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# Impact of Audio-Visual Training on Shooting Skill Among Youth Soccer Players in Imphal West

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**Abstract**
Research reviews indicate that audio visual has an improvement on shooting skills. Various ways and means are available so far to improve one's shooting skill. Nowadays, ample of researches indicate that audio visual training helps to improve in fundamental skills of soccer players. This study was, therefore, undertaken to find out the impact of the training of audio visual on shooting skills in soccer players. Sixty male soccer players (n=60), age: 14-18 yrs., from different nearby clubs in Imphal West, Manipur, were randomly divided in to two groups viz., 30 experimental and 30 control. The subjects were selected on the basis of their participation of football. The level of audio visual was assessed by Mor-Christain soccer ability test during pre-test, post-test and follows up test. Audio visual training was imparted to the experimental group for a period of 6 months, whereas the controlled subjects did not participate in the said programme. The result of t-test revealed that the audio-visual training for three months was significantly effective in improving the level of shooting skills ($t=8.13$, $p<0.05$) and during follow-uptrend of such improvement was gradually declined ($t=4.08$, $p<0.05$) whereas the controlled group could not. This result, in turn, suggests that audio visual exercise programme has a long-term effect in maintaining the skills of shooting among the female male youth soccer players.

**Keywords**: audio-visual, shooting skill, youth, soccer, Mor-Christain Soccer Shooting Test

## INTRODUCTION

Football, also known as soccer, has a rich and fascinating history that spans centuries. The roots of the sport can be traced back to ancient times, with various forms of ball games played in different cultures around the world. However, the modern game of football as we know it today originated in England in the 19th century. Today, football is played and followed by millions of people worldwide. It has become a multibillion-dollar industry, with professional leagues, lucrative contracts, and passionate fan bases. The sport continues to evolve, with advancements in technology, changes in playing styles, and ongoing efforts to address issues such as diversity, inclusivity, and fair play (Md Zahedul Islam, 2023).

Audiovisual (AV) is electronic media possessing both a sound and a visual component, such as slide-tape presentations (Barman, Charles R., 1984) films, television programs, corporate conferencing, church services, and live theater productions (Allen, William H. (1975).

Audiovisual service providers frequently offer web streaming, video conferencing, and live broadcast services (Clegg, 2014). The professional audio-visual industry has companies that provide hardware, software and services. These organizations are commonly referred to as systems integrators and perform both the installation and integration of different types of AV equipment from multiple manufacturers into spaces to create the AV experience for the user.

Computer-based audiovisual equipment is often used in education, with many schools and universities installing projection equipment and using interactive whiteboard technology (Alyssa, Borelli, 2023).

Sports video content has attracted a lot of attention from researchers over the years. Although several methods have been developed to describe the important information in sports video, many of them still depend mainly on low-level video features. These methods often have limited effectiveness because sports videos are complex and low-level features cannot fully represent their meaningful content. To overcome this limitation, an approach for automatically generating highlight summaries of soccer video using audio and visual information was proposed. The method first divides the video into different shots and then analyzes each shot to determine how relevant and interesting it is. One important aspect of this approach is the use of audio information, which helps improve the reliability and overall performance of the summarization system. For each shot, different low and mid-level audio-visual features are extracted and combined to calculate its relevance using predefined empirical rules. The final summary is created by selecting the shots with the highest relevance according to the user's requirements. The method was tested using real soccer video sequences, and the results showed that the approach could effectively generate meaningful highlight from soccer videos. (A Raventós et al., 2015).

Thus, football is related to group cohesion and audio-visual response during the matches and training. Therefore, the objective of this investigation was to develop a audio visual training schedule for improving football skills of youth soccer players.

**Objectives of the Study:**

1. To assess the status of shooting skills on youth soccer players.
2. To find out the impact of audio-visual training on shooting skill among youth soccer players in Imphal West.

**Delimitation of the study**

- The study was delimited to youth soccer players belonging to different soccer clubs in the Imphal-West
- The study included male youth soccer players from Imphal-West who were willing to participate in this study.
- Due to limited financial resources and difficulties in obtaining participants, the duration of the experimental study was limited to six months.

**Limitations:**

Certain factors that could have influenced the results, such as the participant food habits, lifestyle, dietary patterns, and daily routine activities, were not taken into consideration while analyzing the data. These factors may have had some influence on the findings of the study.

