Chapter 2

Review of Literature
REVIEW OF LITERATURE

Review of the literature is of utmost importance for a research scholar. Review of the literature, besides to allow the researcher to acquaint with current knowledge in the field or area in which a scholar is going to conduct his research.

Review of the literature in educational research provide research with the means of getting to the frontier in his particular field of knowledge until we have learned what others have done and what will remain still to do in our specific area. Efforts have been made to present especially such studies in this chapter which have born some relation with the present study. Since the literature is not available in abundance, therefore the investigator had to work under certain constraints; the investigator had to rely on what was thought to have direct or indirect bearing on the problem under investigation.

Review of the related literature enables the investigator to locate the gaps and find the trends in research in a particular field. The information about he designs, samples and research tools employed by other investigators help the future investigators to formulate their designs with more care. An investigator must be aware of the new researches conducted in the past and only than he/she in a position to contribute some thing in original.
Good (1972) has rightly remarked, "...without a critical study of he related literature, the investigator will be groping in the dark and perhaps uselessly, repeat the work already done. Therefore, to save time, energy and resources, it is necessary to undertake a detailed and penetrating study of all available literature".

The review of the literature serves as a guide post to judge the quantum of the work done and perceive the gaps existing in the concerned field of research. A critical review of the literature enables the researcher to go into greater details and wider applicability of the problem in hand so as to provide new ideas, explanations or hypotheses. The review promotes a greater understanding of the problem and its lied aspects and ensures that unnecessary and useless duplication is avoided.

Tuckman (1972), "the purpose of the literature review is to expand upon the context and background of the study, to help future to define the problem and to provide an empirical basis for the subsequent development of hypothesis."

This chapter is devoted to review of available literature relevant to the present study. An effort has been made to cover almost all the important dimensions that may have a direct or indirect bearing on this study. The review of the literature is presented as under;
Shukla, P.C. (1981) "Adjustment' Problems at Plus Two Level"

The study was designed to investigate the adjustment problems of boys and girls from rural and urban areas studying at 2+ level. For this purpose it was hypothesized that (i) the rural and urban students will differ in their adjustment problems; and (ii) a significant difference in the adjustment problems is found in the boys and girls. 100 students of 2+ level were selected at random from eight intermediate colleges in the district of Sitapur (U.P.). They were selected in terms of sex (boys and girls) and rural and urban students in equal proportions. The revised adjustment inventory of Dr. Pamod Kumar of Judhpur University was used to collect the data for the present study. For the analysis of data, Mean (M), S. D. and 't' test were used.

The results confirmed that: (i) there is a significant difference between rural and urban students in their adjustment problems. Both the groups differ at .01 level. The rural students have more problems of adjustment than the urban students, (11) the boys and girls differ significantly among themselves in respect of the adjustment problems. Thus it can be established that adjustment problems are found more in girl students than in boy students. Sex is found to be related with adjustment problems.
Sandhu, Kiran (1988) "A comparative study of sportswomen and non-sportswomen in selected psychological and sociological variables".

This study compares the personality participation and socio-economic status of sportswomen with non-sportswomen in respect of selected psychological and sociological variables.

The objectives of the study was (i) To study the personality factors of sportswomen and non-sportswomen, (ii) to compare the personality factors of sportswomen and non-sportswomen, (iii) to study and compare the socio-economic status of sportswomen and non-sportswomen. (iv) to find out the dominant personality factors among women participants in sports, and (v) to study the influence of socioeconomic status on the sportswomen in their choice of sports.

The sample consisted of 200 sportswomen and 200 non-sportswomen, randomly drawn from various colleges of Delhi during the academic sessions 1984-1985 and 1985-1986. The tools used to collect the data included 16 PF Questionnaires by Cattell to measure personality factors and Socio-economic Status Scale. The collected data were treated by using mean, SD and 't' test.

The researcher investigates (1) the sportswomen (SW) were
found to be more tough-minded and group-dependent and less submissive, shy and sober as compared to non-sportswomen (NSW).

(2) Both groups were found to be reserved, less intelligent, emotionally less stable, conscientious, suspicious, practical, shrewd, self-assured and experimenting, uncontrolled as well as relaxed. (3) In team games, SW differed significantly from NSW. In individual games, SW differed significantly from NSW on factors B, O, Q1 and Q4 (4) No significant differences were found between the two groups on factors A, C, F, G, H, M, N. and Q2Q4. (5) Non-sportswomen scored higher on all the factors of socio-economic status indicating a relatively better socio-economic background than that of the sportswomen. (6) Representation in team games by SW was in a significantly low proportion from the upper middle class and in a high proportion from the lower middle class as compared to the in individual games. [SPR 0596].

Kaur, Prabhsharan (1992) "A comparative study of some psychological characteristics of women hockey players playing at different field positions”.

The study examines the selected psychological characteristics of women hockey players playing at different field positions.

The objective of this study was to investigate the differences in cohesiveness, cooperation, concentration, and emotional stability
aggression and introversion extraversion among women hockey players playing at different field positions.

The sample of the study comprised 288 hockey players (198 members of playing women's teams and 90 waiting members) covering seven field positions. The tools used to collect data included Indian Adaptation of TAT, Cohesiveness Scale also termed as the Group Environment Questionnaire by Garron et al. and Group and Cooperation Attitude Scale constructed by the author. The collected data were treated with 't' test.

The findings of the study are (1) In the case of cohesion, none of the 42 comparisons, 21 pertaining to the different field positions of playing members (Goalkeeper, Full-Back, Half Back, Centre-Half, Left-In and Right-In, Centre-Forward, Left-Out and Right-Out) and 21 pertaining to waiting players, yielded any significant difference. (2) None of the 42 comparisons, 21 comparing cooperation among playing members at different field positions and 21 comparing cooperation among waiting members at different field positions yielded any significant difference. (3) Among the playing members left and right-outs were found to be more aggressive than goalkeepers. (4) None of the comparisons pertaining to concentration among the playing members at different field positions and waiting players at different field positions yielded any significant difference. (5) Regarding introversion extraversion: (a) goalkeepers were less introvert than centre-half. (b) Goalkeepers were less introvert than
left/right-ins. (c) full-backs were less introvert than centre-half. (d) full-backs were less introvert than left/right-ins. (e) full-backs were less introvert than left/right-outs and (f) half-backs were less introvert than centre half. (6) Goalkeepers were found to be less stable emotionally than left/right-ins. centre-half and left/right-outs. None of the 21 comparisons pertaining to the emotional stability of waiting members of different field positions yielded any significant difference. [AK 1808].

