 3 M.Phil. dissertations in psychology from Utkal, and one is a project report. Samuel P.G. (1988), with a natural concern for goodness, studied the moral development of high school students in relation to Cattell's personality traits and certain social factors and found differences by age and SES; relationships were also seen between the moral development stage/judgments and personality traits, scholastic achievement, interaction with students and teachers, and

school behaviours. Makade, P. (1990) compared normally-born and Caesarian children (150 each, aged up to 5 years) on responses to environmental stress and found the 'C' group superior as age advanced. (She seems to recommend Caesarian section, with her own conclusions or arguments on its bio-psycho-social benefits! The home and the school should probably provide compensation to the normal ones!). Thakkar, S.S. (1991) explored the development of permeability in 20 pairs of twins (13-16 years) but found no significant difference in social, emotional and educational adjustments, problem-solving, academic anxiety, task orientation, work-study habits, personality factors, etc. (despite different sophisticated statistical techniques). Mathur, S. (1989) sought to relate autonomic responses to a variety of musical stimuli to gender and to anxiety level, and found many interesting relationships as well as differences in sensibilities and emotionality.

Mohanty, K.'s (1991) concern was about the development of understanding (cannot be conceptual) of desire and belief in 16 children in the age-group 2 to 6, participating in three experiments. He found diversity of desire at 2, evaluation of desire satisfaction at 3, notions of false belief and evaluation of others' false beliefs at 4, evaluation of behaviour-desire-belief of characters in stories at 4/5. Even assuming that the 'purposive sample' consisted of gifted children, it seems too much to claim that a 4-year-old could "explain" others' behaviour in terms of beliefs and a 5-year-old could do so "looking at mental representations". Possibly they could relate behaviour to needs, wants, desires, etc. Hota, S.R. (1991) chose to explore the exploratory behaviour of infants and found no gender differences, in increased exploration at 12, 18 and 24 months as compared to 6 and 30 months, and colour preference at 6 to 12 months. Shukla, J.P. and Sharma, V.P. (1988) studied Piagetian conservation of substance, looking for gender differences ("effect of sex"). [Also see Mohapatra, M. (1991 b) and Mishra, G. (1991)].



A unique study on rats was conducted by Mohapatra, M. (1991(b)). Adult offspring of mother-rats, which were undernourished and had perceptually impoverished environment during pregnancy, were found to be poorer in discrimination learning and reversal learning as compared to offspring of mothers which enjoyed enriched/better conditions. This should remind one of the recent Ford Foundation-supported studies where kitten deprived of all visual stimulation, or all except certain patterns of stimuli, at the early stages, developed near-blindness and capability for perceiving only the familiar patterns of stimuli, respectively. While malnutrition before birth and during childhood can cause serious and lasting harm, deprivation of appropriate stimulation and other opportunities in adequate strength, variety and richness at the early stages would adversely affect development. Bloom, et al. have shown that proper cognitive nourishment from 3 to 6 years is crucial in maximising the development of cognitive potentials; Piaget had emphasised the 2 to 8 period; obviously this has to be continued to sustain the pace and strength of further development.

### Learning

There are 6 Ph.D. theses in education/psychology, 2 M. Phil. dissertations (again from Utkal and relevant to development as well) and a project report which is a fairly comprehensive review of theory, research and instrumentation in the area of learning styles by Raina, M.K. (1990). Only one of the others has a relatively broad focus: the effects of training in controlled experimentation during adolescence (Poonia, A. 1989). It seems to be an experimental study but the nature and scope of the training programme is not clear; starting with several objectives, it gives many interesting findings, including gains in the three levels of intellectual development for almost all kinds of sub-groups and their significant relationship with personality factors but not intelligence. (Some of the conclusions

and implications given seem to go beyond the findings.)

Panda, B. (1990) investigated the Von Restorff Effect in verbal learning from connected discourse (printed) in three curricular areas in Class IV, and found isolation by colour (red more than green), and colour and bold letter contrast to be effective; geography and general science showed similar effects, history being different.

Sharma, R.K. (1988) chose to compare arts and science students on the effects of encoding conditions and retrieval cues on memory trace structure and recall; the conclusions look like assumptions and generalisations rather than findings on relationships.

Sharma, S. (1991) investigated the effects of KR, n. ach. and some other personality traits on performance in line-drawing and the Muller-Lyer illusion. Combinations of extroversion-neuroticism and introversion-neuroticism-low n. ach. seemed to favour boys, while high n. ach. produced better performance in girls. Audience effect—in relation to gender, audience-anxiety and the nature of the task—was the phenomenon that attracted Nepalia, P. (1989). The presence of an audience of the other gender had varying facilitative/disturbing effects, depending on the audience-anxiety level, in the case of men, but was generally facilitative for women; the presence of audience of the same gender also had varying effects; both were facilitative for moderate audience-anxiety subjects.

Agarwal, R. (1990) focused on the performance on anagram tasks in relation to goal-setting behaviour, risk-taking behaviour and prolonged deprivation on the part of school-going girls, with a 2 x 2 x 2 factorial design experiment. Both GSB and RTB were found to influence learning on these tasks. They were mutually dependent in producing the effects; girls with high PDHE, PDES, PDFE and PDME performed well.

The effect of priming the location of the target in visual search and its developmental trend was



investigated by Mohapatra, M. (1991a) with 90 students of Classes V, VII and IX; some relationships were seen between field density, target location, age/grade and search time. The effect of priming on search improved with age and educational level. Mishra, G. (1991) similarly explored developmental changes in the role of selective attention in information coding. Performance in selective attention as well as simultaneous and successive processing tasks improved with age and grade, in children of Classes I and III.

