

CVAINB-2021

# CERTIFICATE

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**International Multidisciplinary  
E - Conference On Contribution of  
Various Aspects In Nation Building**



**Date : 11 th to 13 th October 2021**

Organised by  
Department of [ English, Marathi, Sociology, History,  
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**ARTS, COMMERCE & SCIENCE COLLEGE, MAREGAON (ROAD)**  
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JSRST Team wishes all the best for bright future

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ABSTRACT BOOK

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## Contribution of Various Techniques for Fitness

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### I. INTRODUCTION

#### 1. Power Yoga :

Ashtanga Vinyasa Yoga or Ashtanga Yoga is a System of Yoga popularized by K. Pattabhi Jois and which is often promoted as a Modern day form of classical Indian Yoga. Pattabhi Jois began his yoga studies in 1927 at the age of 12 and by 1948 had established an institute for teaching the specific Yoga practice known as Ashtanga (Sanskrit for "eight-limbed"). Yoga power Yoga and Vinyasa Yoga are generic terms that may be refer to any type of various Yoga exercise derived from Ashtanga Vinyasa Yoga.

The term Vinyasa refers to the alignment of movement and breath, a method which turns static Yoga postures into a dynamic flow. The length of one inhale or one exhale dictates the length of time spent transitioning between postures, poses are then held for a predefined number of breaths. In effect, attention is placed on the breath and the journey between the postures rather than solely on achieving perfect body alignment in a pose, as is emphasized in Hatha yoga.

The term Vinyasa also refers to a specific series of movement that are frequently done between each pose in a series. This Vinyasa 'flow' is a variant of surya namaskar, the sun salutation, and is used in other styles of Yoga beside Ashtanga Vinyasa Yoga. A standard Vinyasa consists (for example) of the flow from

caturanga or plank to caturanga dayasana or low plank, to urdhva mukha svanasana of upward facing dog, to Adho Mukha Svanasana or downward facing dog.

#### 2. Aerobics :-

Aerobics is a form of physical exercise that combines rhythmic aerobic exercise with stretching and strength training routines with the goal of improving all elements of fitness (flexibility, muscular strength and cardio-vascular fitness). It is usually performed to music and may be practiced in a group setting led by an instructor (fitness professional), although it can be done solo and without musical accompaniment. With the goal of preventing illness and promoting physical fitness. Practitioners perform various routines comprising a number of different dance-like exercises. Formal aerobics classes are divided into different levels of intensity and complexity. Aerobics classes may allow participants to select their level of participation according to their fitness levels. Many gyms offer a variety of aerobics classes. Each class is designed for a certain level of experience and taught by certified instructor with a specialty area related to their particular class.

Aerobic gymnastics, also known as sport aerobics and competitive aerobics is a type of competitive aerobics involving complicated choreography, rhythmic and acrobatic gymnastics with elements of aerobics. Performance is divided into categories by age, sex and





groups (individual mixed pairs and trios) and is judged on the following elements, dynamic and static following elements : dynamic and static strength, jumps and leaps, kicks, balance and flexibility. Ten exercises are mandatory : four consecutive high leg kicks patterns. A maximum of ten elements from following families are allowed push-ups, supports and balances, kicks and splits, jumps and leaps. Elements of tumbling such as handsprings, handstands, backs flips and aerial somersaults are prohibited scoring is by judging of artistic quality creativity execution and difficulty of routines. Sport aerobics has state, national and international competitions, but is not an Olympic sport.

### 3. Reike :-

Reike is one of the five streams of Qigong, a form of physical and spiritual discipline originating in China. These five streams include the popular martial arts that employ mostly physical exercise to strengthen body and mind; medical Qigong exercises popular in Japan that combat disease by storing vital energy in the lower abdomen. Confucian Qigong aimed at calming the mind and making it receptive to moral wisdom. Taoist Qigong which includes breathing exercises, internal massage, Visualization and physical exercises to achieve the perfect balance of body, mind and soul, and Buddhist Qigong exercise that focus on the expansion of inner awareness. Reiki is an offshoot of Buddhist Qigong.

The list of benefits attributed to Reiki is long and varied. Benefits include balancing the organs and glands and their bodily functions as well as balancing the energies in the body. Adapting to the natural needs of the receiver, the Reiki energy releases blocks and suppressed feelings relaxes and reduces stress and relieves pain. It promotes natural self healing and heals holistically, strengthening the immune system while treating the symptoms and causes of illnesses. It strengthens the life force energy, enhancing personal awareness, promoting creativity and strengthening intuition.

### 4. Herbal treatment (Herbalism) :-

Herbalism is a traditional medicinal or folk medicine practice based on the use of plants and plant extracts. Herbalism is also known as botanical medicine, medical herbalism, herbal medicine, herbology, herblore and phyotherapy. The scope of herbal medicine is sometimes extended to include fungal and bee products, as well as minerals, shells and certain animal parts. Pharmacognosy is the study of medicines derived from natural sources. Traditional use of medicines is recognized as a way to learn about potential future medicines. In 2001, researchers identified 122 compounds used in mainstream medicine which were derived from "ethnomedical" plant sources 80% of these compounds were used in the same or related manner as the traditional ethno medical use. Plants have evolved the ability to synthesize chemical compounds that help them defend against attack from a wide variety of predators such as insects, fungi and herbivorous mammals. By chance some of these compounds, whilst being toxic to plant predators, turn out to have beneficial effects when used to treat human diseases. Such secondary metabolites are highly varied in structure, many are aromatic substance, most of which are phenols or their oxygen-substituted derivatives. At least 12,000 have been isolated so far a number estimated to be less than 10% of the total. Chemical compounds in the plant mediate their effects on the human body by binding to receptor molecules present in the body such processes are identical to those already well understood for conventional drugs and as such herbal medicines do not differ greatly from convention drugs in terms of how they work. This enables herbal medicines to be in principle just as effective as conventional medicines but also gives them the same potential to cause harmful side effects. Many of the herbs and species used by humans to season food yield useful medicinal compounds.

### 5. Music :-

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The interplay of exercise and music have been long-discussed, crossing the disciplines of biomechanics, neurology, physiology and sport psychology. People "automatically feel the beat" of the music. They listen to and instinctively adjust their walking pace and heart rate to the tempo of the music. Listening to music while exercising has been found in multiple studies to create an increased sense of motivation, distracting the mind while increasing hearts rate. Faster tempo music has been found by researchers to motivate exerciser's to work harder when performing at a moderate pace, but peak performance has been found to be unaffected by listening to music. In a study published in 2009, researchers at the Research Institute for sport and Exercise sciences at Liverpool John Moores University had 12 subjects ride a stationary bicycle at a pace that they could sustain for 30 minutes while listening to a song of the subjects choice. In successive trials, they rode the bikes again, with the tempo of the music variously increased or decreased by 10% without the subject's knowledge. The researchers found that the rider's heart rate and mileage decreased when the tempo was slowed, while they rode a greater distance, increased their heart rate and enjoyed the music more at the faster tempo. Though the participants thought their workout was harder at the more upbeat tempo, the researchers found that when the faster - paced music was heard while exercising "the participants chose to accept, and even prefer, a greater degree of effort". Scientists at the university of Wisconsin-La Cross found in a 2003 study that participants who chose to listen to faster-paced music generated a higher heart rate, pedaled harder and generated more power. Increasing their level of work by as much as 15% by diverting their focus to the music. The study tested 20 volunteers who listened to an MP3 player loaded with a mix of 13 songs that they selected and then rode and exercise bike for an hour at a pace and gear of their choice. The study found that heart rates rose from 133 to 146 beats per minutes and power output

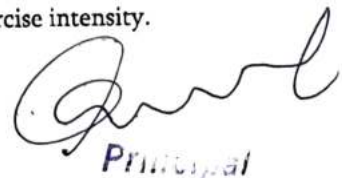
increased accordingly when listening to the tempo-less sound of crashing waves versus music with a medium to fast tempo. A 2004 study by a research team from Australia, Israel and the United states found that runners performing at a pace where they were at 90% of their peak oxygen up take enjoyed listening to music, but that the music had no effect on their heart rate or running pace, regardless of the music tempo.