Khan, Husain (1990) "A study of the effect of special sports training on some psychological attributes of athletes".

This study examines the effect of special sports training on some psychological attributes of athletes.

The investigator has to find out (i) the effect of sports training on some psychological attributes and to pin-point those attributes and sport disciplines in which the maximum minimum or no effect of sports training is registered. (ii) the collective effect of sports training on the psychological attributes of male female and individual-game and team-game athletes separately. (iii) the differences existing in the male and female athletes and individual-game and team-game athletes at the pre—and post-training levels separately and (iv) to examine the changes taking place in the pattern of intergroup differences due to sports training.
The sample consisted of 274 athletes comprising 230 males and 44 females. The age ranged between 20-25 years. Their education ranged between 10-16 years and experience between 3-10 years. The tools used to collect the data included Eysenck Personality Questionnaire, Sportsman Spirit Test by Dubey, Sports Competition Anxiety Test by Martens, Sports Achievement Motivation Test (SAMT) by Kamlesh and Inventory of Factors Influencing Sports Career (IFISC) for the Assessment of Locus of Control by Kamlesh and Sharma. Mean, SD,'t' values analysis of variance (ANOVA) and inter correlations were used to analyse the data.

The result confirmed that (1) in more than 50% of the sport disciplines included in the study the attributes of skills. Extraversion, neuroticism, competitive anxiety and sportsman spirit registered changes in the positive direction. (2) The positive changes in achievement- motivation and internal locus of control took place in 40% of the sport disciplines. (3). Changes in the attributes of psychoticism was found in 33%, and social desirability and external locus of control in 20% of the sport disciplines. (4) The athletes belonging to team-games and male athletes registered more intense and positive changes when compared to the individual-game athletes and female athletes. (5) The pattern of intergroup differences in attributes changed considerably following the training programme. [JNJ 1804].

This study compares the self-concept, adjustment and creative thinking of sports and non-sports school girls of Himachal Pradesh.

The objectives of the study was (i) to ascertain whether there are significant differences in the self-concept, adjustment and creative thinking of school sports girls and non-sports girls. (ii) To find out differences in self-concept, adjustment and creative thinking between rural and urban school-going girls, and (iii) to find out the independent and interactive effects of sports/non-sports and rural/urban residence on self-concept, adjustment and creative thinking.

The researcher worked on 600 students, covering 300 sports girls and 300 non-sports girls. The stratified random sampling technique was used for selecting sports girls and the random device was used for non-sports girls' selection. The tools used to collect the data included Self-concept Scale by Saraswat, Sinha and Singh's Adjustment Inventory and the Creative Thinking test by Mehdi. Mean, median, mode, SD, 2 x 2 ANOVA and 't' test were applied to analyse the collected data.
The Major Findings are: (1) Sports girls belonging to rural and urban areas were found better in physical, social and temperamental self-concept in comparison to non-sports girls of the same area. Non-sports girls were better in educational, moral and intellectual self-concept than sports girls. (2) Sports girls belonging to rural and urban areas were better in emotional, social and educational adjustment than non-sports girls. (3) Non-sports girls scored better in all creativity variables in comparison to sports girls. [JNJ 0260].

Parveen (1991) "A comparative study of kho-kho and basketball women players at inter district and inter-state levels in their motor abilities, intelligence and personality traits".

The study focuses on the identification of differences in the motor abilities, intelligence and personality traits of kho-kho and basketball players as well as identification of differences between national-level and state-level players with respect to these variables for each of these games.

The investigator worked (i) to identify the difference in motor abilities, intelligence and personality traits of inter-district and inter-state level kho-kho and basketball players. (ii) to compare the motor abilities, intelligence and personality traits of inter-district and inter-
state kho-kho and basketball players and (iii) to find interrelationships between the variables under study.

The sample comprised 150 female kho- kho and 150 female basketball players selected from Delhi, Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan and U.P. In the case of each game, one-half of the samples were inter-district and the other half were inter-state players. The tools used included seven scales—C. E. M. N. Q2, Q3 and Q4—of 'A' Form of Cattell's 16 PF. Hand grip, Leg and Back dynamometers, two sub-tests of Physical Fitness Test Battery of Malhotra et al., i.e. 2.4 kilometre run and 60 metre Dash (for speed) and Non-verbal Intelligence Test by Lorge-Thorndike. ANOVA, t-test and correlations were used to analyse the data.

It was found that (1) basketball players were more matured emotionally, more practical, more group-dependent; more relaxed and had more muscular strength but lesser speed as compared to kho-kho players. (2) Kho-kho and basketball players did not differ from one another in assertiveness, shrewdness and discipline. (3) National-level players were found to be emotionally stable, more assertive, more shrewd, less group-dependent, more relaxed, and had more muscular strength, endurance and speed than state-level players. (4) National and state-level players did not differ in respect of practicability, discipline and intelligence. [AK 1674].
Dass, Charan (1998) "The achievement motivation adjustment and creative thinking of college athletes in relation to their performance in track events".

The study examines the achievement motivation, adjustment and creative thinking of college athletes in relation to their performance in track events.

To researcher has to determine (i) the relationship of the subjects' achievement motivation, adjustment and creativity with performance in track events, and (ii) to see the combined effect, of the subjects' achievement motivation, adjustment and creative thinking abilities on their performance in track events.

The sample comprised 300 track –event male athletes of the 100 metres, 400 metres and 1,500 metres race and the 110 hurdle race. They were selected from six districts of Punjab. The tools used included; Rao's Achievement Motivation Test, Sinha and Singh's Adjustment Inventory for College Students and Torrance Tests of Creative Thinking – Figural Form A. The collected data were treated with mean, S.D't' test, partial and multiple correlation.

The result confirmed that (1) Achievement–motivation was found to be positively related to track performance and hurdle race. (2)
High performers had higher achievement-motivation than low performers on all the track events. (3) High performers had had better adjustment than low performers on all the track events. (4) Creativity was positively related to all track events. (5) Achievement - motivation, adjustment and creativity as a team could predict performance better than when they were considered separately. (6) No significant difference was found between athletes of the four track events with respect to achievement motivation. [AK 1844].