### Personality Correlates of Educational

#### Outcomes

Seventeen Ph.D. theses and two project reports adorn this area; eight relate to college education. Some have considered an array of personality factors/traits while a few others have focused on self-concept, motivation, creativity, etc. The criterion variables or outcomes also vary from overall achievement to specific kinds of performance or products, including psychomotor outcomes, speed of performance (interaction), creativity, academic satisfaction and classroom morale.

Sood, R. (1988) searched for personality factors that could predict academic achievement in some professional courses and using Cattell's 16 PF test found a few factors, each 'contributing' positively, and a few others, negatively, to achievement in engineering, medicine, business management and law. Exploring the relationship of creativity to personality, locus of control and alienation (also personality-adjustment factors), again in professional course students, Joshi, R. (1989) found differences among the four groups significant in respect of all these. The engineering group was the highest on fluency, flexibility, originality, elaboration, extraversion, neuroticism, powerlessness, psychoticism and social alienation, followed by medicine, management and law groups in varying orders.

Women were higher than men on fluency, originality, extraversion and neuroticism. (It seems to have taken the shape of a comparative study.) Singh, C. (1989) investigated the interactive effects on n. ach., creativity components and second-order personality factors on anagram task learning of female college students; she found n. ach., creativity, low levels of QI and QII and high levels of QIII, IV, VII and VIII to be significant determinants.

Goyal, C. (1988) was interested in the effects of drive, frustration and adjustment on learning and speed of performance—especially interaction—of female college students. The favourable factors identified included drive, low levels of aggression, resignation and regression, and high levels of adjustment and fixation; some interaction effects among drive, frustration and adjustment were also found to be significant. Poulse, P.J. (1988) chose to explore the influence of nine personality variables, and of gender and residence, on process outcomes in physics of university entrants (pre-university stage). Apart from gender and residence (nature of locality), manifest anxiety, personal adjustment, scientific attitude, science interest and attitude to academic work were seen to "exert significant influence"; interaction effects were not generally significant. 'Academic satisfaction' was the criterion variable chosen by Gupta, A. (1992) for a 'normative survey' (as stated) but she tested hypotheses on relationships with different personality needs and personal values; she found some to be positively related and some others to be negatively related. (There were a few differences in respect of men and women students.) Khan, M.A.R. (1989) was concerned with perceived justice and related factors affecting both academic achievement and satisfaction. In a 'case study of Delhi University' with a 'purposive sample' of final year students of arts and science in one college from each of four zones, he found institutional ('zone') differences, apart from insignificant differences in respect of perceived justice. Further, 'subject' turned out to be the



best predictor of academic achievement (apparently with many significant correlates 'nested' in the subject) and perceived justice that of satisfaction. Burwani, R.G. (1991) focused on self-concept in the area of competence and its impact on mental health and adjustment of first-year college students (girls). Real and ideal self-concepts were highly correlated and discrepancy between the two was associated with mental ill-health. Academic achievement was found to be associated with perceived intellectual competence (but not physical, emotional and social competence); mental ill-health was associated with low achievement.

At the school level too, different researchers focused on different personality traits and varying combinations of other variables. Jantli, R.T. (1988) explored the interrelationships between teacher behaviour, pupil personality and the pupil growth outcome. The study with a  $2 \times 2 \times 2$  pre-test, post-test factorial design, found academic achievement negatively related to extraversion and neuroticism, higher productivity of direct teacher influence in LE/ HN and HE/ LN groups, better ach. by LE/ LN group under indirect influence, and some significant interaction effects of teacher behaviour and pupil E/ N on achievement. Asthana, U. (1990) investigated internal and external conditions of control (meaning motivation) as determinants of performance in relation to certain personality characteristics, including locus of control. Warm-hearted, emotionally stable, assertive, internal-locus pupils performed better under intrinsic motivation, and reserved pupils did better under extrinsic motivation (praise as reward); warm-hearted, assertive, adventurous and tense pupils performed well under both kinds of motivation, while relaxed, external control pupils did poorly under both. Jain, J.R. (1990) focused on self-concept of adolescent girls, along with their identification with parent/parent substitute, as contributing to realisation of academic goals. Positive self-concept, superior cognitive abilities and setting of high academic goals together

favoured high achievement, as also did identification with parent/parent substitute. Frustration showed a negative relationship with goal realisation!

Mahadik, A.K. (1988) studied frustration, value system and type of words as determinants of retention. He found retention to depend on one's value system and level or degree of value orientation, whereas induced frustration (treatment) reduced retention; one's stable (existing) level of frustration however had little effect on retention. Kaur, D. (1991) investigated the effects of test anxiety, belief in reinforcement, and intelligence on intellectual achievement (responsibility) and found the three together to account for up to 30% of the variance in the government/public school group. Boys and girls showed significant differences in achievement in the public school; all other differences and correlations were very low. Hota, N. (1991) studied field dependence and social facilitation. He found field-independent subjects to be better on mechanical and cognitive tasks (finger dexterity, verbal reasoning, anagram and arithmetic reasoning), and group setting had facilitative effect on the first two tasks. Increasing field-independence, raised finger dexterity and clustering ability in girls and arithmetic reasoning in boys.

Classroom morale was the major concern for Joshi, A. (1992); the correlates studied included locus of control, creativity, and medium and parental encouragement. The  $2 \times 2 \times 2 \times 3$  factorial analyses showed significant positive effects of medium-encouragement interaction on the classroom morale of boys and girls, external locus-encouragement for girls, creativity-encouragement for girls (Hindi medium), medium-locus-creativity for all, and interaction among all, the four variables for girls.