**Hypothesis:**

**$H_1$**- Audio-visual training schedule might be significantly effective in improving shooting skills.

**Significance of the Study:**

1. The finding of the study may help to assess the present level of shooting skills among youth soccer players. The results may also provide useful information for improving their overall kicking skills.
2. The study may contribute to the areas of sports, and health education. It may also provide a useful reference for future researchers working in related areas.
3. The study will give the knowledge about the impact of audio visual for regulating shooting skill that is beneficial for soccer players. The finding may be helpful to soccer coaches and physical education professionals in developing effective training methods for improving the performance of young soccer players.

## Methodology

### The Subjects

Male youth soccer players (age: 14-18 years) from different clubs which was participated and never participated at any district and state level competitions from Imphal-West district were the subjects of this study. The duration of the experiment was limited to six months, comprising three months of training followed by three months of follow-up or detraining. The training sessions were conducted on the designated days of the week, excluding Tuesday, Thursday, Saturday and Sunday.

### Inclusion And Exclusion Criteria

- The subjects, who have given a written consent to remain till the experiment is over, were included.
- The male football players who were suffering from the various contagious diseases and whose health is at risk, as discarded by the physician, were excluded.

### Measurement of Mor-Christain Soccer Shooting Test

For assessing the shooting ability of the youth soccer players, the researcher selected the Mor-Christan Soccer Shooting Test. The test is designed to measure the shooting accuracy of soccer players. The goal is divided into specific target areas using ropes suspended from the crossbar, positioned approximately four feet from each goal post. A shooting line is marked 16 yards from the goal line and parallel to it.

**Procedure:** The player is required to shoot a stationary ball using his preferred foot from the 16-yard shooting line. The ball can be placed at any point along the designated line. Before the actual test, the player is given four practice trails to become familiar with the procedure. Following the practice trails, the player attempts four consecutive shots at each of the four target areas, making total of 16 trails.

**Scoring:** the scoring is based on the target area toward which the player aims. When the player aims at the upper-right target, a shot passing through the upper target area is awarded 10 points, while a shot passing though the corresponding lower-righ target area receives 4 points. The same scoring procedure is followed when aiming at the lower target, with 10 points for the lower target and 4 points for the upper target. The target areas on the left side are scored in the same manner.

A ball that rebounds from the circular target area is considered a successful trail. However, no point is awarded when the ball simply rolls or bounces through the target area.

The content validity coefficient of this test is reported as 0.78 while the reliability coefficient is 0.96.

### Experimental Intervention

The audio-visual intervention was imparted to the experimental group for 1 hour daily (morning), every day in a week on the following days viz., Monday, Wednesday and Friday). For first 30 days, they were given training of **Fundamental-Course of soccer** and during next 60 days they were trained with **Skilled Course of soccer** programme along with **kicking and shooting skill (**Guangliang Huang et al., 2021)

**The Experiment**

Considering the principles of purposive sampling, the researcher was selected 60 males with youth soccer players and divided them into two groups, i.e. first group for audio visual practices and second group as regular non audio-visual controls; each group consisting of 30 football individuals.

Out of two groups, the Gr.I (audio visual group) underwent a audio visual training program for a period of 3 months; whereas the Gr.II (control group) was treated as control, but the subjects of the control group were kept continue for their daily routine practice of football. The researcher observed in audio visual practices for 3 months to render training to audio visual group. The researcher himself took care of the control group and supervised overall experiment. After completion of 3 months of training interventions, there was a follow-up period (i.e., detraining period) for next 3 months. Thus, total duration of the experiment was 6 months.

The schematic diagram of the experiment is as follows (Table 1)

**Table-1 Schematic diagram of the experiment**

| **Tests (pre-, post-, follow-up)** | **Gr.I** | **Gr.II** |
|---|---|---|
| **Test (Duration)** | Pre-test (2 days) | |
| **Training (Duration)** | Audio-Visual group (3months) | Control group (3months) |
| **Test (Duration)** | Post-test (2 days) | |
| **Follow up (Duration)** | No training intervention (3months) | |
| **Test/ Duration** | Final test (2 days) | |

The collected data were statistically analyzed using the t-test. The level of significance was set at 0.05, corresponding to 95% level of confidence.

**Finding**

From the Table-2, in case of shooting skills, it is evident that the obtained t-value of the experimental group (pre- and post-test comparison) is **6.65** ($p<0.05$), which is greater than the tabulated t-value (28) 3.67. Therefore, there is significant difference between pre- and post-test means on shooting skills in experimental group. However, the obtained t-value of control group (pre- and post-test comparison) is **0.17** ($p>0.05$) which is lesser than the tabulated t-value (28) 3.67. Therefore, there is no significant difference in control group (pre-post-test comparison) on shooting skills. The result finally indicates that audio visual training (i.e., experimental group) could contribute to improve shooting skills of youth soccer players, whereas the control group could not (Fig.1).