Dhaliwal, Sutinder (1992) “Physical fitness of 10 to 18 year old males living at two selected altitudes”.

The study has examined the physical fitness of 10-18 year old males living at two different altitudes.

Researcher has To ascertain (i) the effect of altitude on the physical fitness of 10-18 year old males, year-wise, living at two altitudes-2,000, feet and 7,100 feet above sea-level. (ii) to compare the physical, fitness of 10-18 year old males belonging to upper and lower middle class, categories, year wise, living at 7.100 feet above sea-level, and (iii) to compare the physical fitness of high altitude males with the males living in the plains.

The sample comprised 1,080 male subjects, belonging to Bilaspur and Shimla, representing the lower and higher altitudes
respectively. They also belonged to different socio-economic classes. The tools used included weighing machine for body weight, Anthropometric Rod for height, Lange Skin folds Calliper and physical fitness tests. The data were treated using mean, SD, Test, correlation, coefficient of variation, growth velocity and growth gradient.

The result revealed that (1) the Altitude did not affect the height, weight, flexed arm hang, sit-ups, 50 metres sprint, forward bend and reach and 60 metre run/walk of males in the age – group of 10-18 years. (2) Higher-altitude males performed better than lower-altitude males in standing broad jump and shuttled run. (3) Affluency helped in increasing the height, weight and performance in 50 metres sprint but had a negative effect on forward bend and reach and 600 metre run/walk. (4) Affluency did not have any effect on flexed arm hang, sit-ups, shuttle run and standing broad jump. (5) The various measures of physical fitness were intercorrelated in general for low-altitude non-affluent and high-altitude non-affluent group, [AK 18451].

Basra, Surjit (1991) “A study of motor skills, physical fitness and selected psychological variables in male college hockey players”.

The interrelationship between Motor kills physical fitness and selected psychological variables were examined in this study.

The objective of the study was to find out the interrelationships
between motor skills. Physical fitness and psychological variables.

The sample included 200 male college hockey players who were selected through the stratified random sampling technique. The tools used to collect the data included Hockey Test Battery by Sangral. MHPER Youth Physical Fitness Test (revised) and Eysenck Personality Questionnaire. The collected data were treated with Pearson's product-moment correlation zero order correlation and partial correlation.

The findings are (1) Scoop for accuracy was negatively correlated with endurance and speed, but not with muscular endurance, abdominal strength and power. (2) The physical fitness components, i.e. agility speed endurance, power and muscular endurance had a multiple correlation with scoop for accuracy. (3) Scoop for accuracy was positively correlated with introversion, but not with psychoticism, neuroticism or lie scores. (4) Extraversion and lie scores had a joint positive relationship with scoop for accuracy. (5) There was a significant negative correlation of self-hit or slop with endurance agility and speed, but not with muscular endurance, abdominal strength or power. (6) Endurance, speed, agility and abdominal strength had a significant multiple correlation with self-hit and stop. (7) Self-hit and stop was correlated with extraversion, but not with psychoticism, neuroticism or He scores. (8) Dribble and push had a significant negative correlation with endurance, ability and speed, but not with muscular endurance, abdominal strength and
power. (9) Dribble and push had a multiple correlation, with extraversion, psychoticism and neuroticism. IAK 16751.

Kaur, Narinder (1991) "A study of pre – adolescent players in relation to their motor-fitness, intelligence and emotional stability".

The study examines the effect of sex, intelligence and emotional stability on the motor-fitness of pre-adolescent players.

The study has to find out (i) the effect of intelligence and emotional stability on the fitness of 9 and 12-year olds and combined 9 and 12-year old players. (ii) the sex difference in motor-fitness. (iii) the interactive effect of intelligence, emotional stability and sex on motor-fitness, and (iv) to find out the inter-correlations among intelligence, emotional stability and motor-fitness components.

The sample comprised 300 randomly selected players including 100 (50 male, 50 female) 9-year olds, and 200 (120 male, 80 female) 12-year olds. For intercorrelation, these total samples were used, but for the factorial design only 113 subjects. Covering 48 males and 65 females were retained. The tools used to collect data included a Questionnaire. Draw-a-Bicycle rest by Sharma. Draw-a-Man Test by Misra. Emotional Stability Test (EST) for Children by Gupta and Singh and North Carolina Motor-fitness Battery. For
analysis The players were grouped as high and low intelligent and high and low emotional stability. Three-way (2x2x2) ANOVA IIid correlations were used to analyses the data.

The result confirmed that (1) In the case of 9-year olds: but of the three main effects of sex, intelligence and emotional stability and four interaction effects for each of the five motor-fitness components, namely sit-ups (SU), sidestepping (SS), stand broad jump (SBJ), modified pull-ups (MPU), and squat thrust (51), only the following were found to be significant: (a) girls performed better than boys in SBJ and in 51'; (b) high intelligence players performed better Ulal low intelligence players in MPU; (c) sex and intelligence had an interactive effect on 55. SBJ and MPU. (2) Among I he 12-year old H: (a) girls performed better than boys in SBJ, (b) high intelligence players performed better than low intelligence players in SS and SBJ (c) none of the interaction effects was significant. (3) Among the combined group of 9 and 12-year olds: (a) boys performed better than gills in SUO SBJ and 51'; (b) high-intelligence students performed better than low-intelligence students in S5. SBJ and MPU: (c) none of the interaction effects was significant. (4) For the 9-year olds, out of the 21 intercorelations between intelligence, emotional stability, SU, 5S. 5BJ. MPU and 51', nine were significant where: (a) intelligence was correlated with MPU; (b) SU with SBJ. MPU and 51'; (c) 55 was related with SBJ. MPU and 51': and (d) SBJ with 51'. (5) For the 12-year old students. out of 21 correlation coefficients. 15 were significant: (a) intelligence was related with emotional stability. S5.
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SBJ and MPU; (h) emotional stability was related with S5 and MPU; (c) 5U was related with S5. SRJ. MPU and 51'; (d) 55 with SBJ. MPU and 51'; (e) 5BJ with MPU and 51'; and (g) MPU with 51'. (6) For the combined group of 9 and 12 year-olds, 19 out of 21 intercorrelations were significant: (a) intelligence was correlated with emotional stability as well as all the five motor-fitness components; (b) emotional stability with SU. 55. SBJ and 51'; (c) all the five motor-fitness components were interrelated with each other; (d) emotional stability was neither correlated with intelligence nor with SU[AK 1843].