Of the two studies on psychomotor/athletic performance, Sharma, A.'s (1989) experiment focused on personality, intelligence, gender and practice on psychomotor learning and reminiscence. It revealed significant effects of



length of work period, length of rest period, gender (boys being superior to girls), extraversion and neuroticism, on both performance and reminiscence. The inter-task correlations were also highly significant. Further, reminiscence correlated highly with post-test performance. Sawarkar, N.B. (1991) analysed the interrelationships among anthropometric measurements, and certain personality factors and athletic achievements, through correlation coefficients. Higher secondary boys were superior to girls in physical measurements and emotional stability but inferior to them in confidence; physical measurements showed positive relationship to athletic performance, but confidence and emotional stability did not show any such relationship, though the measurements related positively with both these.

In the two projects reported, Madhosh, A.G. (1989) studied psycho-social correlates of sociometric status, and explored sub-cultural group differences, and Misra, G. (1989) sought to relate intrinsic motivation and extrinsic reward to performance (as was done by Asthana as well).

#### **Personality Traits: Correlates/Determinants**

The twenty-five research reports surveyed here include 20 Ph.D. theses (13 in psychology and 7 in education), 3 M.Phil. dissertations (2+1) and 3 project reports. They focus on different personality traits like self-concept/esteem (3 studies), invulnerability (2), risk-taking (1), achievement motivation and level of aspiration (4), frustration (2), reflectivity-impulsivity (1), aggression (2), anxiety and conflicts (1), interpersonal attraction (1), modernity (1), competition and cooperation (2), and effects of story-telling (1), feedback (1), and *japa-yoga* (1) on certain traits, in combination with, or in relation to, certain other psycho-social variables. They must have chosen these 'focal traits' and the other variables out of some fascination or convenience, or both. Few studies can be said to be comprehensive and inclusive in

themselves; nor do they seem to be part of a concerted scheme of investigations. The educational implications are also indirect, limited and remote.

Ramiah, L. (1990) sought to relate self-concept to parental involvement in Class IX pupils, and found the two to have a significant positive relationship, whereas Jain, N. (1989) studied self-esteem in adolescents in relation to family structure and parental behaviour through a  $2 \times 2 \times 4$  factorial design. Joint family, parental support along with control, support rather than control, and interaction of family structure and parental behaviour contributed to self-esteem. Bhatt, P.D. (1987) conducted a more inclusive but culturally loaded study of alienation, dogmatism and self-image in relation to prolonged deprivation in Kumaoni and non-Kumaoni adolescents. Ultimately, thirty variables were studied and they showed many kinds of significant differences within each group, depending mainly on the extent of deprivation, and between the two groups; surprisingly there were many similarities, too, especially in sexual attitude, morals, alienation and educational/economic goals. Deprivation seemed to cause alienation, dogmatism, confusion, and poor emotional tone and social relationships, apart from low adaptability.

Two studies in psychology conducted at Utkal focused on invulnerability (disadvantaged but competent), one relating it to curiosity and the other to coping styles. In the former Jena, L. (1989) found the invulnerable to be about as curious as the advantaged-competent, without the effect of memory; similarly, incompetence was associated with low curiosity, irrespective of disadvantage. Hariharan, M. (1991) found the invulnerable to have only limited damage from deprivation and stress, and to be prepared to face crisis and tackle problems; they showed healthy family relationships too.

Risk-taking fascinated Sharma, S.K. (1989); searching for some cognitive and non-cognitive correlates, he found the high risk-taking to be



outgoing, venturesome, tender-minded, assertive, low in frustration, happy-go-lucky, expedient, suspicious, apprehensive, experimenting, imaginative and forthright, whereas the low-risk-taking were intelligent, fast-learning, emotionally stable, humble, sober, exacting, controlled, withdrawing, toughminded, trusting, practical, assertive, sedate and self-sufficient. He also found many differences by gender and S.E.S. Konwar, L.N. (1989) focused on personal achievement motivation along with socialisation practices at home and school. Significant differences were found between boys and girls, the urban and rural, pairs of caste groups (SC, ST, OBC, Caste Hindus), etc. The broad socialisation factors identified included individual achievement orientation and independence of behaviour. Gujral, S. (1991) sought to identify personality and motivational correlates of Type A behaviour, with college students and CHD patients as subjects. The Type A behaviour pattern was found to be associated with competitiveness, hardworking nature, higher performance standards, achievement orientation, and higher educational/occupational aspirations and attainments.

Level of aspiration was a key variable in two studies. Tripathi, R.N. (1989) studied it along with time perspective and task persistence as functions of culture and SES, with equal number of Muslim and Hindu students (males) as subjects. He found no significant 'effect' or relationship. Jain, M. (1990) explored the impact of adjustment, frustration and level of aspiration, comparing children of working and non-working mothers. Differences in some personality characteristics were found between the two groups as also in achievement between sub-groups at high/low levels of the three variables. The mother's educational level was found to be related to the three. Biswas, P.C. (1989) focused on frustration, exploring school-children's reactions thereto and testing a number of sets of hypotheses. While age, family structure and tension were found to have differential effect on

the reaction pattern, gender, locale, SES and school climate made little difference. Gaikwad, J.M. (1988) studied elementary school-children's personality traits in relation to their mothers' marital adjustment and child-rearing practices. Good adjustment went with healthy practices, but they were helpful in developing only obedience and conscientiousness—not the other traits studied.

Srivastava, N. (1988) and Arunima (1989) were concerned with aggression. While the former studied aggression in adolescents in relation to self-concept, motivation and performance, the latter sought to make a 'socio-psychological appraisal of aggression in children'. Srivastava found no significant correlation, except a curvilinear relationship between aggression and academic and non-academic performance. However, high aggression went with more frustration and behaviour deviation and low aggression with lack of clear goals. Both found boys to be more aggressive than girls. Arunima reported association between high aggression in children and low education/income/occupational status of parents but not their aggression or spousal relations or incongenial childhood. Children of younger parents and larger families tended to be more aggressive—without class/caste differences.