## II. CONCLUSION

The above discussions concludes that Vibrational medicines such as power Yoga, Aerobes, Reiki, Herbal, Treatment and music plays a very vital role in fitness. If these simple treatments are followed lot more can be achieved in terms of fitness, than it can be done thorough conventional methods like gaming and steroids. If the above mentioned methods can be implemented effectively on grass root leavels, it will have a very positive impact on today's youth.

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**Jointly Organized One Day International Interdisciplinary E-Conference on  
"Role of Physical Activities, Health and Fitness in Today's Crisis"**

**On 16<sup>th</sup> October, 2021**

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This is to certify that **Dr Anjali C Pande** of **Narayanrao Rana Mahavidyalaya** has participated in One Day International Interdisciplinary E-Conference on **"Role of Physical Activities, Health and Fitness in Today's Crises"** organized by **IQAC** and Department of Physical Education & Sports, **Mahatma Jyotiba Fule Mahavidyalaya, Amravati**, **Late Dattatraya Pusadkar Arts College, Nandgaon Peth, Amravati**, **Narayanrao Rana Mahavidyalaya, Badnera, Amravati** on **16<sup>th</sup> October, 2021**.

  
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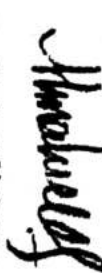
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16<sup>th</sup> October, 2021  
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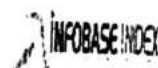
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Mahatma Jyotiba Fule Mahavidyalaya, Amravati, Late Dattatraya Pusadkar Arts College,  
Nandgaon Peth, Amravati & Narayanrao Rana Mahavidyalaya, Badnera, Amravati.

### NUTRITION FOR ATHLETIC PERFORMANCE

#### ABSTRACT

Nutrition is the provision to cell and organisms, of the materials necessary to support life. Many common health problems can be prevented by taking healthy diet. Nutrition is the supply of materials, food required by organism and cells to stay alive. In science and human medicine, nutrition is the science and practice of consuming and utilizing foods. Nutrition also focuses on how diseases, conditions and problems can be prevented or lessened with a healthy diet.

Athletic performance and recovery from training are enhanced by attention to nutrient intake. Optimal needed to support regular training and peak performance. As training demands shift during the year, athletes need to adjust their caloric intake and macronutrient distribution while maintaining a high nutrient dense diet that supports their training and competition nutrient needs. The following key points summarize impacts of training on energy, nutrient and fluid recommendations for competitive student-athletes as recommended by the college of Sports Medicine.

Carbohydrate, The primary fuel for higher intensity activity is required to replenish liver and glycogen stores and to prevent low blood sugar (hypoglycemia) during training and performance. Carbohydrate intake has been well documented to have a positive impact on adaptation to training, performance and improved immune function. During base training, a daily intake to between 5-7 grams of carbohydrate per kilogram of body weight per day is advised. As training intensity and/or volume increase, carbohydrate need may easily exceed 10 grams of carbohydrate per kilogram of body weight. Athletes should begin to think about fueling for stores, can be calculated based on 1-1.2 grams of carbohydrate per kilogram of body weight and should be consumed immediately following training sessions 90 minutes or high intensity shorter duration training sessions. Within 2 hours following training, additional carbohydrate will help continue glycogen repletion. The experts in performance nutrition recommended athletes focus their food choices on less refined types of fruits and vegetables are excellent source of high quality carbohydrate.

Protein in the foods is broken down into individual amino acids. Body uses the amino acids to build and repair the various parts of the body. Muscles contain lots of protein. Protein requirements are slightly higher in both endurance (1.2-1.4 grams per kilogram body weight) and strength-training student-athletes (1.6-1.7 grams per kilogram body weight). Fortunately, the higher intakes recommended for athletes is easily achieved in a well balanced diet without the use of additional supplements.

Fat intakes is an important source of essential fatty acids and carrier for fat soluble vitamins necessary and are stored in muscle as triglyceride for use during activity. Dietary intake is suggested to be between 20 the diet and the ability to consistently improve performance.

In general, vitamin and mineral supplements are not required if a student-athlete is consuming adequate energy from a variety of foods to maintain body weight. However, the risk of micronutrient deficiencies is greatest in student-athletes restricting calories, engaging in rapid weight-loss practices or eliminating specific foods or food groups from their diet. A multivitamin providing no more than 100 percent of the daily recommended intake can be considered for these student-athletes. Female student-athletes are especially prone to deficiencies in calcium and iron due to the impacts of regular menstrual cycles, avoidance of animal products and/or energy restriction. The diets and iron status of endurance athletes and vegetarians (especially females) should be evaluated. However, mega doses of specific vitamins or minerals (10 to 100 times the dose of daily requirements) are not recommended.

The maintenance or attainment of an ideal body weight is sport-specific and represents an



important nutrition regimen, particularly those competing in "weight class" sports (e.g., wrestling, rowing), sports that favor those with lower body weight (e.g. distance running, gymnastics), sports requiring student-athletes to wear body contour-revealing clothing (track, diving, swimming, volleyball) and sports with subjective dodging related to "aesthetics". These student-athletes are encouraged to eat to provide the necessary fuel for performance, yet they often face self or team-imposed weight restrictions. Emphasis on low body weight or low body fat may benefit performance only if the guidelines are realistic, the calorie intake is reasonable and the diet is nutritionally well-balanced.

The use of extreme weight-control measures can jeopardize the health of the student-athlete and possibly trigger behaviors associated with eating disorders. Studies have shown that at least 40 percent of member institutions reported at least one case of anorexia nervosa or bulimia nervosa in their athletics programs.

A more prevalent issue are the large number of sub-clinical or chronically dieting athletes. Department wide efforts to educate staff and student-athletes should include addressing the negative impacts of under fueling and weight/food preoccupation on the athlete's performance and overall well-being. Although dysfunctional eating is much more prevalent in women (approximately 90 percent of the reports in the studies were in women's sports) dysfunctional eating also occurs in men. Female athletes who miss 3 or more menstrual cycles in a year are preoccupied with weight, experience rapid changes in body weight, avoid eating with others, are over focused on shape and food are exhibiting warning signs worth addressing if prevention of eating disorders. The medical examination and updated history bylaw is an opportunity to assess athletes for the these risk factors and referral to appropriate professionals for further evaluation and diagnosis is critical.