Kaur, Daljit (1991) "Assessment of the physical fitness of high school girls of Punjab".

This study assesses the physical fitness of rural and urban high school girls of Punjab in the age-group 12 to 15 years.

The objectives of the study was (i) To prepare the norms of physical fitness items as listed in Fleishuran's physical fitness test battery on high school girls of Punjab. (ii) to determine and compare the physical fitness index of urban and rural high school girls of Punjab. (iii) to compare the physical fitness of high school girls according to age-steps of 12, 13, 14 and 15 years on various components of physical fitness, and (iv) to enable the teachers of physical education to develop physical fitness programmes for those girls who do not possess the required standard of physical fitness:
The total sample consisted of 4,000 high school girls in the age-group 12 to 15-years, drawn from the various urban and rural schools of Punjab. Fleishuran's Physical Fitness Test Battery was used as a tool to collect the data. Mean, median, SD, skewness, kurtosis, percentile scale, two-way analysis of variance (2 x 4 ANOVA) and 't' test were employed to analyse the data.

The result shows that (1) the rural and urban groups differed significantly on physical fitness variables. (2) Different age-steps independently affected some of the dependent variables, while these age-steps interacted with regard to other variables. (3) There was a notable interaction between residence and age in the physical fitness variables. (4) Subjects with urban residence were significantly superior to rural subjects. (5) The physical fitness levels of 12, 13, 14 and 15 years-old girls differed significantly. [JNJ 0261].

Khodaskar, A.N. (1991) "A nonnative study of the cantability in male kabaddi players and comparison of the effects of selected yogic and non-yogic exercises on cardio-respiratory endurance and cantability"

This study investigates the effects of selected yogic exercises
on the cantability and cardio-vascular endurance in comparison to non-yogic exercises. It has developed age-wise norms of cantability, thereby trying to improve the cantability of kabaddi players.

The objectives were to (i) develop norms of cantability for national-level kabbadi players of different age groups, and (ii) to find out an effective exercise programme for the development of the cardio-respiratory endurance and cantability of kabaddi players by comparing the results of yogic exercises and non-yogic exercises.

The sample comprised 150 subjects in the age-group 8-25 years, who were randomly select ('d from the Degree College of Physical Education at Hanuman Vyayam Prasarak Mandai, Amravali, and divided into three groups of 50 each as Experimental Group A, Experimental Group H and Control Group. Before the division, they went administered tests. Including cant duration in the game situation, Breath-holding after full inhalation and after full exhalation, Vital capacity and Harvard step test; and their height and weight were measured. The values of the initial and final test H of all the three groups were analysed with ANCOVA and the significance of difference between tile values obtained from yogic and non-yogic training programmes was tested.

The findings are (1) Yogic training programmes were more effective in the Improvement of the cantability and cardio-respiratory endurance in comparison to the non-yogic training programme used in
the study. (2) The maximumcantability for the players of the sub-junior group was 24.50 seconds for 13-year olds and 27.50 seconds for 14-year olds. The junior group players had their maximum cantability as 28.05 seconds, while in the senior group it varied between 26.5 seconds to 31.7 seconds according to age. The best cantability was found in players of 27-28 years. (3) Experimental Group A, undergoing yogic exercises, made significant improvement in all the variables except external breath-holding. (4) Group B, undergoing non-yogic exercises, made significant improvement in vital capacity, external breath-holding and cardio-respiratory endurance. It did not show any significant improvement in the cantability. (5) The control group did not show any significant improvement in any of the selected variables.

Singh, Kewal (1992) "A study of the physical fitness and personality traits of boxers at different levels of competition".

The study examines differences in the physical fitness and personality traits of boxers of different levels.

The sample comprised 212 boxers of India; it included inter-college, inter-district, inter-university, national and international-level players. The tools used to collect the data included Haro-Singer Fitness Test and Cattell's 16 PF questionnaire. The collected data
were treated using correlations, one-way ANOVA and Scheffes post hoc test.

The result was (1) Out of the 16 personality factors, significant differences were found in the boxers of different levels -in only two factors. (2) Out of the seven components of physical fitness, no significant differences were found in the boxers of different levels. (3) No significant differences were found between boxers of different levels with respect to the Figure Eight Run, Shuttle Run and Ball Throw. (4) None of the 560 correlations between personality factors and physical fitness components for the five levels of boxers was significant. [AK 1592].

Sandhu, Nachhattar Paul Singh (1992) "The achievements - motivation, socio-economic status, educational aspirations and physical performances of high school hockey players and non players."

The sample comprised 200 (100 male, 100 female) hockey players and 200 (100 males - 100 females) non players from four districts of Punjab in the age group 15 - 17 years.

Investigator compared females with the males. The males had a higher achievement, motivation and performance better in the 100
meter race as well as standing high jump, while males and females did not differ in their socio-economic status as well as educational aspiration of players and non players was more in case of males than females.

Robert M. Malina (2000) "Urban-Rural contrasts in the physical fitness of school children in Oaxaca, Mexico".

The physical fitness of school children resident in an urban Colonia and in a rural indigenous community in Oaxaca, southern Mexico, was compared. Two measures of performance-related fitness (standing long jump, 35-yard dash [32 m]) and four measures of health-related fitness (grip strength, sit and reach, timed sit-ups, distance run) were taken on 355 rural (175 boys, 184 girls) and 324 urban (163 boys, 161 girls) school children, 6-13 years of age. Urban children were significantly taller and heavier than rural children. Absolute grip strength did not consistently differ between rural and urban children, but when adjusted for age and body size, strength was greater in rural children. Explosive power (standing long jump) and abdominal strength and endurance (timed sit-ups) were better in urban than in rural children without and with adjustment for age and body size. Urban-rural differences in running speed (dash) and flexibility (sit and reach) varied by age group and sex. Younger rural children and older urban girls performed better in the distance run, whereas older rural and urban boys did not differ in endurance. The size advantage
of urban children does not necessarily translate into better levels of performance- and health-related physical fitness. The observed differences may be related to activity habits associated with school physical education and lifestyle in the respective communities.