Srichandan, P. (1990) titled his study 'Perceptual correlates of Reflectivity-Impulsivity' but possibly studied the contributory relationship of the personality trait with performance on perceptual tasks. Both reflective and impulsive children performed well on certain visual-perceptual tasks, but MFFT errors and MFFT latencies were differentially related with different tasks.

Bhargava, S. (1989) turned her attention to anxiety and conflicts taken in relation to rigidity-flexibility and level of aspiration. (With correlations and *t* values she found a few 'effects'.) Anxiety seemed to be related to rigidity and unrealistic goal-setting, but conflict was not



related to either of the variables considered. Kumari, S. (1990) explored modernity in undergraduate students in relation to SES, self-concept and level of aspiration. (With correlations and CR's she too found some 'propellants'.) Girls were more modern than boys; modernity seemed to be related to SES and self-concept, but not to level of aspiration.

Two studies focused on competition-cooperation—Pal, A. (1988) relating it to personality and parental orientation, and Dembla, P. (1990) comparing it for girl students at three stages (100 each) in relation to SES, territoriality (locality), etc. Highly cooperative children were found to be warm-hearted, conscientious, obedient, more affected by feelings, excitable, enthusiastic, tender-minded and tense. Girls were more competitive than boys; SES showed a negative relationship with both cooperation and competition. Only mother's cooperative disposition was positively related to children's cooperation. Dembla found few differences significant, except urban-rural differences in both cooperation and competition of secondary school and undergraduate students.

Verma, J. (1992) studied achievement motivation, anxiety and learning style in relation to ecological variables like age, gender, caste, residence and SES of parents. Gender made differences in achievement motivation and anxiety, residence, in learning style, and parents' educational level in ach. motivation.

Khatoon, J. (1988) focused on personality patterns of high and low achievers among adolescents of Rohilkhand and, with a  $2 \times 2 \times 2$  factorial design and ANOVA, found a few significant differences as well as main effects and interaction effects of gender and locality on achievement.

Pradhan, R. (1990) chose to explore interpersonal attractions between adolescent boys and girls, relating it to personality make-up (extraversion-introversion) and found it to be related to similarity of attitudes (towards others),

which, in turn was related to personality.

Bhadury, J. (1989) investigated the effect of feedback in improving personality, desirable behaviours, prosocial values and teacher perception in secondary and senior secondary pupils (through a causal-comparative study) and found planned feedback to be effective in developing most of these (except in cases of psychoticism). In an experimental study Godbole, A.Y. (1988) found selective story-telling to be effective in developing personality in both delinquents and normal children (taken separately)—especially in respect of improving home adjustment, school adjustment, mental health and general behaviour (independently of LAT, RCT, intelligence and linguistic skills). Murthy, C.G.V. and Rao, T.R. (1987) investigated the 'effect' of *japa yoga* on reactions to frustration and certain personality dimensions only to find few significant differences between the *japa* practising and non-practising groups—except that the former generally showed extrapedetive reactions. (Sustained meditation—TM—might still produce significant effects over time.)

Thus, the different studies investigated a variety of relationships and differences and brought out corresponding findings with varying validity as well.

### Personality Patterns and Traits of Students

A few researchers have assessed and compared different combinations of personality traits in different groups of students at different levels. All the ten are doctoral studies. They are generally descriptive studies—surveys, often with comparisons among sub-groups by region, locale, type of school, SES, gender, ability, achievement, etc., sometimes with a correlational dimension. The findings cannot be expected—and are not usually claimed—to be generalisable for larger populations or extensive areas, but are almost as indicative of similar differences in similar sub-groups elsewhere, as are the relationships in the correlational and



causal-comparative studies surveyed in the earlier sections.

Pareek, D.L. (1990) compared the self-concept, personality traits and aspirations of adolescents in central schools, government schools and private schools in Rajasthan. The former two were reported to be more intelligent and imaginative and the latter more practical, with a higher percentage showing 'average self-concept'. (Some of the findings reported are apparently irrelevant or strange.) Sambhi, P. (1989) chose to compare the value patterns and some personality variables of secondary-level students in Sathya Sai Missionary and central schools, one each in A.P., with a limited 'incidental' sample, but employing 't' test and factor analysis! The three groups differed significantly in respect of both patterns, and showed many specific differences possibly attributable to the 'deliberate efforts' made in the settings. Vijai (1990) explored certain personality traits, achievement and level of aspiration of children of working and non-working mothers and found quite a few significant differences but not specific enough, considering that an SES scale, the 16 PF test and an LOA test were used. Swami, P.M. (1989) sought to compare children of orphanages with 'normal children' and found the latter superior in anxiety (lower), adjustment, self-concept and intelligence (with little difference after 16 years of age); gender, religion, etc., made little difference in both the groups.

Parwal, S.'s (1987) focus was on the disciplined vs. the undisciplined; the former were found to be higher than the latter in introversion and all the eight abilities represented in DAT. Rathaur, G.S. (1986) got interested in clowns inside and outside classrooms and compared 198 of each (with 'membership') on some cognitive and personality variables; class clowns were generally superior in different cognitive abilities (measured by DAT) but differences were not significant in respect of 10 of the 16 PF.

