

Review

Disciplines as Child Development, Educational Psychology and School Psychology have large overlap because in the modern world 'school' has the major role in human development for advancement of society. It is also the main system that introduces basic skills for the survival and progress of the individual. Great persons like Swami Vivekanand look at the school as a place for character formation expanding intellect and strengthening mind, equipping the child to stand on one's own feet. For this kind of 'man making' education, schools should provide the learning environment for holistic development. Do they fulfill this expectation? The researches at Jnana Prabodhini (JP) try to explore the situation from psychological perspective. It is essential also because JP runs formal and non-formal educational programmes and variety of activities for students.

Human development proceeds through interaction between individual and environment. When we consider school as the environment, both students and teachers are not only 'products' of schooling; they also produce changes in the environment. Students, teachers, curriculum, examination system and implicit role of parents, etc. are the main factors that influence the whole process of development during school age of a child.

Students' scholastic achievement as indicated by school marks and their adjustment in the school always come forth as the main consideration by teachers as well as by parents and researchers. However, students' learning ability, aptitudes for future career, identification of hidden talents, holistic development of personality etc. receive secondary importance. In teachers' training emphasis is more on 'teaching skills' for implementation of government policies rather than on the use of innovative and indigenous methods. Teachers' personality which leaves positive marks on teacher-student interaction is very often ignored. Parents' role also has to be attended. Research at Jnana Prabodhini has explored such issues through doctoral researches, major research projects and also through post graduate level dissertations and small try-outs during action.

Development of Basic Skills

The initial research at JPIP has focused on reading, creativity and test construction. However, while conducting these experiments in the classroom, a few other topics also were explored. Interestingly, it was noted that students with high reading speed were not so good in writing skills. Their thinking speed was pushing their pen and pencil without any discipline. So, an

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experiment was done with an intention of improving writing skills (1). Writing speed, handwriting, content and general structure were the topics included in the program. A pre-post design was used. Results showed significant improvement in content and form. After a long time there was again some interest to study writing skills. Writing difficulties in low achievers from English medium secondary school were analyzed in a small study (10). Low achievers were found to be poor in basic writing skills as word recognition and spelling. The importance of writing skill is inherent both in learning and in examination. In a very innovative program, a favorable effect of story-telling was noted on the writing skills, memory and comprehension (11). Listening to story improved interest in learning vocabulary, acquaintance with language as well as concentration facilitating understanding of arithmetics.

Low achievement in scholastic learning can be prevented if learning difficulties and mental abilities are studied in time i.e. when children start learning three R's. JPIP has standardized Indian Child Intelligence Test (ICIT) for young children (4 to 12 years age), which is useful for various purposes. A study was undertaken to verify the use of this test in the diagnosis of Learning Disabilities (LD) and Mental Retardation (MR) (33) and children diagnosed as LDs through teacher-made tests got verified by ICIT. Such standardized tools are useful for initial screening and to locate strengths and weaknesses in the thinking skills. However mere assessment and diagnosis followed by remedial teaching are not enough. LDs have reflections also in affective domain. An in-depth study was undertaken to find co-morbid factors which contribute to behavioral and emotional problems of students with learning disabilities (41). Results of the study for this purpose indicated Malin's Intelligence Scale for Indian Children (MISIC) as reliable tool for indication. Correlational analysis revealed co-occurrence of Attention Deficit Hyperactivity Disorder (ADHD) and emotional problems but no such significant relation was found between behavioural problems and intellectual abilities along age.

Scholastic Achievement and its Correlates

Scholastic achievement is influenced by external factors as well as some personality characteristics. Effect of media, socio-economic status of parents, social-cultural milieu, atmosphere at home and school, etc. are the external factors that more often seem to be taken into account. Child's adjustment at home and school, anxiety, motivation, etc. are the factors in child's affective domain that immediately attract attention of both teachers and psychologists. What is the role of these factors and to what extent any of them is influential, should be investigated. Many such attempts are presented here.