Body composition and body weight can affect exercise performance but should not be used as the main criteria for participation in sports. Decision regarding weight loss should be based on the following recommendations to reduce the risk of disordered eating.

1. Weight loss (fat loss) should be addressed during base or transition phases
2. Weight loss goals should be determined by the student-athlete, medical and nutritional personnel, with consultation from the coach.

3. Weight loss plans should be individualized and realistic.

For each student-athlete, there may be a unique optimal body composition for performance, for health and for self-esteem. However, in most cases, these three values are not identical. Mental and physical health should not be sacrificed for performance. An erratic or lost menstrual cycle, sluggishness or an obsession with achieving a number on a scale may be signs that health is being challenged.

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### EFFECTS OF A SEVEN-WEEK HOME EXERCISE PROGRAMME ON THE RESPIRATORY PARAMETERS OF MALE STUDENTS

#### ABSTRACT:

This investigation evaluated the effects of a seven-week home exercise programme on the respiratory parameters of male students. The study was conducted on a sample of 40 male aged 18 to 20 who participated in all training sections during seven weeks of completion of exercise programme. The researcher were selected 40 boys from various colleges of Amravati were selected randomly as subjects for the present study. They were tested before and after the completion of exercise programme. In this research investigation the independent variables are selected exercise programme. In this research study the dependent variables are: vital capacity, breathing holding time and respiratory rate. For analysis of basic statistic data and distribution of results on initial and final measurement, basic descriptive parameters have been calculated: Mean, Standard Deviation, Standard Error, Mean difference. The effects of applied training model were analyzed using Paired 't' test. The level of statistical significance was set at  $p < 0.05$ . The research of seven week exercise programme on a sample of 40 male showed statistically significant effects on changes in respiratory parameters of Male students.

**KEYWORDS:** exercise programme, respiratory parameters

#### INTRODUCTION:

Intense exercise requires 20 times more oxygen than usual and produces 20 times more carbon dioxide. But the amount of oxygen and carbon dioxide in the blood does not change much during exercise, because exercise increases the speed and depth of breathing and greatly increases ventilation. There is also an increase in heart rate and blood flow from the heart to the lungs. Both provide more oxygen than needed and expel more carbon dioxide. So the amount of carbon dioxide does not change. This happens especially in educated players. This is because having learned a lot before, their brain increases the ventilation as much as it needs to by sending the right message. But in a person who is not proficient in sports and has not learned before sports, the above two reasons increase or decrease the ventilation in the lungs more or less than required. When this happens, however, the amount of carbon dioxide and oxygen

in the blood changes and then both of these affect the respiratory system and change the airway as needed.

#### METHODOLOGY:

The study was conducted on a sample of 40 male aged 19 to 20 who participated in all training sections during seven weeks of completion of exercise programme. The researcher were selected twenty boys from various colleges of Amravati were selected randomly as subjects for the present study. They were tested before and after the completion of exercise programme.

#### Selection of Variables and Tests:

In this research investigation the independent variables are selected exercise programme. In this research study the dependent variables are: vital capacity, breathing holding time and respiratory rate.

The subjects were tested on the following variables.

Name of Variables	Test	Unit
-------------------	------	------



Vital Capacity	Wet Spirometer	milliliters
Breath Holding Time	Holding the breathe	Time in second
Respiratory rate	Manual method	Numbers of breathing cycle in one minute

#### Training Schedule:

Session	Exercise s	Weeks					
		1, 2 & 3		4 & 5		6 & 7	
		Set s	Time	Set s	Time	Set s	Time
Warmup	logging and Stretching	-	10	-	10	-	12
Exercise s	Lateral hops over cone, Forward & Backward hops over cone, Single leg hop over cone, Vertical jump with headers and long jump	5-6	30	6-7	35	7-8	40
Cooling Down	Stretching exercises	7	-	10	-	10	-

#### STATISTICAL ANALYSIS:

Data gathered during this research were analyzed using statistic programs for personal computers Microsoft excel 2007. For analysis of basic statistic data and distribution of results on initial and final measurement, basic descriptive parameters have been calculated: Mean, Standard Deviation, Standard Error, Mean difference. The effects of applied training model were analyzed using Paired 't' test. The level of statistical significance was set at  $p < 0.05$ .

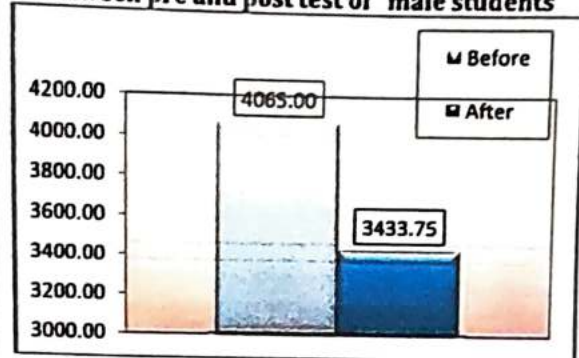
**Table-1: The summary of mean and paired sample 't' test For the pre and post tests on vital capacity of male students**

Test	N	Mean	SD	SE	MD	Ot	df	Tt
Before	40	4065.00	696.49	206.58	631.25	13.338*	39	2.09
After	40	3433.75	606.94					

\*Significant at .05 level.

Table- 1 reveals that the 't' ratio values 13.338 of vital capacity for treatment group respectively are found to be significant at 0.05 level of significance. The result reveals that seven-week exercise programme showed significant improvement in vital capacity in the selected respiratory parameters.

**Graph-1: vital capacity of mean difference between pre and post test of male students**



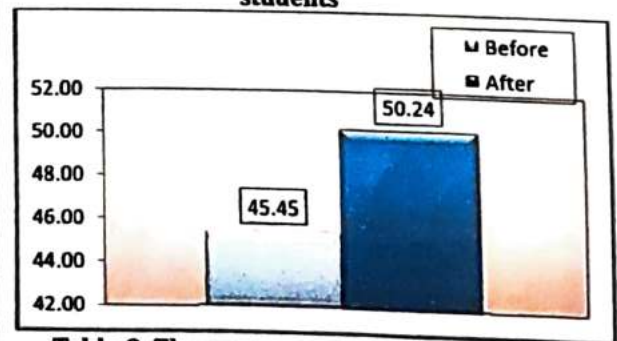
**Table-2: The summary of mean and paired sample 't' test For the pre and post tests on breath holding time of male students**

Test	N	Mean	SD	SE	MD	Ot	df	Tt
Before	40	45.45	13.45	3.93	4.79	5.563*	39	2.09
After	40	50.24	11.35					

\*Significant at .05 level.

Table- 2 reveals that the 't' ratio values 5.563 of breath holding time for treatment group respectively are found to be significant at 0.05 level of significance. The result reveals that seven-week exercise programme showed significant improvement in breathing holding time in the selected respiratory parameters.