Four studies explored certain social-psychological characteristics of different

categories/groups of students. Baruah, M.K. (1988) compared professional and non-professional students on intelligence, 16 PF, DAT components and family background, and found differences in certain abilities, personality factors and preferences. Sundaram, J. (1989) was interested in comparing first-generation and 'traditional' learners and found many specific differences. Srivastava, R. (1992) delimited his study to Class X students of Navodaya Vidyalayas and gave percentage distributions for different levels of intelligence, self-concept, SES, occupational aspirations and adjustment; they were positively related to achievement. Sinha, N. (1991) preferred to compare academically talented and average students on a wide range of social and psychological factors and reported many specific similarities and differences.

#### **Attitudes, Values and Other Student Characteristics**

Many of the 15 studies reported in this area had something about attitudes and/or values, in their focus: development of certain attitudes or values, attitude change, certain correlates, etc. A few had 'religiosity' in one form or another as part of their concern. One was on differential aptitudes and another on scientific aptitude, a third on social maturity, and still another on 'affective behaviour'. While three studies focused on leadership, one project sought to raise the intelligence scores of lower-class children.

Three studies brought religiosity or attitude to religion, into their focus. Leela, A.V.S. (1988) related religiosity to certain personality variables (16 PF and locus of control) and gender. She compared the high and the low on the personality factors and further found that 48% of the variance in religiosity could be explained by five variables. Girls were more religious than boys. Kohli, O.P. (1989) also explored the relationship of attitude, to religion with personality characteristics, intelligence and SES. Apart from further confirmation on the higher



religiosity of girls, many significant correlations with intelligence, SES and some personality factors were obtained. Dadu, P. (1992) compared certain personality traits, values and religious attitudes and found many significant differences between sub-groups by SES and locale (urban-rural).

Chinara, B.D. (1992) tried out two strategies for developing seven democratic values in adolescents and found the self-confrontation strategy and the clarifying-response strategy to be variously effective in developing the different values. The former was most effective with extraverts and non-conformers and the latter with introverts and conformers.

Sultana, P. (1991) had a complex  $3 \times 2 \times 3 \times 2$  design for her experiment on the effects of goal structures, outcomes, instructional sets and levels of performance on attitudes towards self and others. Cooperative goal structure, success, improvement-oriented instructions and cooperative group processes seemed to enhance attitudes towards self and others. Bharambe, M.D. (1991) attempted a multivariate analysis of attitudinal change in children (8-9 years) through an experimental study. Attitudes to cleanliness and work were in focus, and the 'persuasive treatment' worked, but indications of stability of gains over time were not quite promising.

Chaturvedi, R.D. (1988) studied personality factors, value orientation and age as correlates of attitude towards social change, with three groups of adolescents, adults and old people (above 60). Among the many interesting findings were the relationships of empathy, value orientation, and progressivism in relation to age, with the attitude concerned.

Asthana, A. (1989) studied social maturity among school-going children in Lucknow and found it to be associated with age, grade, intelligence, achievement and adult-dependence (negatively), but not gender (through 't' tests, correlations and multiple regression analysis). Affective behaviour (consisting of interest,

appreciation, attitude and adjustment) of mathematics students at the higher secondary stage was the concern of Shrinivasan, T.K. (1991). He found some interesting similarities and differences between different kinds of sub-groups.

Leadership was the principal focus in three studies. Ingle, V.N. (1990) studied the leadership qualities of Class X students, through sociometric techniques and teacher opinions, and selected the qualities which students and teachers considered important (appreciated), indicating differences by medium, type of school and specialisation area. Mulia, R.D. (1990) reported a study of leadership behaviour of students in relation to their gender, level of adjustment and streams, and found gender to make a significant difference—not the other correlates or their interaction. (Some conclusions seem to go beyond the data—and are unwarranted.) Manu, P. (1992) investigated certain cognitive and affective styles of leadership-potential of 'plus 2' students in India—with a small sample from Agra. While leadership potential was assessed through Cattell's 16 PF test, cognitive style was assessed using Witkin's embedded-figure group test. Leadership potential was found to be significantly related to cognitive style, field independence, certain interest patterns and seven primary factors (which according to Cattell himself yield the leadership score).

Two 'cross-sectional' studies have been reported from Kalyani, one on scientific aptitude and the other on DAT. Mukhopadhyaya, D. (1991) was concerned with the effect of academic motivation and scientific attitude on scientific aptitude. With 21 hypotheses for testing through ANOVA and regression analysis, it was found that both the correlates 'contributed to' and could together predict the criterion variable. Bhattacharya, A. (1989) made a study of differential aptitudes (limited to 4) in secondary school students making many comparisons between subgroups by gender and locale (urban-



rural), and working out correlations.

Jailkhani, N. (1988) tried out an enrichment programme for raising the IQ scores of lower class children and found it to be moderately effective, but with some variations for different subgroups. But this is not exactly in pursuance of Sternberg's persuasive and fairly convincing thesis that intelligence consists of a set of trainable learning and thinking skills, or in line with his further analysis of the concept (not to speak of Howard Gardner's theory of multiple intelligences for which he got the prestigious Grawemeyer Award).

### **Adjustment, Problems, and Delinquency**

Most of the thirteen studies surveyed in this area are doctoral studies, one an M.Phil. dissertation and three are projects. Two of these focus on humour as a dimension of adjustment, two on factors influencing learned helplessness, three on correlates of delinquency, and three on adjustment problems of children/adolescents.

Srivastava, C. (1989) sought to relate teacher styles and certain individual/group factors in teacher-student relations to intellectual commitment and adjustment of college students (in Delhi—as a 'case' study). Employing ANOVA, factor analysis, regression analysis and cross-leg correlation analysis, among others, the study found higher SES, gender (girls > boys), need satisfaction, positive aspects of group atmosphere and college environment, task orientation of teachers, etc., contributing severally and interactively to the two criterion variables. Vijayalakshmi, R. (1991) investigated the relationship between self-concept and 'personality adjustment' of family-reared and institution-reared children (200 of 13-15 years) finding the two variables to be related, without significant differences between the two groups.