Effect of peer relations and media on achievement are very often discussed in the society. In a small study (7) contrary to common expectation, watching TV didn't reveal any relation

with achievement though high achievers clearly showed interest in reading, music and craftwork. Underachievers did not show influence of peers. The study was done in 1994- when computer did not have decisive impact on children. There can be some more extrinsic as well as intrinsic factors related to scholastic achievement.

Failure in the school exam seems (22) to depend on many factors other than intelligence. They include physical disability, low education and income of parents, unhealthy atmosphere at home, fear about teachers and lack of motivation; peer group is one of the factors. Many times teachers advise 'IQ test' of a child after failure in the exam, but in this study the responsibility of both teachers and parents was underlined. Another study showed importance of proper guidance (24). Satisfactory study habits and adjustment at school and also at home, did not guarantee better performance.

When medium of instruction in the school is different from mother tongue it influences school adjustment, home adjustment and achievement of adolescent students. A study in this respect (13) has shown students with low family adjustment having low school achievement and there was no effect of school adjustment on achievement.

Different variables seem to be correlated with underachievement. When the relation between such variables was studied in the group of underachievers, home adjustment was found to be significantly correlated with school adjustment and self-concept, but study habits did not show significant correlation (12).

Attempt was made to identify factors contributing to achievement, motivation and achievement-motivation separately. The program implemented for socio-economically deprived children was observed, and based on those observations, the intervention program combining motivational aspect and coaching for improvement in learning was conducted. As a result students showed more interest and better achievement in the school (19).

Along with desire and interest, aspirations start influencing the learning behavior in secondary school. It has to be investigated continuously. In one such study of girl students (8), high achievers were found to be inclined towards achievement related aspirations than task related. They were most interested in administrative field where entry is through competitive exams and less in business and scientific for which long term pursuits are essential.

Specific interests of students strongly determine their learning through concerned subjects. To develop interest in the subject, the factors related to interest need to be investigated. A study was done to find out the relation of interest with aptitude and level of intelligence (16). The results showed significant relation between mechanical interest and mechanical aptitude, and

between scientific interest and intelligence. No such relation was found between business interest and intelligence. In the study of relation between career choice and personality traits, mental ability and family background, external factors were found to influence career choice (20).

In school life, social skills are important. Students lacking in these skills often have to struggle to communicate with teachers and peers and get adjusted in the school. In a study in this regard, (9) it was found that personality characteristics were more decisive for achievement in school life. Behavioural intelligence as measured through SOI test did not show such relationship. In another study, students' performance on test of Decision Making in social situation showed very low and non-significant correlation with intelligence and more with personality factors (3). Certainly measurement of behavioral social ability has limitations, more so for its use across the cultures. It was shown in a critical study of behavioral intelligence and similar concepts (4).

Psychosocial Correlates of Development

Managing emotions and adapting with the environment are significant variables in adolescent development in the school and outside the school. Anxiety behavior affects performance more when individual is in the field and children are on the playground. So a study was conducted to see the effect of intervention in anxiety management. The results were promising (14). Factors from affective domain as well as from cognitive domain influence sports performance. Hence a very well designed specific training of mental skills was implemented for athletes in the school. The results were encouraging (40). Overstrain in competitive sports often shows detrimental effect. But how to assess it in time is the question. It posed a problem for investigation and was studied through Ayurvedic approach, on the sample of athletes from the track and field. The assessment protocol developed for the purpose was useful to diagnose Over Training Syndrome (OTS). Comparatively high percentage of OTS in track events was observed than jumping and throwing events (46).

The way students interact with the environment and adapt themselves depends on the strategies they used for coping. How are those strategies developed? Do interest and orientations make any difference? A study in this respect (44) has shown that students more often used social interpersonal ways to cope up than other strategies. In the school, students very often have to work in a group. In a group-task, participatory behavior is essential to achieve the goal. When it was studied in relation to group activities, participatory behavior and personality variables (18), results indicated moderate relation between these variables.