**Graph-2: Breath holding time of mean difference between pre and post test of male students**



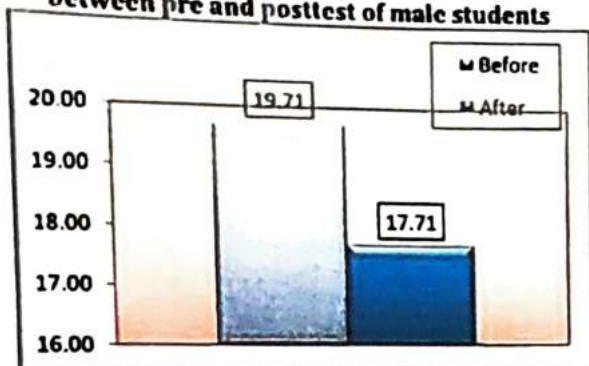
**Table-3: The summary of mean and paired sample 't' test For the pre and post tests on respiratory rate of male students**



Test	N	Mean	SD	SE	MD	CV	df	Tt
Before	40	19.71	1.4	0.4	2.0	12.329	1	20.9
After	40	17.71	1.4	0.4	0		9	

Table- 3 reveals that the 't' ratio values 12.329 of respiratory rate for treatment group respectively are found to be significant at 0.05 level of significance. The result reveals that seven-week exercise programme showed significant improvement in respiratory rate in the selected respiratory parameters.

Graph-3: Respiratory rate of mean difference between pre and posttest of male students



#### CONCLUSION:

The research of seven week exercise programme on a sample of 40 male showed statistically significant effects on changes in respiratory parameters of Male students. It is important to include breathing exercises in your routine workouts. Doing these purifies the lungs and respiratory system in the body. Also, these respiratory functions bring physical concentration which reduces mental tension.

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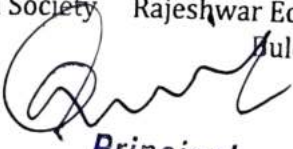
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### प्रस्तावना

मानव आणि तंत्रज्ञान यांचा फार जुना संबंध आहे. अगदी प्राचीन काळापासून मानव तंत्रज्ञानाचा वापर करत आलेला आहे, अथवा त्याने ते विकसित केलेले आहे. अग्नीचा शोध, चाकाचा शोध अथवा कागदाचा शोध असो त्याने त्यामध्ये प्रत्येकवेळी नवनवीन भर घालून मानवी जीवन सुसह्य बनविण्याचा प्रयत्न केलेला आहे. आज 21 व्या शतकात तंत्रज्ञानाने मानवी जीवनातील सगळी क्षेत्रे व्यापून टाकली आहेत. भारतीय शिक्षण व्यवस्था संक्रमनाच्या टप्प्यातून जात असताना त्यात तंत्रज्ञानाचा वापर वाढत आहे. अथवा तो नक्कीच वाढविला गेला पाहिजे असे माझे स्पष्ट मत आहे. अध्यापनात योग्य पद्धतीने व विचारपूर्वक तंत्रज्ञानाचा वापर केल्यास अध्ययन अध्यापन नक्कीच आनंदायी होऊ शकते. असे चित्र आज आपणास खुप ठिकाणी बघावयास मिळत आहे. तंत्रज्ञानाच्या योग्य वापराने विचारांची क्षेत्रे रुंदावण्यास मदत होते. तंत्रज्ञानाचा वापर शिक्षक व विद्यार्थी या दोहोंसाठी उपयुक्त आहे. दर्जेदार व प्रभावी अध्यापनास पूरक साहित्य म्हणून आपणास नवीन तंत्रज्ञानाची नक्कीच मदत होऊ शकते. यात आपणास मोबाईल, लॅपटॉप, कॉम्प्युटर, प्रोजेक्टर, टॅबलेट मोबाईल इ. विविध साधनांचा वापर करता येईल. बाजारात उपलब्ध साहित्याशिवाय काही तंत्रज्ञेही शिक्षकांचा स्व-निर्मित तंत्रसाहित्य निर्मितीवर विशेष भर आहे. ही फार अभिमानास्पद बाब आहे. दूरस्थ शिक्षणात तंत्रज्ञान हे खूप प्रभावी माध्यम आहे. शेकडो किलोमीटर दूर बसलेला विद्यार्थी मी बनविलेली चाचणी ऑनलाईन सोडवितो, हे प्राथमिक शिक्षकाला कधीही न पडलेले स्वप्न आज तंत्रज्ञानाने साकार करून दाखविले आहे. विद्यार्थी सुद्धा स्व प्रेरनेने तंत्रज्ञानाचा वापर करून आपल्या ज्ञानात भर घालत आहे. शेकडो किलोमीटर दूर असलेले शिक्षक आज तंत्रज्ञानाच्या माध्यमातून दुर्गम भागापर्यंत पोहचून विद्यार्थ्यांची ज्ञानाची भूक भागवित आहेत. अध्ययन अध्यापनात तंत्रज्ञानाच्या वापराने विद्यार्थ्यांमध्ये अपेक्षित बदल नक्कीच घडून येतात.

तंत्रज्ञानाची उपयुक्तता साधनांच्या परिणामकारक वापरावर अवलंबून आहे. शैक्षणिक क्षेत्रात काम करणाऱ्या प्रत्येक घटकाने यासाठी पुढाकार घेतला पाहिजे. Whats app वर शैक्षणिक चळवळ रुजत आहे. Facebook वर भरपूर माहिती देणारे शैक्षणिक pages उपलब्ध आहेत. त्यांचाही आपणास संदर्भ म्हणून वापर करता येईल. तंत्रज्ञानाने अध्ययन अध्यापनात क्रांती घडविली हे सत्य आहे पण आता गरज आहे ती शिक्षकांनी आपल्या व विद्यार्थ्यांच्या गरजा ओळखून स्वतः तंत्रज्ञान विकसित करण्याची.... व इतर शिक्षक बांधवाना त्यासाठी प्रेरित करण्याची. खुप तंत्रज्ञेही शिक्षक microsoft power point चा खूप छान वापर करत आहेत. काही विद्यार्थ्यांना दैनंदिनी लिहायची सवय असते, त्यांना आपण त्यांचा वैयक्तिक Blog तयार करून देऊन त्यावर लिहिण्यास प्रेरित केले पाहिजे, आपल्या वर्गाचा अथवा शाळेचा पण ब्लॉग तयार करता येऊ

Narayanrao

yalaya





शकतो. Twitter account ला तालुक्यातील सर्व शाळा जोडून आपल्याला कोणत्याही शाळेतील उपक्रम बघता अथवा share करता येतील. एक उपयुक्त शैक्षणिक साहित्य म्हणून Google सर्च इंजिन चा उपयोग नक्कीच झाला पाहिजे.