Jaluria, R. (1988) studied humour as a process and a product of personality, creativity and frustration, and found it to be more of a product than a process of the three. He also

found it to be related to emotional dryness, self-sentiment, ego-integration, dominance, social boldness, creativity and 'fixation frustration'. Coping through humour was the subject of an 'exploratory investigation' by Chhotray, M. (1991); he reported that humorous children gave enough 'indications of a distinct coping style', marked by anger but not a feeling of insult, emotional reactions, and seeking of information and social and emotional support.

While Sia, N. (1991) investigated the role of socio-cultural antecedents in the development of learned helplessness, Ojha, N. (1990) probed the task importance and depression attribution of success/failure as factors in it. Sia reported findings on differential effects of attitudes and expectancies of mother and father, training for independence, attribution explanation for negative events, parents' self-perception, etc. Ojha found helplessness to be more associated with failure in high task importance conditions; success was generally attributed to internal factors and failure to external factors. (Two other studies relating to helplessness are referred to elsewhere.)

Three studies related to crime-proneness/delinquency. Madhumathi, C. (1988) sought to identify personality correlates of crime-prone behaviour (with adult subjects in two prisons). On the 16 PF test, the subjects were seen to be reserved, assertive, tender-minded, imaginative, shrewd, experimenting, self-sufficient and tense (but it should be noted that such combinations do not necessarily make criminals). Many other interesting similarities and differences were also found between casual and habitual offenders. Murthy, C.G.V. (1988) chose to compare delinquents and non-delinquents in relation to intellectual level, reaction to frustration, family size and education. Delinquency was clearly associated with lower intelligence and larger family size and not with the other factors, comparatively speaking (but again, the two factors together do not always make for delinquency.) Kumari, S. (1990) studied



personality characteristics, achievement motivation, adjustment and SES of juvenile and adult female offenders. Offenders were marked by psychoticism, neuroticism, introversion, low intelligence and achievement motivation, low SES, etc. Urban-rural differences were not significant.

Sharma, N. (1989) studied the social, emotional and educational problems of adolescent college students (in Agra) in relation to personality factors and found many similarities and differences in respect of both between subgroups by gender, age and SES. (The relationships between the two sets of variables were not probably probed.) Kashyap, V. (1989) investigated some 'psychological determinants of adolescent problems' (using an array of tools and CR's and r's in her 'normative survey'). She found youth problems were positively related to anxiety, frustration, insecurity, emotional immaturity, etc., and negatively to intelligence (and achievement). Differences by gender and locale (urban-rural) were clear in respect of sense of security, with rural boys having it the best.

Mehta, P.; Gaur, J.S. and Mohan, S. (1988) surveyed the adjustment problems of boys with superior scholastic ability and Sharma, M. and Mehta, M. (1989) investigated the effect of discordance between interest, aptitude and chosen curriculum, in a study of psychological adjustment. Discordance is apt to produce disturbances of different kinds, but there are other factors—internal and external—that contribute to satisfactory adjustment and achievement. Choice of course is influenced by many other practical considerations, and not even a system of educational-vocational guidance, much talked about but little practised, would guarantee good matching. Matching not only curricular choices but treatments to several relevant factors in the learner is a major concern in education at present; but the variables are too many and the problem too complex for an easy or simple solution. (Is match-making perfect

anywhere, and is there perfect concordance in any situation?)

### **Teacher Characteristics, Perceptions, etc.**

Nine doctoral studies and one project have been reported in this area. Three relate to personality, leadership and/or other characteristics of teachers/principals, four to students' perception/conception of teachers, one to teacher perception of students, one to job satisfaction, one to teachers' stress and burn-out and one to teacher opinion. They are generally descriptive studies, mainly correlational and comparative, with one being an idiographic analysis; one—the project by Mishra, B.C.H. and Patel, B. (1990)—was concerned with the effect of teacher behaviour feedback.

Mittal, A. (1989) sought to relate teachers' personality characteristics to their classroom behaviour, analysed in Flanders' style as direct and indirect teaching (or influence). Indirect teachers were found to be more outgoing, intelligent, emotionally stable, humble, sober, conscientious, restrained, tender-minded, trusting, imaginative, shrewd, apprehensive, conservative, group-dependent, controlled and relaxed, than direct teachers. They were disciplinarians, technologists, humanitarians, stylists and academicians in type—in the descending order. Gupta, B.D. (1988) was concerned only with effective teachers of arts and science in intermediate colleges—their intelligence, personality needs and adjustment. Many comparisons were made; while the science teachers were more intelligent the arts teachers were better adjusted. Effectiveness was highest in the 30-39 age-group and it was negatively correlated with salary! 'Characteristics of effective leadership behaviour of secondary school principals' was the subject of Deota, N.P.'s (1990) 'survey-cum-case study'. Of four patterns of leadership behaviour, H H (high initiation and high consideration) marked by good task orientation, human relations, decision-



making, conflict-resolution, communication and creativity was found to be the best.