Effect of environment on thinking skills has been studied both at macro level and micro level. This was clearly verified in the unique study of children exposed to a program under

Integrated Child Development Scheme (ICDS) (5). Children in the program started thinking in relation to inputs received for personal hygiene, cleanliness, protection of environment through plantation and fencing the school space. Parents also were involved in these experiences. As a result there was a change in behavior of children and parents as well as improvement in scores on psychological test. The trend in improvement was assessed periodically and compared with control groups.

In another such study of wider school population, the effect of environment on cognitive abilities (2) was also clearly revealed. When performance of children on 90 SOI tests was thoroughly analyzed, the results indicated urban-rural differences more on verbal semantic abilities and in favour of urban children, while rural children were comparable to, or even superior to, urban children on visual divergent thinking.

Some students with financial problems cannot take regular education, hence get admitted in night school. Do these students differ from day school students with respect to motivation and self concept? Do they face same learning difficulties like day school students? (21). Results of the study in this respect indicated no significant difference on tests of motivation and self concept, and contrary to expectation more learning problems, in case of day school student.

Interventions and Training Programmes for Pupils, Parents and Teachers

Schooling occupies the major part of formative period of individual's life. Hence interventions for holistic development should be affiliated to school system. The fact that integration of cognitive and affective domains facilitates development in both, cannot be ignored. A long term study was done to find the effects of storytelling on the personality characteristics of children in the primary schools and also adolescent juvenile delinquents in the industrial school (6). Results indicated the positive changes in general behavior and personality characteristics both in normal students and juvenile delinquents.

The basic skills in reading, writing and arithmetic are essential for learning in the school and also off the school. Can these skills be improved through play activities? The experiment for improving vocabulary and numerical operation through play like exercises was done successfully (15). Results encouraged continuing such interactive methods for improving different abilities from SOI model.

Enhancement of numerical ability is possible if basic thinking skills at the root of numerical operations are well nourished; SOI model provides the guidelines. In a six day intensive training (39) of students from std. II and VII the effectiveness of the curriculum based on factors from symbolic content of SOI model was experimentally confirmed.

In the school life, curriculum and classroom teaching cannot handle holistic development of the student. Some well planned inputs over and above regular school seem to facilitate holistic development of children. It was verified in the study (23) of children at child development center (Garware Balbhavan). So formal classroom teaching should be supplemented by variety of co-curricular programs. These programs can be conducted during vacations or free time throughout the year. JPIP has evolved such comprehensive program for children, referred as CCDP (Comprehensive Child Development Program), which helps the children develop cognitive, emotional and social abilities. At times their effect has been evaluated scientifically. Studies in these respects have noted statistically significant change (37), (47). The positive change has been noted on children coming from different family and socio-economic background and from distant group such as children from Assam Rifles group (27). In these programs sometimes specific skills were emphasized and the effect of activities was verified. Positive results were noted when activities were oriented for leadership experiences (51). It was also seen in another program for adolescent girls in slum area (50). Nature of the group, the period of the program, the type of activities, etc. are the important variables that influence the outcome. When such program was implemented for rural adolescents, positive results were not obtained. Redesigning of the curriculum was found to be essential (48).

Can we not design a more comprehensive curriculum for both children and youth for their development and make use of vacations for the same throughout their school and college education? In one such study known as Child and Youth Development Program (CYDP) (28) a sequential developmental program was spaced over 2 years and inputs were given for development in physical, intellectual, social-emotional and spiritual domains. It showed significant improvement that was verified both qualitatively and quantitatively.

Even if such programs are successful, there will be limitations for extending their scope. Orienting teachers and parents in facilitation skills for the comprehensive development of children and youth is one solution. Hence JPIP experimented with teachers. Two such major programs were conducted. In one program (29) training of secondary school teachers was found to have positive effect on their own personality as well as students' abilities and scholastic achievement. In another program with wider scope (52), teachers from pre-primary, primary, and secondary schools, were given training spaced over two years. Results were quite encouraging, showing improvement in teachers' abilities and quite demonstrative change in students' performance. More in depth analysis of a small group from these teachers confirmed the impact when tested through statistical rigors (49). The whole environment was changed in both these programs. Need for teacher training for holistic development of children has been also supported from

other side of coin in the same study. Why do students learn? What do they want to receive from the education? The correlational study of students' learning orientation and their scholastic achievement revealed the significant relationship. Students look at schooling not only for examination but also for personality development, social recognition and making a future (45). Teachers need training to equip themselves to satisfy such needs of the students. A teacher training with a limited scope was also extended to "Anganwadi Teachers" in another program where positive effects were observed qualitatively (43).