**Table-2 Pre-post-test comparison of shooting skill on experimental and controlled youth soccer players**

| **Group** | **n** | **Mean** (SD) | | **MD** (Mean difference) | **df** | **SEM** | **t-ratio** |
|---|---|---|---|---|---|---|---|
| | | **Pre** | **Post** | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Experimenta | 30 | 136 (SD=14.08) | 157.46 (SD=11.98) | -21.46 | 28 | 3.22 | **6.65*** |
| Control | 30 | 134.93 (SD=13.01) | 135.53 (SD=12.78) | -0.6 | 28 | 3.35 | **0.17** |

***Significance at 0.05 level; Tab 0.05 (28) = 3.67**

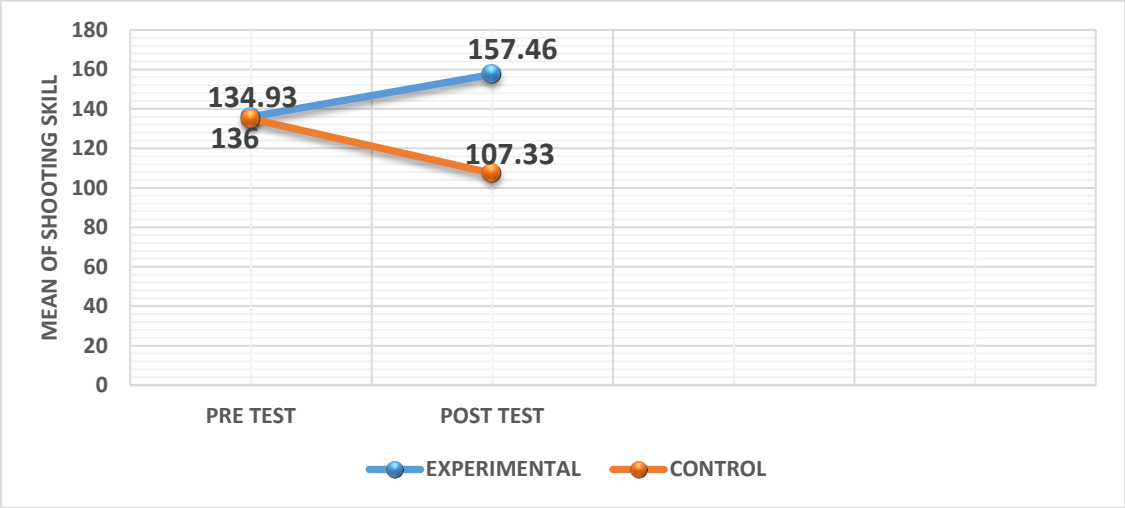



**Fig.1: Graphical representation of pre-post scores of experimental and control groups on shooting skills.**

The result of post-test comparison of mean values of shooting skills revealed that the mean value of the experimental group was higher than the control group (t=8.13, p<0.05) (Table 3). This indicates that audio visual training for three months was found effective in improving shooting skill.

**Table-3 Post-test comparison of shooting skill among experimental and controlled youth soccer players**

| **Group** | **n** | **Mean** /(SD) **Post-test** | **MD** (Mean difference) | **df** | **SEM** | **t-ratio** |
|---|---|---|---|---|---|---|
| Experimental | 30 | 157.46 (SD=11.98) | 21.93 | 28 | 2.69 | **8.13*** |
| Control | 30 | 135.53 (SD=12.78) | | | | |

***Significance at 0.05 level; Tab 0.05 (28) = 3.67**

Result of post-test and follow-up comparison in the scores of shooting skills, it is evident from the Table-4 that the obtained t-value of the experimental group (post-test Vs follow-up comparison) is **1.70** (p>0.05)**,** which is lesser than the tabulated t-value (28) 3.67. This indicates that there is no significant improvement on shooting skill in experimental group (post-test Vs follow up test comparison) during follow-up period. Similarly, the obtained t-value of control group (posttest Vs follow-up comparison) is **1.17**(p>0.05), which is lesser than the tabulated t-value (28) 3.67. Therefore, there is no significant change in shooting skill between posttest and follow up test of both experimental and control group (Fig.2).