### माहिती व संप्रेषण तंत्रज्ञान म्हणजे काय?

माहिती प्रक्षेपित करण्यासाठी, साठविण्यासाठी, तयार करण्यासाठी, प्रदर्शित करण्यासाठी किंवा तिची देवाणघेवाण करण्यासाठी वापरली जाणारी विद्युत उपकरणे म्हणजे माहिती व संप्रेषण तंत्रज्ञान. यामध्ये रेडियो, दूरदर्शन, व्हिडियो, डिव्हिडी, दूरध्वनी, मोबाईल फोन, उपग्रहावर आधारित सेवा व सुविधा, संगणक व त्या संबंधित हार्डवेअर आणि सॉफ्टवेअर अशा गोष्टींचा समावेश होतो. ह्या व्यतिरिक्त, व्हिडियो कॉन्फरन्सिंग, ईमेल, ब्लॉग अशा तंत्रांचा ही यात समावेश होतो. सध्याच्या 'माहिती युगात' शैक्षणिक क्षेत्रे समजून घेण्यासाठी माहिती व संप्रेषण तंत्रज्ञानाच्या (ICT) नवनवीन स्वरूपांचा शिक्षणात अंतर्भाव करणे गरजेचे आहे. हे सर्व प्रभावीरीत्या करण्यासाठी शैक्षणिक नियोजनकार, मुख्याध्यापक, शिक्षक व तंत्रज्ञांना प्रशिक्षण, तंत्रज्ञान, वित्त, शिक्षण, संप्रेषण अशा विविध क्षेत्रात अनेक निर्णय, ते ही योग्य रीत्या घेता आले पाहिजेत. अनेकांसाठी हे काम म्हणजे एखादी नवी भाषा शिकणे व ती शिकविण्यास शिकणे इतके कठीण काम वाटते. या विभागात विविध उपकरणे व तंत्रे यांची माहिती दिलेली आहे. यात देशांना जोडणाऱ्या उपग्रहांपासून, विद्यार्थी वर्गात वापरत असणाऱ्या उपकरणांपर्यंत सर्वांचा समावेश आहे. शिक्षणतज्ञ, नीतीशास्त्रज्ञ, नियोजनकार, अभ्यासक्रम तयार करणारे तज्ञ तसेच इतरांना माहिती व संप्रेषण तंत्रज्ञानाची (ICT) गुंतागुंतीची उपकरणे, त्या संबंधित संज्ञा आदीं तून मार्ग काढत योग्य निर्णय घेणे सोपे जावे हा यामागील उद्देश आहे.

### माहिती व संप्रेषण तंत्रज्ञानाची शिक्षणातील भूमिका

माहिती व संप्रेषण तंत्रज्ञानाचा (ICT) वापर करून शिक्षणाच्या दर्जात उल्लेखनीय आणि सकारात्मक सुधारणा करता येईल असे साधारणतः सर्वच शिक्षणतज्ञांचे व संशोधकांचे म्हणणे आहे. मात्र शिक्षणपद्धतीमध्ये माहिती व संप्रेषण तंत्रज्ञानाचे स्थान नेमके काय असावे व त्याच्या उपयुक्ततेचा जास्तीत जास्त फायदा कसा करून घेता येऊ शकतो हा अजून ही चर्चिला जाणारा मुद्दा आहे. या विभागात माहिती व संप्रेषण तंत्रज्ञानाचा शिक्षणपद्धतीवर पडलेला प्रभाव व शाळांमध्ये तंत्रज्ञानाचा वापर कसा करता येईल या विषयी अनेक लेख, अहवाल समाविष्ट करण्यात आले आहेत शिवाय या विषयावरील ऑनलाईन जर्नल्स व वेबसाईट्सच्या लिंक्स देखील देण्यात आल्या आहेत. (शिक्षणपद्धतीत माहिती व संप्रेषण तंत्रज्ञान वापरण्याचे फायदे सांगणारे लेख या विभागात आहेत. तसेच, शिक्षणपद्धतीत या तंत्रज्ञानाचा समावेश करताना होऊ शकणाऱ्या चुका, त्या टाळण्यासाठी घ्यावयाची काळजी याविषयावरील लेख व उदाहरणे देखील देण्यात आली आहेत.)

अध्ययन व अध्यापन प्रक्रियेत पुढील माहिती तंत्रज्ञानाचा उपयोग होऊ शकतो.

- पोर्टेबल मीडिया प्लेअर
- व्हाईटबोर्ड
- व्हॉईस प्रोजेक्शन सिस्टम
- विद्यार्थी प्रतिसाद प्रणाली
- आयपॉडचा वापर





**Principal**  
**Narayanrao Chaudhari Mahavidyalaya**





- पॉडकास्टिंग
- व्हर्चुअल लर्निंग
- व्हिडिओ कॉन्फरन्सिंग
- YouTube
- मल्टीचॅनेल लर्निंग (बहु-वाहिनी शिक्षण)
- शैक्षणिक दूरदर्शन
- शैक्षणिक रेडियो
- वेब-आधारीत सूचना
- शोधासाठी ग्रंथालये
- विज्ञान व तंत्रज्ञान यांची प्रात्यक्षिके
- माध्यमांचा (मीडिया) वापर
- विविध क्षेत्रातील तंत्रज्ञानाचा वापर: लहान मुलांचा विकास, कमी घनता असणारी लोकसंख्या, प्रौढ शिक्षण, स्त्री शिक्षण, मनुष्यबळ विकास
- शिक्षकांच्या तयारीसाठी व प्रशिक्षणासाठी तंत्रज्ञानाचा वापर
- धोरणे आखण्यासाठी, माहिती व्यवस्थापन (डेटा प्रबंधन) करण्यासाठी तंत्रज्ञानाचा वापर
- शाळा व्यवस्थापनासाठी तंत्रज्ञानाचा वापर

#### **पोर्टेबल मल्टीमीडिया प्लेअर**

पोर्टेबल मल्टीमीडिया प्लेअर (पीएमपी), कधी कधी पोर्टेबल व्हिडिओ प्लेअर (पीव्हीपी) किंवा इंटरनेट मीडिया टॅब्लेट (आयएमटी) म्हणून ओळखले जातात, डिजिटल मीडिया संग्रहित करण्यास आणि प्ले करण्यास सक्षम आहेत. डिजिटल ऑडिओ प्लेयर्स (डीएपी) जे प्रतिमा प्रदर्शित करू शकतात आणि व्हिडिओ प्ले करू शकतात ते पोर्टेबल मल्टीमीडिया प्लेअर आहेत. डीएपीएस प्रमाणेच डेटा हार्ड ड्राइव्हवर संग्रहित केला जातो.

#### **इंटरएक्टिव व्हाइटबोर्ड**

इंटरएक्टिव व्हाइटबोर्ड एक पृष्ठभाग आहे ज्यावर डेटा प्रोजेक्टरद्वारे संगणक स्क्रीन प्रदर्शित केली जाऊ शकते. हा स्पर्श संवेदनशील असल्याने शिक्षकांना बोर्डमधून संगणकावर नियंत्रण ठेवण्यासाठी आणि भविष्यातील धड्यांसाठी कोणतेही बदल जतन करण्यासाठी माऊसप्रमाणे पेन किंवा बोटाचा वापर करण्याची परवानगी देते. याव्यतिरिक्त, मल्टीमीडिया संसाधने तसेच इंटरनेट आणि वेबसाइटवरील प्रवेशाद्वारे अध्यापन आणि शिकवणुकीस समर्थन मिळू शकते. इंटरएक्टिव व्हाइटबोर्ड एक वर्ग-आधारित धड्यांमध्ये उपयुक्त अध्यापन सहाय्य आहे कारण ते सादरीकरणे, प्रात्यक्षिके आणि मॉडेलिंगद्वारे शिकण्यास मदत करू शकतात, विद्यार्थ्यांना सक्रियपणे गुंतवून ठेवतात आणि धड्यांचा वेग आणि प्रवाह सुधारू शकतात. डेटा प्रोजेक्टरला लिंक केलेला लॅपटॉप संगणक आपल्याला स्पोर्ट्स हॉल किंवा जिममध्ये या प्रकारच्या संसाधनाचा वापर करण्यास सक्षम करू शकतो. संपूर्ण वर्गाला व्हिडिओ प्रात्यक्षिकांमधून त्वरित किंवा मागील धड्यां घेतलेले एक विशिष्ट तंत्र दर्शविण्यासाठी शिक्षक इंटरएक्टिव व्हाइटबोर्ड वापरू शकतात.