Misra, U.S. (1989) analysed conceptual differences among students at junior high and senior high (intermediate) levels, regarding an ideal teacher. Of the five broad dimensions analysed—namely cognitive skills, institutional styles, communication styles, personality traits, and rapport with students—the second was the most highly rated and the fourth the least. Short-term objectives of teaching seemed to weigh more than long-term educational goals. Khan, R.S. (1988) chose to study students' perception of teachers as a function of educational level, academic achievement and school background of students. Many comparisons were made and effects seen (thanks to ANOVA); both EL and SB seemed to be significantly related to the perception of teachers. Bhatt, S. (1986) attempted 'a cross-cultural study of self-disclosure and obedience tendency, as determinants of students' perception of science teachers'. ANOVA revealed significant main effects and interaction effects, with the obedient students showing a better perception; the Indian perception was better than the Nepalese. Bidyadhar, S. (1991) was concerned with teacher perception of students, and validation of the Lens Model in the social judgment process. In his 'ideographic analysis' (employing ANOVA as well) of data collected from doctors, engineers, lawyers and lecturers, all engaged in teaching and research, through interview and task-responses (in judging the quality of hypothetical students), he found (rather inferred) intrinsic motivation and sociability to be the main bases and then resourcefulness, competitiveness, classroom performance, hard work and past academic performance to be the second-order bases—with some differences among the four groups.

Job-satisfaction of teachers of central schools (of Northeastern region) attracted Goswami, T.N.'s (1988) attention. Aspects of general satisfaction and dissatisfaction were identified. Four out of the five cadres seemed to experience

dissatisfaction—and this was more in the case of men, elder persons, seniors, and teachers with UG and PG qualifications. Misra, K.N. (1991) investigated the interrelationship between organisational conflict in teachers' stress and burn-out in relation to personality—at the primary level. Analyses of data (collected from 200 teachers) through correlations, ANOVA, regression analyses, etc., revealed differences in relation to personality types/characteristics and type of management in respect of organisational conflict, stress in teaching and burn-out, and in behaviours for coping with stress and conflict.

### Miscellaneous

This group is a mixture of studies on different themes which cannot be clearly assigned to the earlier areas; two in a way relate to school organisation, but have some psychological implications; one relates to adult education; and most of the others are primarily sociological, with a psychological dimension of a general nature, without immediate implications for the formal education systems—at best the few educational implications are indirect, remote and/or secondary.

Rao, L. (1988) investigated the effect of noise pollution on the behaviour of school-going children. Many urban schools are located in areas with noise pollution beyond tolerable limits. This affected the strain and effectiveness of speech communication, concentration and anxiety of students, and even hearing capabilities over time. Patnaik, B. (1991) surveyed the opinions of secondary school teachers of Cuttack on co-curricular activities for development of personality, employing an opinionnaire and interview. A generally favourable opinion, and varied opinions on a number of specific activities and aspects were reported.

Reading interests and study habits of neo-literates caught the attention of Indira, K. (1992). Her survey (employing t-test and ANOVA) identified interests in three areas (entertainment,



social, mythological and religion) at three levels of popularity and gave indications of quantum, frequency, timing, etc. Agochiya, D.P. (1992) attempted a cross-cultural study of personality, values and altruistic behaviour of youth workers. One hundred and forty workers in the age range 21-54 from eight countries formed the sample. They were found to be relatively high on altruism and on social/political/religious values, and low on extroversion, neuroticism, psychoticism and theoretical/economic/aesthetic values. There were significant differences across countries/cultures. Jain, N. (1990) probed the effect of the perceiver's and the stimulus person's religion and sex on person perception. While there were significant differences among different religious groups, all were generally influenced by both the variables in question. Perception within one's group was generally more favourable than that outside it; there were interesting gender differences too. No influence of security feelings or self-esteem was seen.

Lidhoo, M.L. (1992) adopted survey-cum-case-study methods to explore the psychological development, family background and conditions at work of working children in Kashmir. 'Factors related to the quality of working life' were explored by Aggarwal, V. (1989) in Kurukshetra. She sought to relate some organisational, demographic, psychological and need fulfilment variables to QWL in industry. While Rath, S. (1991a) investigated 'learned helplessness and work alienation in organisations' (administrative/financial), Dogra, T. (1991) chose to compare learned helplessness and job involvement in white-collar and blue-collar employees. (Both are M.Phil. dissertations undertaken at Utkal.)

Three studies may fall in the area of "Women's Studies". Bharathi, L. (1988) probed 'role-conflict and personality types as stressors of educated working women', in Bangalore. Kapil, R. (1992) analysed the nature and sources of emotional tension of educated Hindu girls of

Agra; level of education seemed to make a difference. Jamuna, D. (1985) studied 'some factors related to adjustment of middle-aged and older women' in and around Tirupati.

Two researches by Kaur, D. (1991) and Shirotriya, N. (1988) focused on premarital expectations and apprehensions and marital adjustment respectively. The former found conservatism, neuroticism and psychoticism to be positively related to both expectations and apprehensions, and extroversion to be negatively related, with some differences between the genders. Women were more apprehensive than men. The latter compared Hindus, Muslims and Christians, on the one hand, and women and men on the other, to find significant difference only between Muslim men and women; SES too had some influence.

Nandi, S. (1989) made a comparative study of psychological and social effects of living in high density and low density housing; the elaborate findings generally favoured low density housing. Ratnam, K.S.J. (1991) chose to compare the administration and educational programmes of two central prisons in A.P. Whatever be the findings, including those on the frequency and severity of the crimes of the inmates, the 'key words' include repentance, rehabilitation, reformation, correction, etc., which represent a good psychological-educational approach and optimism-positivism in respect of prison management and programmes.