There are still differences in the physical development between population groups, due to their socio-economic situation. This phenomenon is named social stratification (Bielicki 1992). Documentary evidence and observations show, that this factor can be a sensitive barometer of changes in the living conditions of groups and social classes (Bielicki and Waliszko 1991, Bielicki et al. 1997). In this connection, monitoring methods of social stratification through its biological aspects are often used in anthropology research work. They have also been used lately in investigations on environmental influence on motor development. Investigations, which have been carried out in some of European countries pointed to a greater level of motor and somatic development of children and youth from towns than from villages (Jeschke 1972, Riebel 1976, Renson et al. 1980). In Polish tests, a similar trend of interpopulation differentiation has been found only in the case of some motor abilities (Dutkiewicz 1980, 1985, Przeweda 1985, Przeweda and Trzesniowski 1996, Szklarska 1998).
They suggesting the existence of different physical fitness structures in village inhabitants (endurance strength fitness profile) and town inhabitants (speed-co-ordinational fitness profile). The magnitude of this differentiation varies during the ontogenesis period and is most distinct in the period of pubescence.

The purpose of study was to answer the question is were changes the trend in the morpho-functional and motor development of children and youth from villages and small towns during the economical transformations in Poland.

The differentiation in the development level of somatic, functional and motor traits of children and youth of both sexes from southern Poland at the age 7-19 years.

Analyzing the data concerning the index of normalized differences one can find, that in somatic traits there are lower differentiations in urbanization gradients than in ones found by all previous Polish researches. This can be confirmed by the fact, that apart from the lean body mass (LBM) of the girls in older age groups, there are no statistically significant differences between the level of somatic development of children and youth from villages and towns in southern Poland.

The direction of normalized differences of selected anthropometric traits, tested on children and youth at the age of 7-19
years showed, that in most cases, there is a slight prevalence of individuals living in towns over ones living in villages. This is most distinct in the oldest group, aged 15-19. Due to this fact it seems, that in the tested population in the last decade of the XX-th century, the conditions for suitable biological development in younger children are similar in different socio-cultural circles-against the decade of 1980-1990. The results of the comparative analysis of the collected material, concerning motor development level and aerobic performance of the tested girls and boys, can also partly confirm the hitherto observations on environmental differentiation. As shown by the range and direction of indices of the normalized arithmetic mean of selected motor abilities in the tested children and youth from villages, in relation to the mean and standard deviation of subjects of the same age from towns in the groups of 11-14 and 15-19 years, there is no base for claiming, that the factor "residence" influences the formation of motor fitness differentiation. Most differences were not statistically significant. The analysis of data presented in concerning both the direction and the range of normalized differences in the youngest group allow to note (without measurement of speed abilities and frequency of movements) a distinct superiority of motor fitness of village children. A similar tendency was found in the aerobic performance in all age groups. According to this, it can be thought, that (except speed abilities) only younger children (7-10 years) living in southern Polish villages could have better conditions for motor fitness development then their contemporaries from towns.
Results of investigation carried out by Szklarska (1998) show a similar tendency of differences between rural and urban population in dynamic and explosive strength.

It is worth emphasizing, that present investigations have confirmed the already well-known phenomenon (Przeweda 1985, Dutkiewicz 1985, 1990 Szopa et al. 1985) concerning rural children superiority over urban children in the level of run endurance development and of an opposite characteristic in the of speed abilities. In addition, the difference of frequency movement points to smaller speed abilities of rural children. According to the suggestion presented in some research works (Wolanski and Parizkowa 1976, Szopa et al. 1985, 1996), such a situation can be the result of specific environmental stimuli.

In the light of previous investigations (Przeweda 1985) attention should be paid to the lack of distinct differences in the flexibility of individuals living in rural and urban environment. This can be considered to be an advantageous effect of movement exercises in physical education process. It seems, at apart from somatic constitution a similar factor has influenced the direction of balance measurements.

Assuming that the level of motor and functional development is a more sensitive indicator of environmental of temporal changes (Wolanski and Pyzuk 1972, Zekonski and Wolanski 1981, Wolanski
and Siniarska 1982), the tendency found in rural children can be considered to be advantageous, particularly in the youngest age group. In the interpretation of this phenomenon one should note that the majority of tested individuals were born at the turn of the 80's and 90's of the XX century during the time of stormy social changes, which accompanied the transformation of the political system in our country. The compiled material can be an evidence of social village rise during the difficult period. There is however a difficult question to be solved: have the observed tendency and the range of interpopulation differences been the consequence of the actual improvement of living conditions and new possibilities for motor fitness formation of children living in villages, or the effect of family impoverishment and the sedentary lifestyle of contemporaries in small towns of Southern Poland? In a way, the rhetoric of this question was indicated by the results of investigations of Młeczko 2000a, 2000b.

It seems that presented results of the research and discussion allow the following general conclusions:

The results indicate disappearance of typical urban gradients in population of Southern Poland the indices of level differentiation of somatic functional and motor development of children and youth of 7-19 years. This can confirm the levelling of livings standards and functional and motor fitness formation in small towns and villages of Southern Poland in the period of political system transformation. The range of these investigations does not allow to learn about the etiology
of phenomenon of rural inhabitant's advance in the period of political system of transformation, which disclosed itself particularly at the level of functional and motor development of children of the youngest school age group.

Asrid N. Sjolie and (2002) Studied “School journeys and leisure activities in rural and urban adolescents in NORWAY”.

Health promotion measures in order to increase physical activity should include environmental and policy approaches. Studies in natural living environments such as rural and urban areas may provide valuable information about the effects of environmental factors on physical activity. The present study was performed among 88 adolescents living in one rural and one urban area in Norway, with particular focus on the availability of cycling tracks and walking trails. The study showed that both rural and urban adolescents spent more time on sedentary activities, such as watching TV/video and playing TV/data-games, than on regular physical activity. No differences were observed between the two groups in regard to activity patterns. However, the median distance the urban adolescents walked or cycled to school was three times greater than the median distance the rural adolescents walked or cycled to a bus stop or to school. The urban adolescents also walked or cycled more to regular activities than the rural ones. Positive lacking concerning predictors of sedentary and general physical activity, but the results indicate that access to cycling
tracks and walking trails in residential areas may increase both walking or cycling to school and to leisure activities. A relevant strategy for health promotion may therefore be to make cycling tracks and walking trails accessible; some passive transport both to school and to leisure activities may thus probably be replaced by walking or cycling, correlations were found between walking or cycling from home to school and walking or cycling to regular activities. In multiple regression analysis, urban area, female gender and distance walked or cycled to school or bus stop predicted increased walking or cycling to activities. The results confirm other studies on adolescents, showing that much more time is spent on sedentary rather than on physical activity.