#### **व्हॉईस प्रोजेक्शन सिस्टम**

व्हॉईस प्रोजेक्शन सिस्टमचा वापर हा शिक्षणाद्वारे विद्यार्थ्यांशी संवाद साधण्याचा अभिनव मार्ग आहे. सिस्टममध्ये हलकें, वायरलेस हातांनी रेडिओ मायक्रोफोन आणि हेड मायक्रोफोनचा समावेश आहे जो शिक्षकांचा आवाज बॅस-स्टेशनवर प्रसारित करतो. हे नंतर विस्तृत करते, भाषण वारंवारिता वाढवते आणि स्पीकर्स कडून संपूर्ण वर्गापर्यंत आवाज प्रसारित करते. हे सेट करणे सोपे आहे आणि खूप प्रभावी आहे.





- पॉडकास्टिंग
- व्हर्चुअल लर्निंग
- व्हिडिओ कॉन्फरन्सिंग
- YouTube
- मल्टीचॅनेल लर्निंग (बहु-वाहिनी शिक्षण)
- शैक्षणिक दूरदर्शन
- शैक्षणिक रेडियो
- वेब-आधारीत सूचना
- शोधासाठी ग्रंथालये
- विज्ञान व तंत्रज्ञान यांची प्रात्यक्षिके
- माध्यमांचा (मीडिया) वापर
- विविध क्षेत्रातील तंत्रज्ञानाचा वापर: लहान मुलांचा विकास, कमी घनता असणारी लोकसंख्या, प्रौढ शिक्षण, स्त्री शिक्षण, मनुष्यबळ विकास
- शिक्षकांच्या तयारीसाठी व प्रशिक्षणासाठी तंत्रज्ञानाचा वापर
- धोरणे आखण्यासाठी, माहिती व्यवस्थापन (डेटा प्रबंधन) करण्यासाठी तंत्रज्ञानाचा वापर
- शाळा व्यवस्थापनासाठी तंत्रज्ञानाचा वापर

### पोर्टेबल मल्टीमीडिया प्लेअर

पोर्टेबल मल्टीमीडिया प्लेअर (पीएमपी), कधी कधी पोर्टेबल व्हिडिओ प्लेअर (पीव्हीपी) किंवा इंटरनेट मीडिया टॅब्लेट (आयएमटी) म्हणून ओळखले जातात, डिजिटल मीडिया संग्रहित करण्यास आणि प्ले करण्यास सक्षम आहेत. डिजिटल ऑडिओ प्लेयर्स (डीएपी) जे प्रतिमा प्रदर्शित करू शकतात आणि व्हिडिओ प्ले करू शकतात ते पोर्टेबल मल्टीमीडिया प्लेअर आहेत. डीएपीएस प्रमाणेच डेटा हार्ड ड्राइव्हवर संग्रहित केला जातो.

### इंटरएक्टिव्ह व्हाइटबोर्ड

इंटरएक्टिव्ह व्हाइटबोर्ड एक पृष्ठभाग आहे ज्यावर डेटा प्रोजेक्टरद्वारे संगणक स्क्रीन प्रदर्शित केली जाऊ शकते. हा स्पर्श संवेदनशील असल्याने शिक्षकांना बोर्डमधून संगणकावर नियंत्रण ठेवण्यासाठी आणि भविष्यातील धड्यांसाठी कोणतेही बदल जतन करण्यासाठी माऊसप्रमाणे पेन किंवा बोट्याचा वापर करण्याची परवानगी देते. याव्यतिरिक्त, मल्टीमीडिया संसाधने तसेच इंटरनेट आणि वेबसाइटवरील प्रवेशाद्वारे अध्यापन आणि शिकवणुकीस समर्थन मिळू शकते. इंटरएक्टिव्ह व्हाइटबोर्ड एक वर्ग-आधारित धड्यांमध्ये उपयुक्त अध्यापन सहाय्य आहे कारण ते सादरीकरणे, प्रात्यक्षिके आणि मॉडेलिंगद्वारे शिकण्यास मदत करू शकतात, विद्यार्थ्यांना सक्रियपणे गुंतवून ठेवतात आणि धड्यांचा वेग आणि प्रवाह सुधारू शकतात. डेटा प्रोजेक्टरला लिंक केलेला लॅपटॉप संगणक आपल्याला स्पॉटर्स हॉल किंवा जिममध्ये या प्रकारच्या संसाधनाचा वापर करण्यास सक्षम करू शकतो. संपूर्ण वर्गाला व्हिडिओ प्रात्यक्षिकांमधून त्वरित किंवा मागील धड्यांचे घेतलेले एक विशिष्ट व्हॉइस प्रोजेक्शन सिस्टम

व्हॉइस प्रोजेक्शन सिस्टमचा वापर हा शिक्षणाद्वारे विद्यार्थ्यांशी संवाद साधण्याचा अभिनव मार्ग आहे. सिस्टममध्ये हलके, वायरलेस हातांनी रेडिओ मायक्रोफोन आणि हेड मायक्रोफोनचा समावेश आहे जो शिक्षकांचा आवाज बॅस-स्टेशनवर प्रसारित करतो. हे नंतर विस्तृत करते, भाषण वारंवारिता वाढवते आणि स्पीकर्स कडून संपूर्ण वर्गापर्यंत आवाज प्रसारित करते. हे सेट करणे सोपे आहे आणि खूप प्रभावी आहे.

Principal





### विद्यार्थी प्रतिसाद प्रणाली

परस्परसंवादी विद्यार्थी प्रतिसाद प्रणाली शिक्षकांना विद्यार्थ्यांच्या प्रगतीवर नजर ठेवण्यासाठी आणि त्यांची नोंद ठेवण्यासाठी साधने प्रदान करीत असताना विद्यार्थ्यांना गुंतवून ठेवण्यास प्रवृत्त करते. प्रगत रेडिओ फ्रिक्वेन्सी तंत्रज्ञानाचा वापर करून आणि अभ्यासक्रम सॉफ्टवेअरसह समाकलित करण्यासाठी त्यांना कधीकधी वर्ग मतदान प्रणाली म्हणून संबोधले जाते. विद्यार्थी प्रतिसाद प्रणाली इंटरएक्टिव राइटिंग टॅब्लेट किंवा वायरलेस स्लेटद्वारे कक्षामध्ये वाढलेली परस्पर क्रियाशीलता समाविष्ट करते जे परस्पर व्हाईटबोर्ड तंत्रज्ञानासाठी प्रभावी प्रभावी पर्याय प्रस्तुत करते.