**Table-4 Comparison of post-test and follow-up-test means on soccer skills between experimental and controlled youth soccer players**

| Group | n | Mean / (SD) | | MD (Mean difference) | df | SEM | t-ratio |
|---|---|---|---|---|---|---|---|
| | | Post | Follow up | | | | |
| Experimental | 30 | 157.46 (SD=11.98) | 150.20 (SD=16.52) | 7.26 | 28 | 4.26 | **1.70** |
| Control | 30 | 135.53 (SD=12.78) | 134.93 (SD=13.01) | 0.6 | 28 | 3.35 | **1.17** |

***Significance at 0.05 level; Tab 0.05 (28) = 3.67**

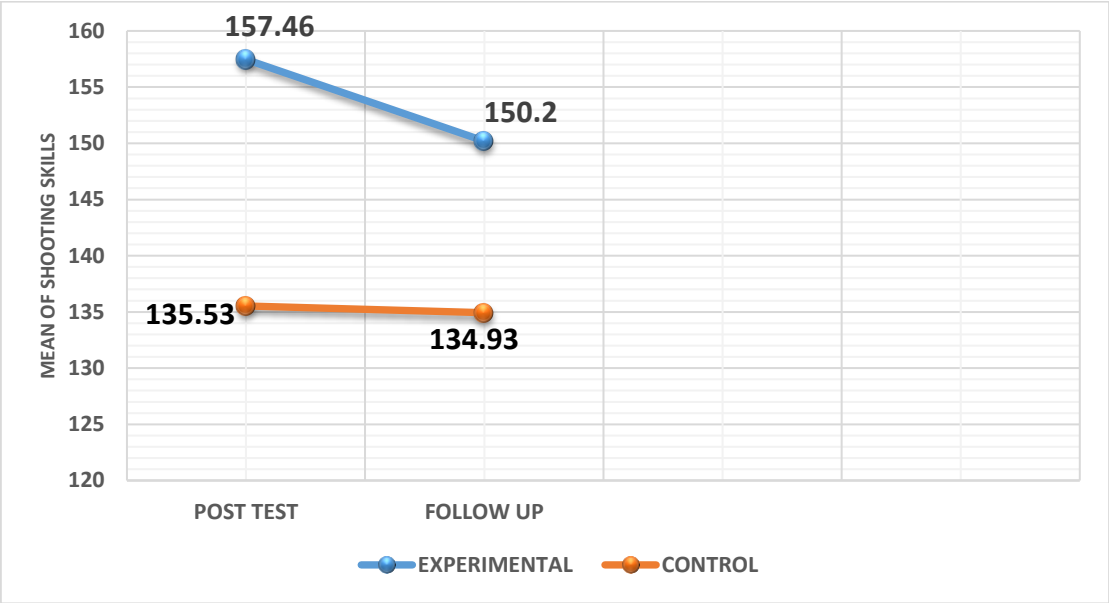



**Fig.2: Graphical representation of post-follow up scores of experimental and control groups on working memory**

The result of post-follow-up-test comparison between experimental and control groups on mean values of shooting skills revealed that there was significant difference between the experimental and control groups of post follow up test on audio visual ($t=4.08$, $p<0.05$) (Table-5). This in turn indicates that audio visual training helps in follow-up effect on shooting skills.

**Table-5 Post follow-up test means of shooting skills among experimental and controlled youth soccer players**

| Group | n | Mean/(SD) | MD (Mean difference) | df | SEM | t-ratio |
|---|---|---|---|---|---|---|
| | | Post follow-up test | | | | |
| Experimental | 30 | 150.20 (SD=16.52) | 15.26 | 28 | 3.73 | **4.08*** |

| | | | | | | |
|---|---|---|---|---|---|---|
| Control | 30 | 134.93 (SD=13.01) | | | | |

***Significance at 0.05 level; Tab 0.05 (28) = 3.67**

**Discussion of Finding**

The result, in this experiment, revealed that audio visual training for a total duration of 3 months contributed to improve shooting skill among the male youth soccer players ($t=8.13$, $p<0.05$) (Table 3). The result as appeared seems to be logical and in turn supports the findings of many of the earlier research reports about role of audio visual in improving shooting skills. The result of this experiment also suggests that there must be a relationship with audio visual and improvement of shooting skill. Finally, it is confirmed that 3-month audio visual training helps to increase shooting skills of youth soccer players. Similarly, the result of 3 months follow up shows that there is a significant difference on post-follow up test among experimental and control group ($t=4.08$, $p<0.05$) (Table 5). Thus, it indicates that audio visual training is effective in improving shooting skills for a longer period of time.

Thus, the result finally concludes that shooting skills is effectively increased after a 3-months training session of audio visual training, which might have increase the shooting skills of the youth soccer players. In addition, regular practice of audio visual exercises had a long term effects to improve shooting skills.

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