The bus journey each way to school was on average 18 lan for the rural pupils. The means and medians of active school journeys were 0.4 and 0.2 lan in the rural area versus 0.8 and 0.6 lan in the urban area, respectively. Twenty-five per cent of the rural pupils lived within 4.5 km of the school. None of the urban pupils reported being brought regularly to and from school by car or bus, and none of the rural pupils reported being brought regularly by car from home to the bus stop. Active school journeys were performed mostly by walking in the rural area and mostly by cycling in the urban area. The headmaster and the teachers living in the urban area gave assurances that no pupils in grades 8-9 had either been or were regularly driven by bus or car to and from school (K. Skoglund, personal communication). There was a lower socioeconomic level in the rural
area than in the urban area. Time spent on activities, and leisure transport distances according to area. Weekly time spent on physical activity was 9 h and time spent watching television or on the computer was 16 h for the whole group, without significant geographical or gender differences. The rural pupils spent 4 h every week on the school bus. Rural adolescents walked or cycled 1.0 Km weekly to regular activities compared with 10.3 Ian among urban adolescents. Rural adolescents were brought 26.6 km to regular activities every week by car or bus, compared with 12.2 km among urban adolescents. There were no significant gender differences in the transport distances. Girls spent more time reading than boys (9 h versus 7 h; p = 0.04).

The main activities in the rural area were forest touring, music, skiing, skating and jogging. Forest touring, football, jogging and handball were the main activities in the urban area. Other regular activities were reported by 17% of the rural adolescents and 10% of the urban adolescents. A correlation analysis between socio demographic factors and activity data was performed.

This study compares the self-concept, adjustment and creative thinking of sports and non-sports girls of Himachal Pradesh.

The objectives were: 1. to ascertain whether there are significant difference in the self-concept, adjustment and creative thinking of sports and non-sports girls of Himachal Pradesh.

To find out difference in the self-concept, adjustment and creative thinking between rural and urban school going girls.

To find out the independent and interactive effects of sports/non-sports and rural/urban residence on self-concept, adjustment and creative thinking.

The sample consists of 600 students covering 300 sports girls and 300 non-sports girls. Tools used are self-concept scale by Saraswat, Sinha and Sings adjustment inventory and the creative thinking test by Mehdi. Mean, median, mode, SD, 2x2 ANOVA and t-test were applied to analyse the data.

The conclusions were: (1) Sports girls belonging to rural and urban area were found better in physical, social, and temperamental self-concept in comparison to non-sports girls were better in educational, moral and intellectual self-self than sports girls. (2) Sports girls belonging to rural and urban areas were better in emotional, social educational adjustment than non-sports girls. (3) Non sports
Review of Literature

The study compares the motor abilities and the physical and physiological characteristics of gymnasts, track and field athlete and non-sportsmen.

The investigator has to find out (1). The motor abilities, age, height, weight, body fat, aerobic and anaerobic capacity of male adolescent gymnasts, track and field athlete and non-sportsmen. (2) To compare the motor abilities, age, height, weight and body fat, aerobic and anaerobic capacity of male adolescent gymnasts, track and field athlete and non-sportsmen. The sample comprises 275 subjects from 13-16 years age group including 75 gymnasts, 75 track and field athletes and 75 non-sportsmen. The tools used to collect the data include Barrow-motor ability test, Harvard step test, and Sargent jump test. Mean, SD and t-test was employed to test the data.

The result confirmed that the: (1) Differences exist between
gymnasts, athletes, and non-sportsmen regarding motor abilities, physical and physiological characteristics. (2) Athletes performed better than gymnasts in medicine ball-put, zigzag run, motor stability, anaerobic and aerobic capacity and had shorter height and lower body fat. (3) Gymnasts performed better than non-sportsmen in standing broad jump, medicinal ball-put, zigzag run, and motor ability, anaerobic and aerobic capacity and had shorter height and lower body fat. (4) Sportsmen performed better than non-sportsmen in standing broad jump, medicinal ball-put, zigzag run, motor ability, anaerobic and aerobic capacity and were heavier in weight and possessed lower body fat. (5) Among Sportsmen and non-sportsmen age affected motor ability and physical as well as physiological characteristic.

Verma and Srivastava (1997) Academic achievement and value pattern of Athletes of vidya Bhariti”.

The study compares academic achievement and value pattern of Athletes of vidya Bhariti.

The sample comprises 539 best athletes (312 boys and 227 girls). Mean, SD and t-test was employed to analyse the data.

It was found that (1) The female athlete taken together at national level were significantly higher in their academic achievement in comparison to male athletes. It was also found that at national as
well as state levels patriotism, social knowledge values occupied the top three ranks respectively, in schools run by vidya Bhariti. On economic values, boys belonging to Bihar, M.P. and Rajasthan were significantly higher than their female counterparts from the same state.


The study finds out the self-concept, body image adjustment and performance of hockey players.

The study comprises of 224 hockey players of 14 Universities of Utterpradesh.

The conclusions were: (1) The self-concept, body image adjustment and performance of hockey players were found to be significantly correlated. (2) The players who had achieved higher level of performance scored higher on self-concept, body image and adjustment as compared to the low level performer.

Sachdeva, A (1996) "Evaluation of Olympic and Asian sprinting performances".

The study evaluated the Olympic and Asian sprinting
performance in 100m and 400m runners who participated in Olympic of 1896 to 1984 and Asian games of 1951 to 1986.

It was found that there is an improvement in all sprint performance with the passage of time: the male athletes showed maximum improvement in 400m event while female athletes showed maximum improvement in 100m event. The performance lag was more in age of female athletes than male athletes.

Mokha et al. (1998) "A comparative study of physical fitness of urban and rural girls".

The study compares the physical fitness of rural and urban girls of Ludhiana district Punjab.

The study comprises 404 samples (202 rural girls and 202 urban girls). Mean, SD, and t-test was employed to find out the result.

1. It was found that urban girls were slightly taller and heavier than rural girls.

2. Rural girls were faster in running than urban girls.

3. Rural-urban differences are found to decrease as the age increases.
Verghese (1993) "Effect of nutrition education and DIET supplementation on adolescent girls- Rural and Urban".

The study compares the physical fitness and effect of nutrition education of rural and urban adolescent girls of Tamil Nadu.

The study comprises 2000 samples (1000 rural girls and 1000 urban girls) of two districts of Tamil Nadu.