*(Note: Three other studies reported for this survey relate to personality correlates of the matching-figure test (Acharya, P. 1991), construction of Triguna personality scale; (Sandhu, S. 1990) and adaptation of Cattell's HSPQ (Thakur, R.N. 1989)—but they don't seem to have any implication for education, except that they can possibly be used as tools in research in education, especially educational psychology.)*



## IN CONCLUSION

### *Assessment*

Surveying over 135 studies reported in this area and searching for clear thrusts and trends has not given much satisfaction, to say the least. Analysing them for valuable additions to knowledge, contributions to methodology and scope for productive application has largely been a futile effort. The output in terms of number of studies has been fairly consistent in recent times and might have even registered a higher rate in the last decade; but the quality remains suspect by and large, and, still more importantly, so do their relevance and utility value for improvement of practices and systems in education. The trend report for this section in the Fourth Survey had, in its concluding part, highlighted some emerging issues, both conceptual and methodological, and made some meaningful suggestions on priority thrust areas and types of research needed; they are still very relevant and valid. For broad areas, the kinds of problems and themes selected for investigation and the types of researches have continued to be the same by and large; whatever changes have been noticed are not often in the desired direction. There have been fewer studies on learning, classroom climate and processes, cognitive growth and processes, and more on personality patterns and traits—their intercorrelations and distributions, apart from personality correlates. The 'obsession' with personality is more pronounced but the thrust is not on development of desirable personality traits. Experimental researches or intervention studies of value also seem to be fewer, and clear lines of investigation are missing. Few studies can be said to be extension of previous studies in chosen areas and along selected lines of special relevance and value; they cannot even be said to be replications of impressive and worthwhile studies conducted elsewhere. Cooperative researches, concerted efforts in selected thrust areas, and continuing

investigations on chosen lines are conspicuous by their absence; *ad hocism* seems to prevail almost everywhere. (Only a few institutions seem to pursue a chosen theme or two with purposeful consistency and vigour.)

### *Perspective*

Research is a highly purposeful and controlled activity; it is exacting, challenging, and possibly rewarding. It demands technical rigour and soundness. Whether it is basic research adding to theory and expanding knowledge, or applied research trying out new systems and treatments, employing innovative techniques and establishing their worth, it has value only to the extent that it makes for improvement of things, at least potentially if not in actuality, especially in a field like education. The areas, themes, points of focus and types of studies outlined in the section on international trends, could form the broad guidelines or suggestions for concerns, priorities and pursuits in the immediate future. The scope for meaningful research is unlimited in these areas, and the potential for valuable contribution immense. Even replication studies in different settings should be productive and useful; better still, if they are specially designed to suit the needs and features of varied situations in India and avoid the common weaknesses and pitfalls analysed earlier. Early childhood education, including compensatory education for the socially disadvantaged and culturally deprived, primary education, upper primary education and secondary education, and corresponding age-levels in more or less that order of importance/priority, could be given special attention; psychologically sound approach and treatment are required at these stages more than in higher education, and they should hopefully benefit most of the next generation. Categories of exceptional children should also get special attention, especially through innovative treatment. Implications of relevant findings in neuro-sciences should be duly incorporated,



wherever appropriate.

### *Thrust areas and types*

Learning should be—and is—the central concern and the core area of educational psychology; and closely related to that are development, individual differences and adjustment. The contributions and effects are reciprocal between learning, on the one side, and the other areas, on the other. Learning as a process has to be studied, understood—and undertaken—in relation to the products (intended and/or actual) as well as the different kinds of internal and external variables that affect both. Any one or two of these taken in isolation would yield only an incomplete picture and it would not form a meaningful component of larger and larger cognitive structures on the issues or themes concerned. While studies correlating the variables (internal/external variables to processes to products) might help in identifying variables of relevance as part of a preliminary effort, causal-comparative studies with selected variables and employing multi-variate analysis would indicate the interrelationships better. But to establish them firmly and analyse the effects of varying combinations, experimental studies are needed. And there is no limit to the scope and need for these, for, there are umpteen variables of relevance, and their combinations. There is a wide variety of important learnings at each level—even variety in kinds, not just specifics—and the learning and thinking skills involved, and the activities or steps that form the process are also many so that they have to be taken in different combinations and sequences. Tactics and strategies and metacognitive awareness and execution are important. Learner capabilities and preferences, needs and difficulties, talents and disabilities, existing structures and characteristics, too, matter. It is important to match the processes selected to objectives—contents on one side and learner-situation variables on the other. There are many situational variables of relevance and also the

time factor—and in classroom settings, teacher inputs too. All these have to be studied in their one-to-one relationships to find a thousand and one bits of answers to one basic question: What are the best or most promising learning procedures for different kinds of learners at different levels to achieve different kinds of learnings in different settings? (see 'Cognitive psychology' and 'Further Thrusts in the Areas of Learning').

Case studies, ethnographic studies and other situation-related studies, attempting comprehensive and deep probes and yielding clear pictures of the effects of a multiplicity of unique socio-psychological and educational factors in active interplay, mainly through qualitative analyses, should bring a breath of fresh air into the research arena. And they have their own value—not only for the situation concerned, but also for limited or qualified generalisation.

Normative surveys are relevant and useful if they focus on developmental components, feature qualitative shifts and increments, and yield norms for age-levels or age-grade levels in terms of means, percentiles, stanines, etc., in respect of measurable variables; in-depth qualitative description covering all the aspects under examination would be valuable, too. Clear patterns and trends should emerge—also of variations, across different socio-cultural and educational settings. Relationships among such features and with contributing factors would provide the bases for intervention treatments/studies for modifying, strengthening, accelerating, enriching the gains or outcomes. Training researches with development orientation has abundant scope and value. Studies in personality should now focus more on developing desirable traits and utilising them for improving behaviour and performance, and for achievements of value. This again calls for innovative treatment, and intervention studies, and the scope is unlimited. It merges into the related area and problems of adjustment; coping strategies and styles assume relevance.



Intervention studies employing different treatments and techniques of group guidance and individual counselling are warranted not only for 'problem cases' but for all with a view to promoting balanced, healthy, harmonious, strong and well-integrated personality development, and development of well-adjusted, competent, achieving, self-actualising, fully-functioning individuals with a genuine concern for society, indeed for humanity as a whole. (Isn't that what education is all about?)

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