Like teachers, some efforts are done for parents too. Parenting is a job for which there is no formal training. What does parenting mean to parents? In what way training in parenting will facilitate child development? In an international cross-cultural study when two groups in India and one group in The Netherlands were compared, they were found to use child's leisure time mostly in a similar way. Parents everywhere are alike in some respect! In the same study one group in Pune received training in parenting skill focusing communication skills and creative behavior. The training showed positive effects on both parents and children. Results showed improvement in certain mental abilities of children including creativity. The results suggest how parents can change the environment at home and enhance child's abilities (35).

Use of Psychometric Test

Variety of psychological tests seem to be constructed or adapted by psychologists and teachers for school children. Norms of such tests are to be revised periodically and local norms have to be developed along with general norms. It is true even for widely used tests as Raven's SPM. In one such study of tribal children in which JPIP participated in coordination, tribal children showed lower Mean scores than urban, at all age levels. Tribal norms will have to be used while working with those children (36).

Administering the test and interpreting the results require specialized training which puts limitations on the use of the test. Researchers at JP have tried to overcome these limitations. The administration and interpretation are made easier at the same time reliability and validity are increased. Two such illustrations are mentioned here. It was found essential to have a proper user friendly tool to study anxiety behavior among students. One such tool was re-standardized for this purpose and its validity was studied, in which the interpretation guide is modified to decide the level of anxiety and screen out the needs for more guidance (38). Another example is a major scheme of aptitude testing for career guidance. Though in the last section such tests are described, here in this section it is worthwhile to mention how a computerized test has been helping thousands of children for choosing their course after 10th standard. The test battery "I-AM" (Intelligence and Aptitude Measurement) has been developed using SOI and personality

tests and has been fully computerized. Relevant studies are being continued to investigate the effect of mode of presentation, and to see whether computerization facilitates or limits the performance? (25). In the investigation some differences between written and computer version were noted. Other psychometric properties also have been under constant explorations (26), (30). Norms are revised (32) and even the questions are modified (31). Though a highly statistical analysis is essential in psychological tests, it assures the artifact of the test to a greater extent, subjective impressions and feedback from parents and students are essential for ascertaining the purpose while using the test. No stone was left unturned in this respect to verify validity of the test battery I-AM as well as the guidance given for choosing the career (34). Any guidance program has to satisfy students' needs. Guidance for choosing an academic course after 10th or 12th std. and that for career choice afterwards, makes some difference. In the latter case work related preferences and psychological factors become significant over and above abilities and orientations. It is well incorporated in the test battery SWAYAM recently standardized on the sample of graduates (35).

Research put to use

Research in educational psychology has immediate application by teachers and psychologists. Activities in child development workshops for enhancement of child's potential in cognitive and affective domain, is a major such systematic step. In teacher training programs conducted by JPIP, teachers' own personality is focused. Teachers are oriented towards role of teachers and the school, in child's holistic development, and use of indigenous methods as story telling for motivating children and developing their basic skills. Parents' workshops also are conducted periodically. Being creative for one's own growth and facilitating child's development are emphasized, both for teachers and parents.

What is needed?

Based on our applications certain modules are to be standardized for further research in child development and teachers' and parents' training. Significance of OTS in sports suggests such study in other areas. More indepth research is essential in underachievement. Limiting our interest to JP's priority areas more attention should be given to underachievement of identified gifted (superior ability children). Association of certain variables with underachievement might be due to other factor that induces such associationship. Some findings from small studies in this respect have more research value; it should not be overlooked.