### आयपॉडचा वापर

आयपॉड पोर्टेबल मीडिया प्लेयर्सचा एक ब्रँड आहे जो Apple पल इंक द्वारे डिझाइन केलेला आणि मार्केटिंग केला गेला आहे. उत्पादनांमध्ये हार्ड ड्राइव्ह बेस्ड आयपॉड क्लासिक, टचस्क्रीन आयपॉड टच, व्हिडिओ-सक्षम आयपॉड नॅनो आणि कॉम्पॅक्ट आयपॉड शफल यांचा समावेश आहे. आयफोन एक आयपॉड म्हणून कार्य करू शकतो परंतु सामान्यतः वेगळा उत्पादन मानला जातो. आयपॉड क्लासिक मॉडेल अंतर्गत हार्ड ड्राइव्हवर मीडिया संग्रहित करतात, तर इतर सर्व मॉडेल्स त्यांचे लहान आकार सक्षम करण्यासाठी फ्लॅश मेमरी वापरतात. इतर बर्याच डिजिटल संगीत प्लेयर्सप्रमाणे, आयपॉड, आयपॉड टच वगळता, बाह्य डेटा स्टोरेज साधने म्हणून देखील काम करू शकतात. मॉडेलनुसार स्टोरेज क्षमता बदलते.

### पॉडकास्टिंग

पॉडकास्ट ही ऑडिओ किंवा व्हिडिओ डिजिटल मीडिया फाइल्सची एक मालिका आहे जी इंटरनेटद्वारे पोर्टेबल मीडिया प्लेयर आणि वैयक्तिक संगणकावर डाउनलोडद्वारे, वेब फीडद्वारे वितरीत केली जाते. पॉडकास्ट सिंडिकेट करण्याची, सदस्यता घेण्याची आणि नवीन सामग्री जोडली जाते तेव्हा स्वयंचलितपणे डाउनलोड करण्याच्या क्षमतेनुसार बर्याचच डिजिटल माध्यमांच्या स्वरूपात फरक केला जातो. प्रसारण या शब्दाप्रमाणेच पॉडकास्ट एकतर सागरीच्या मालिकेचा किंवा ती सिंडिकेट केलेल्या पद्धतीचा संदर्भ देते; नंतरचे पॉडकास्टिंग देखील म्हणतात. पॉडकास्टच्या होस्ट किंवा लेखकास बर्याचदा पॉडकास्टर म्हटले जाते.

### व्हर्चुअल लर्निंग एन्व्हायर्नमेंट (VLE)

व्हर्चुअल लर्निंग एन्व्हायर्नमेंट (व्हीएलई) ने विद्यार्थी शिकवण्याच्या आणि शिक्षक शिकवण्याच्या पद्धतीमध्ये बदल केला आहे. आभासी शिक्षण वातावरण ही जागतिक वेबसाइट आहे जी विद्यार्थ्यांना त्यांचे कार्य आणि त्यांचे अभ्यासक्रम जगातील कोठूनही प्रवेश करू देते. हे हक्क-संरक्षित आहे आणि म्हणूनच पालक, विद्यार्थी आणि कर्मचारी लॉग इन करण्यास सक्षम असतील. विद्यार्थ्यांचे काम सेट केले जाऊ शकते, एकत्र केले जाऊ शकते आणि व्हीएलई मार्फत चिन्हांकित केले जाऊ शकते, जे कागदाच्या कामकाजावर आणि संग्रह आणि अंतिम मुदतीच्या तारखांमध्ये मोठ्या प्रमाणात बचत होईल. हे यामधून विद्यार्थ्यांचे सामर्थ्य वाढवू शकते आणि त्यांच्या स्वतःच्या शिक्षणाची माहिती देऊ शकते. विद्यार्थी अधिक निर्णय घेण्यास सक्षम आहेत, कारण कार्य त्यांच्या स्वतःच्या गतीने आणि संभाव्यतः त्यांच्या स्वतःच्या वेळी पूर्ण केल्या जातील.

### व्हिडिओ कॉन्फरन्सिंग

शाळांमध्ये व्हिडिओ कॉन्फरन्सिंग औपचारिक अध्यापनासाठी, अतिथी शिक्षकांचा वापर करून, बहु-शाळा प्रकल्प आणि समुदाय कार्यक्रमांसाठी वापरली जाऊ शकते. एकदा कनेक्ट झाल्यानंतर, विद्यार्थी दुसऱ्याक



व्यक्तीस टीव्ही स्क्रीनवर पाहू शकतात आणि प्रश्न विचारू शकतात. आवश्यक उपकरणांमध्ये एक टीव्ही मॉनिटर, कॅमेरा, मायक्रोफोन, स्पीकर आणि एक संकुचित व्हिडिओ सिस्टम समाविष्ट आहे जे एकात्मिक सेवा डिजिटल नेटवर्क (आयएसडीएन) द्वारे प्रसारित केले जाऊ शकते. व्हिडिओ कॉन्फरन्सिंगद्वारे विद्यार्थ्यांना वेगवेगळ्या मार्गांनी शिकण्याची संधी मिळू शकते, ज्यामध्ये परीक्षा स्तरावर शारीरिक शिक्षणामध्ये विशिष्ट विषयावर लक्ष केंद्रित केले जाऊ शकते. हे दुसऱ्या शारीरिक शिक्षण विभागासह आयोजित केले जाऊ शकते जेथे परीक्षा अभ्यासक्रमामध्ये शिक्षक माहिती सामायिकरण करण्यास अनुमती देऊन विशिष्ट कौशल्य देऊ शकतात.

### शाळांमध्ये यूट्यूबचा वापर

YouTube एक व्हिडिओ-सामायिकरण वेबसाइट आहे जिथे वापरकर्ते व्हिडिओ क्लिप अपलोड, पाहू आणि सामायिक करू शकतात. हे मूव्ही क्लिप, टेलिव्हिजन क्लिप आणि संगीत व्हिडिओ तसेच व्हिडिओ ब्लॉगिंग आणि शॉर्ट ओरिजनल व्हिडिओसारख्या हौशी सामग्रीसह विविध प्रकारच्या वापरकर्त्यांद्वारे व्युत्पन्न व्हिडिओ सामग्री प्रदर्शित करण्यासाठी ॲंड्रोब फ्लॅश व्हिडिओ तंत्रज्ञानाचा वापर करते. यूट्यूबवरील बऱ्याच सामग्री व्यक्तींनी अपलोड केल्या आहेत, जरी बीबीसीसह मीडिया कॉर्पोरेशन त्यांची काही सामग्री साइटद्वारे ऑफर करतात. यूट्यूबने व्यापलेल्या अनेक विषयांच्या विडीओने व्हिडिओ सामायिकरण इंटरनेट संस्कृतीतल्या एका सर्वात महत्वाच्या भागात रूपांतरित केले आहे. शाळांमध्ये प्रतिमा मिळवण्यासाठी आणि सादर करण्यासाठी YouTube एक जलद प्रभावी माध्यम होत आहे.

20व्या शतकाच्या सुरुवातीपासून रेडियो व दूरदर्शन यांचा वापर शिक्षणासाठी केला जात आहे. रेडियो व दूरदर्शनचा वापर मुख्यत्वे खालील प्रकारे केला जातो: ICT च्या ह्या स्वरूपांचा मुख्यत्वे तीन प्रकारे उपयोग करण्यात येतो:

1. शालेय विषयांशी संबंधित ध्वनी चित्रफिती व रेडियोवरून प्रसारित केले जाणारे कार्यक्रम यांच्या सहाय्याने वर्गात शिकविणे.
2. शाळांमध्ये शिक्षणाला पूरक असे कार्यक्रम प्रक्षेपित करणे.
3. सामान्य ज्ञान व माहितीपर शैक्षणिक कार्यक्रम दाखविणे किंवा प्रसारित करणे.