It was found that the haemoglobin content as well as physical fitness components were better in rural girls as compared to the urban girls.

Singh Darshan (1992) "The sports achievements of secondary school of Punjab".

Investigator worked on 300 schools selected through I stratified random sampling technique. The schools were classified as category I, II & III schools based on the performance, physical facilities and, coaching facilities. (1) Performance in track and field events of category I schools was better than those of category II and category III schools, whereas no significant difference was found between the sport performance of category II & III schools. (2) The maximum - physical facilities schools had better track and field performance than
the minimum - physical facilities schools and the mediocre - physical facilities schools performed better than minimum physical facilities schools. However no significant difference was fouled in the sports performance of maximum and mediocre physical facilities schools. (3) The maximum coaching - facilities schools, had better performance in track and field events than the mediocre and minimum facilities schools, but no significant difference was found between the sports - achievements of mediocre and minimum facilities school.


The study focuses on the performance evaluation of eastern Indian athletes through certain physical and physiological parameters with specific emphasis on comparing the performance in seven different sports, including typical Indian national games.

The study compare (i) the biological characteristics of athletes in the different sports, (ii) to assess the functional capacities of eastern Indian athletes in a systematic manner, (iii) to find the criteria of performance to be predicted from selected variables suitable for field study, and (iv) to formulate a comprehensive performance index for objective evaluation.
The subjects were randomly selected from among the best available players at the state level from four states of eastern India. The different sports covered in the study included football (FTB), basketball (BKB), kabaddi (KBD), kho-kho (KHO), Athletics (ATH), gymnastic (GYM), and swimming (SWM). The physical and physiological parameters were measured in the static and dynamic states. The physical parameters included height, weight, body surface area, limb length, girth measurement, gait study (for speed cadence) and step length. The physiological parameters include heart rate, oxygen consumption, pulmonary ventilation, energy expenditure and O2 pulse. The collected data were treated using mean, SD, t-test, correlation and multiple correlation.

The result shows that (1) the structure of the athletes in the different sports was found to be different games. (2) The FTB and ATH groups had higher values in all the kinematic factors than the BKB, KHO and GYM groups scored in the middle range. (3) Among the physiological parameters measured during the dynamic condition, there was not much difference in maximum heart rate among the different athletic groups; only GYM was significantly different from the others. (4) The highest VO2 max was observed in the FTB, followed by SWM and ATH. (5) In gait characteristics, the various athletic groups differed. (6) In overall performance capacity, the FTB, ATH and SWM Groups were superior to other groups. (7) In physiological capacity, the FTB, ATH and SWM were significantly different from all other groups. [PDR 0616].
Ganie. M.Y. (1992) "Personality Dispositions of the Participant and non-participant adolescents with Reference to some major physical activities".

The objectives of the study are (1) To prepare the personality profiles of participant and non-participant adolescents. (2) To compare participant and non-participant adolescents on their personality. (3) To search for differences on the basis of gender. (4) To compare the personality features of sportsmen belonging to different game categories. 420 participant and 420 non-participant subjects served as the sample of the study. The subjects were ranging from 16-18 years age group.

The conclusions are: (a) certain personality traits have been identified which predominate in an athletic personality. Social intercourse, participation in sports and inter-personal relation generally determine the degree of manipulation of a particular trait in sportsmen. The traits which have been identified in the personality of the sportsmen are outgoing, emotionally more stable, aggressive, enthusiastic, conscientious, practical, socially aware, experimenting, group dependent and relaxed. (b) The participant and non-participant show significant dissimilarity in their profile comparison. it indicates that participant and non-participant can have their distinct personality profiles. (c) The impact of sex as a source of variation in the personality profiles of participants to a great extent has been
established. (d) After a thorough analysis of the data personality structure of participants (sportsmen) emerged quite distinct that of non-participants group. Even game to game analysis has established the distinct profiles of sportsmen. In majority of the groups the participants have been found to possess a similar personality profiles.

Sodi, A. S. (1982) "Comparison and relationship of physical fitness intelligence of rural and urban high school boys of Kashmir".

The objective of the study are to compare the intelligence and physical fitness of rural and urban students of Kashmir.

The sample for the study comprises of 300 students (150 rural boys and 150 urban boys) of both rural and urban high schools of Kashmir valley. Mean, SD. and t-test was employed to analyses the data. The conclusions are: (1) There is no significant difference in physical fitness level between rural and urban students of Kashmir. (2) Rural boys are superior to urban boys in pull-ups and bent knee- sit ups. (3) There is no difference in the intelligence level of rural and urban students of Kashmir.
Das (1996) studied "the transformation of sports training into sports technology."

By reviewing the methods of sports training adopted by sports trainers from the time of ancient Olympic to modern times. Profound changes have been found in sports training due to the involvement of science, and factors, such as technology. Playing surface, equipments, dress and sports gears have greatly been transformed into sports technology giving an advantage to sportsmen belonging to countries which have been developed sports technology. It has been reported that unnatural procedures for improvement of sports performance are gaining acceptance but inviting hazards.
OVERVIEW

Twenty eight studies have been reviewed under the section adjustment, physical fitness, academic achievement and sports performance.

The findings of the research reviewed that there are significant difference between rural and urban students in personal and social adjustment. Most of the students have adjustment problems, it has been also reviewed that the students of urban area are possessing high academic achievement. Many researches have reviewed that rural area students have high physical fitness than urban students. It has also been reviewed that the school providing better sports facilities and equipments to the students showed better sports performance.

