



Effect of Instructional and Skill Based Training on Selected Physical and Physiological Variables Among School Cricketer

KEYWORDS

Skill based training, Instructional training.

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ABSTRACT We examined the Effect of instructional and skill based training on selected physical and physiological variables among school cricketer. The 12- week -long exercise intervention included 60-min of - instructional and skill based training five times per week. The control group was not exposed to any of additional activity other than their routine. The study was formulated as a random group design. In this study forty five men age group of 14 to 16 years were selected as subjects. A pre and post test was employed for this investigation. The subjects were randomly divided into three groups (two experimental and one control group).The groups were designed as experimental group I – Skill based training group (SBTG), experimental group II – Instructional training group (ITG) and control group (CG) respectively. All the subjects were tested prior and after the 12 weeks training period. Results: The results reveal that the interventions had an impact on the selected variables to a similar degree in all experimental groups; it was observed that the mean gains and losses made from pre and post test were statistically significant.

Introduction:

Instructional tasks involve the behaviors of teachers and students that focus on content learning (Hastie and Siedentop, 2006). Instructional is a critical component of a teaching-learning ecology in physical education classes and sport environments (Griffin et al., 1998), and refers to instructional process used to establish and maintain student responsibility for behavior, task involvement, and outcomes (Balderson and Sharpe, 2005). Therefore, accountability is still seen as the instructional decisions used by teachers or coaches to ensure that students or players complete any given task (Lund, 1992), as well as a fundamental tool that should have influence on the practitioners' motivation (Roch and MacNall, 2007). Balderson and Sharpe, 2005 indicate that when students are held accountable for certain actions, they tend to be more closely tied to follow and demonstrate those actions. According to the literature, the explicitness of the task presentation, the type of exigency and the verification of task accomplishment are particularly relevant for the accountability system to be efficient (Crouch et al., 1997).Athletic skill-based programs promote social acceptance by enhancing athletic performance. (Michel Hersen, 2007). Skill-based condition training was recommended to develop both technical skills and physical performance [Gabbett, 2008,

Methodology:

The study was formulated as a true random group design consisting of a pre-test and post test. The subjects (N=45) 45 male cricket players from various schools in Chennai were randomly selected as subjects and their age ranged between 14-16 years were randomly assigned in to four groups of ten each male volleyball players. The groups were designed as experimental group I – Skill based training group (SBTG), experimental group II – Instructional training group (ITG) and control group (CG) respectively. Pre test was conducted for all the 45 subjects on chosen variables of the study. The experimental groups underwent in respective training for a period of twelve weeks. The control group did not given any training. The post test was also conducted on the chosen dependent variables after an experimental period of twelve weeks for all the four groups. The different between initial and final mean scores of the groups was the effect of respective experimental treatment on the subjects. The differences in the mean scores was subjected to statistical treatment using ANCOVA In all cases 0.05 level was fixed test the hypothesis of the study.

The present study was undertaken primarily to assess the effectiveness of instructional and skill based training on selected physical and physiological variables speed, agility, muscular strength, vo2 max, resting heart rate.

Statistical analysis:

To analyze the training effect of instructional and skill based training and control group t-test was used. The selected subjects of all the groups were tested on criterion variables. In order to compare the effects of treatment on physical and physiological variables among the three groups, analysis of covariance (ANCOVA) was used to find out the significant differences in each criterion variables among the groups. When the f-ratio was significant Scheffe's post hoc test was used to find out which treatment used in the present study is the source for the significance of adjusted post test means. All the statistical analysis tests were computed at 0.05 level of significance ($p < 0.05$). SPSS 15.0 for windows evaluation version software was used to analyze the data.

Results:

An examination of table-II indicates that the obtained't' ratios were 5.87, 7.13, 5.06, 6.57 and 8.36 for speed, muscular strength & endurance, agility, Vo2 max and resting heart rate respectively. The obtained't' ratios on the selected variables were found to be greater than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be significant. The results of this study showed that statistically significant and explained its effects positively.

Table – I

S. No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Speed	8.32	7.72	0.60	0.39	0.10	5.87*
2	Muscular Strength and Endurance	33.73	42.86	9.13	4.95	1.27	7.13*
3	Agility	16.13	14.91	1.22	0.93	0.24	5.06*

4	Vo2 Max	1258.66	1418.33	159.67	94.06	24.28	6.57*
5	Resting Heart Rate	72.20	69.53	2.67	1.23	0.31	8.36*

SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON SELECTED VARIABLES OF INSTRUCTIONAL BASED TRAINING GROUP

* Significant at 0.05 level

An examination of table-III indicates that the obtained 't' ratios were 9.44, 6.56, 4.70, 5.13 and 9.86 for speed, muscular strength & endurance, agility, Vo2 max and resting heart rate respectively. The obtained 't' ratios on the selected table variables were found to be greater than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be significant. The results of this study showed that statistically significant and explained its effects positively.

Table – II

S. No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Speed	8.47	7.64	0.83	0.34	0.08	9.44*
2	Muscular Strength and Endurance	32.73	41.00	8.27	4.87	1.25	6.56*
3	Agility	16.39	15.04	1.34	1.10	0.28	4.70*
4	Vo2 Max	1294.40	1426.46	132.07	99.67	25.73	5.13*
5	Resting Heart Rate	72.53	69.66	2.87	1.12	0.29	9.86*

Significant at 0.05 level

SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON SELECTED VARIABLES OF SKILL BASED TRAINING GROUP.

Table – III

S. No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Speed	8.46	8.44	0.02	0.28	0.07	0.37
2	Muscular Strength and Endurance	31.86	32.53	0.67	2.76	0.71	0.93
3	Agility	16.71	16.42	0.29	0.65	0.16	1.74
4	Vo2 Max	1289.00	1298.60	9.60	84.61	21.84	0.43
5	Resting Heart Rate	72.93	72.40	0.53	1.18	0.30	1.74

Significant at 0.05 level

SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON SELECTED VARIABLES OF CONTROL GROUP

An examination of table-IV indicates that the obtained 't' ratios were 0.37, 0.93, 1.74, 0.43 and 1.74 for speed, muscular strength & endurance, agility, Vo2 max and resting heart rate respectively. The obtained 't' ratios on the selected variables were found to be lesser than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be insignificant.

CONCLUSIONS

Within the limitations and delimitations of this study, it was concluded that the skill based training group improved agility and muscular strength than instructional group and control group. It was concluded that the development of speed, agility, muscular strength, vo2 max, are due to skill based training. In reviewing such effect of skill based training on muscular strength, agility, cricket it was concluded that the skill based group had improved better than the other two groups.

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