The findings of the review are:

Shukla, P.C. (1981) Confirmed that: (i) there is a significant difference between rural and urban students in their adjustment problems. Both the groups differ at. The rural students have more problems of adjustment than the urban students, (ii) the boys and girls differ significantly among themselves in respect of their adjustment problems. The Thus it can be established that adjustment problems are found more in girl students than in boy students. Sex is found to be related with adjustment problems.
According to Kaur, Narinder, (1991, the three main effects of sex, intelligence and emotional stability and four interaction effects for each of the five motor-fitness components, namely sit-ups (SU), sidestepping (SS), stand broad jump (SBJ), modified pull-ups (MPU), and squat thrust (51), only the following were found to be significant: (a) girls performed better than boys in SBJ and in 51'; (b) high intelligence players performed better than low intelligence players in MPU; (c) sex and intelligence had an interactive effect on S5 and MPU. (2) Among the 12-year old H: (a) girls performed better than boys in SBJ, (b) high intelligence players performed better than low-intelligence players in SS and SBJ (c) none of the interaction effects was significant. (3) Among the combined group of 9 and 12-year olds: (a) boys performed better than girls in SUO SBJ and 51'; (b) high-intelligence students performed better than low-intelligence students in S5, SBJ and MPU; (c) none of the interaction effects was significant. (4) For the 9-year olds, out of the 21 intercorrelations between intelligence, emotional stability, SU, S5, SBJ, MPU and 51', nine were significant where: (a) intelligence was correlated with MPU; (b) SU with SBJ, MPU and 51'; (c) S5 was related with SBJ, MPU and 51'; and (d) SBJ with 51'. (5) For the 12-year old students, out of 21 correlation coefficients, 15 were significant: (a) intelligence was related with emotional stability, S5, SBJ and MPU; (h) emotional stability was related with S5 and MPU; (c) S5 was related with S5, SRJ, MPU and 51'; (d) 55 with SBJ, MPU and 51'; (e) 5BJ with MPU and 51'; and (g) MPU with 51'. (6) For the combined group of 9 and 12-year-olds, 19 out of 21 intercorrelations were significant: (a) intelligence was
correlated with emotional stability as well as all the five motor-fitness components; (b) emotional stability with SU. 55, SBJ and 51°; (c) all the five motor-fitness components were interrelated with each other; (d) emotional stability was neither correlated with intelligence nor with SU.

Kaur, Daljit. 1991 Finds: (1) the rural and urban groups differed significantly on physical fitness variables. (2) Different age-steps independently affected some of the dependent variables, while these age-steps interacted with regard to other variables. (3) There was a notable interaction between residence and age in the physical fitness variables. (4) Subjects with urban residence were significantly superior to rural subjects. (5) The physical fitness levels of 12, 13, 14 and 15 years-old girls differed significantly.

Robert M. Malina – 2000 has revealed that the physical fitness of school children resident in an urban colonia and in a rural indigenous community in Oaxaca, southern Mexico, was compared. Two measures of performance-related fitness (standing long jump, 35-yard dash [32 m]) and four measures of health-related fitness (grip strength, sit and reach, timed sit-ups, distance run) were taken on 355 rural (175 boys, 184 girls) and 324 urban (163 boys, 161 girls) school children, 6-13 years of age. Urban children were significantly taller and heavier than rural children. Absolute grip strength did not consistently differ between rural and urban children, but when adjusted for age and body size, strength was greater in rural children. Explosive power
(standing long jump) and abdominal strength and endurance (timed sit-ups) were better in urban than in rural children without and with adjustment for age and body size. Urban-rural differences in running speed (dash) and flexibility (sit and reach) varied by age group and sex. Younger rural children and older urban girls performed better in the distance run, whereas older rural and urban boys did not differ in endurance. The size advantage of urban children does not necessarily translate into better levels of performance- and health-related physical fitness. The observed differences may be related to activity habits associated with school physical education and lifestyle in the respective communities.

(Edward Mleczko), (Bielicki 1992), (Bielicki and Waliszko 1991), (Bielicki et al.) Found the differences in the physical development between population groups, due to their socio-economic situation. This phenomenon is named social stratification. In this connection, monitoring methods of social stratification through its biological aspects are often used in anthropology research work. They have also been used lately in investigations on environmental influence on motor development. Investigations, which have been carried out in some of European countries pointed to a greater level of motor and somatic development of children and youth from towns than from villages (Jeschke 1972, Riebel 1976, Renson et al. 1980). In Polish tests, a similar trend of interpopulation differentiation has been found only in the case of some motor abilities (Dutkiewicz 1980, 1985, Przeweda 1985, Przeweda and Trzesniowski 1996, Szklarska 1998).
They suggesting the existence of different physical fitness structures in village inhabitants (endurance strength fitness profile) and town inhabitants (speed-co-ordinational fitness profile). The magnitude of this differentiation varies during the ontogenesis period and is most distinct in the period of pubescence.

The purpose of present study was to answer the question is changes the trend in the morpho-functional and motor development of children and youth from villages and small towns during the economical transformations in Poland.

The differentiation in the development level of somatic, functional and motor traits of children and youth of both sexes from southern Poland at the age 7-19 years.

As shown by the range and direction of indices of the normalized arithmetic mean of selected motor abilities in the tested children and youth from villages, in relation to the mean and standard deviation of subjects of the same age from towns in the groups of 11-14 and 15-19 years, there is no base for claiming, that the factor "residence" influences the formation of motor fitness differentiation. Most differences were not statistically significant.

Results of investigation carried out by Szklarska (1998) show a similar tendency of differences between rural and urban population in dynamic and explosive strength. It is worth emphasizing, that present
investigations have confirmed the already well-known phenomenon (przeweda 1985, Dutkiewicz 1985, 1990 Szopa et al. 1985) concerning rural children superiority over urban children in the level of run endurance development and of an opposite characteristic in the of speed abilities. In addition, the difference of frequency movement points to smaller speed abilities of rural children. According to the suggestion presented in some research works (Wolanski and Parizkowa 1976, Szopa et al. 1985, 1996), such a situation can be the result of specific environmental stimuli.

Assuming that the level of motor and functional development is a more sensitive indicator of environmental of temporal changes (Wolanski and Pyzuk 1972, (Zekonski Wolanski 1981) , (Wolanski and Siniarska 1982), the tendency found in rural children can be considered to be advantageous, particularly in the youngest age group.

The results indicate disappearance of typical urban gradients in population of Southern Poland the indices of level differentiation of somatic functional and motor development of children and youth of 7-19 years Verma and Srivastava in 1997 studied "Academic Achievement and value pattern of Athletes of vidya Biharit". He has found that the female athlete taken together at national level were significantly higher in their academic achievement in comparison to male athletes.
Singh Darshan in (1992) studied the Performance of the students in track and field events. He revealed that the maximum physical facilities schools had better track and field performance than the minimum - physical facilities schools and the mediocre - physical facilities schools performed better than minimum physical facilities schools. However no significant difference was fouled in the sports performance of maximum and mediocre physical facilities schools. The maximum coaching-facilities schools, had better performance in track and field events than the mediocre and minimum facilities schools, but no significant difference was found between the sports - achievements of mediocre and minimum facilities school.