### रेडियो व दूरदर्शन

रेडियोवरून (IRI) प्रसारित केले जाणारे कार्यक्रम दैनिक स्वरूपाचे असतात. हे रेडियो धडे, एका विशिष्ट विषयाशी संबंधित असतात व त्यांचा प्रेक्षकवर्ग लक्षात घेऊन त्यांची काठिण्यपातळी ठरविली जाते. या कार्यक्रमांमुळे शिक्षकांना तो विषय अधिक चांगल्या रीतीने शिकविण्यास मदत होते तसेच मुलांना ही तो विषय समजून घेणे सोपे जाते. या पद्धतीमुळे दुर्गम भागातील शाळेतील विद्यार्थी व ज्या ठिकाणी शिक्षकांची कमतरता आहे अशा ठिकाणच्या विद्यार्थ्यांना ही शिक्षण घेणे सोपे जाते. रेडियोवरून (IRI) प्रसारित केल्या जाणाऱ्या या कार्यक्रमांमुळे औपचारिक व अनौपचारिक दोन्ही प्रकारच्या शिक्षणाचा दर्जा व त्याची व्याप्ती, दोन्ही गोष्टींवर सकारात्मक प्रभाव पडला आहे. शिवाय रेडियो कमी खर्चिक असल्यामुळे मोठ्या लोकसंख्येला शिक्षणाचा लाभ मिळू शकतो.

दूरचित्रित केलेले कार्यक्रम अभ्यासक्रमास पूरक म्हणून किंवा स्वतंत्र पाठ म्हणून ही वापरले जाऊ शकतात. अशा कार्यक्रमांना अनेक आमूलाग्र बदल घडून आले आहेत. पूर्वी अनेकदा अशा कार्यक्रमांत





एखादा शिक्षक एखाद्या विषयावर विवेचन करताना दाखविला जाई मात्र आता त्याची जागा विद्यार्थ्यांना जवळ वाटणार्या मुद्यांनी व सुसंवाद साधणार्या कार्यक्रमांनी घेतली आहे त्यामुळे हे कार्यक्रम विद्यार्थ्यांना अधिकाधिक खिळवून ठेवत आहेत. विद्यार्थ्यांची ग्रहणक्षमता व सुसंवाद वाढविण्यासाठी बहुतेक अशा शैक्षणिक कार्यक्रमांसह छापील व इतर प्रकारचे साहित्यदेखील पुरविले जाते. आशिया-पॅसिफिक प्रदेशात शैक्षणिक प्रसारण मोठ्या प्रमाणात केले जाते. उदा. भारतात इंदिरा गांधी राष्ट्रीय मुक्त विद्यापीठातील अनेक अभ्यासक्रम दूरदर्शन व व्हिडियो कॉन्फरन्सिंगच्या मदतीने शिकविले जातात.

काही विशिष्ट अभ्यासक्रमांशी संबंधित कार्यक्रम प्रसारित करण्याबरोबरच सर्वसामान्य शैक्षणिक कार्यक्रम प्रसारित करण्यासाठी ही दूरदर्शन व रेडियोचा वापर केला जाऊ शकतो. वास्तविक, शैक्षणिक मूल्य असणारा व रेडियो किंवा दूरदर्शनवरून प्रसारित केला जाणारा कोणताही कार्यक्रम 'सर्वसामान्य शैक्षणिक कार्यक्रम' म्हणून गणला जाऊ शकतो. उदा. अमेरिकेत प्रसारित केला जाणारा 'सीसेम स्ट्रीट' हा कार्यक्रम किंवा कॅनडामधील 'फार्म रेडियो फोरम' हा रेडियो चर्चा कार्यक्रम.

### अध्यापनात संगणकाचा वापर

सध्याचे युग हे संगणकाचे युग म्हणून ओळखले जाते. कॉम्प्यूटर नावाच्या या यंत्राने आजच्या समाज जीवनावर सर्वांगीण परिणाम केलेला आहे. संगणक हे एक इलेक्ट्रॉनिक उपकरण आहे. यांत चिन्हांवर प्रक्रिया करणारी पद्धती किंवा व्यवस्था असून त्याची रचना व व्यवस्थापन असे असते की, ज्यामुळे माहिती स्वीकारणे, साठविणे व संस्कारित करणे आणि निकाल किंवा उत्तरे तयार करणे या प्रक्रिया आधीच साठवून ठेवलेल्या पाय-या पाय-यांनी बनलेल्या सूचनाबरोबर आपोआप केल्या जातात. संगणकाचा रेल्वे, विमान, आरोग्य, बँक, उद्योगधंदे, शिक्षण, संशोधन, विमाक्षेत्र, विद्युतविभाग इत्यादी क्षेत्र / विभाग यांत विविध कार्यांसाठी उपयोग केला जातो. ते संगणकाच्या काही वैशिष्ट्यपूर्ण क्षमतांमुळे याला शिक्षणातील अध्ययन-अध्यापन क्षेत्र तरी कसे अपवाद असणार?

### संगणकाची वैशिष्ट्ये

1. वेग - संगणकाच्या कामाचा वेग अतिप्रचंड आहे.
2. स्मरणशक्ती - संगणकांची मुख्य स्मरणशक्ती मर्यादित असली तरी दुय्यम स्मरणशक्ती साधने वापरून खूप मोठ्या प्रमाणावर माहिती साठविता येते.
3. अचूकता - संगणक दिलेले काम दिलेल्या सूचनांप्रमाणे अतिशय अचूकतेने करतो.
4. अष्टपैलू उपयोगिता - ज्या कामाबाबत तर्कसंगत व क्रमवार सूचना देता येतात असे कोणतेही काम सामान्यपणे संगणक करू शकतो. या त्याच्या गुणधर्मांमुळे संगणक विविध प्रकारची कामे पार पाडू शकतो उदा. वाहतुकीचे नियंत्रण, गुणपत्रिका छपाई इत्यादी.
5. संगणक हे एक तंत्र असल्याने त्याच्यामध्ये न कंटाळता व न थकता अचूकपणे काम करण्याची क्षमता आहे.
6. संगणकाच्या सर्व क्रियांमध्ये सातत्य, विश्वासाहता दिसून येते.
7. संगणकाची विविधांगी उपयोगिता पाहता त्यावर होणारा खर्च नगण्य आहे.
8. भावनिक दृष्टीने कोणत्याही संगणकाच्या कार्यक्षमतेवर कोणताही विपरीत परिणाम होत नाही.



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20-21

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Organized  
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Impact of COVID-19 on World :  
Problems, Challenges and Opportunities

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This is to certify that

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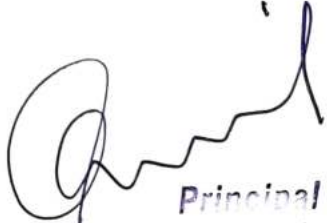
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**Women Empowerment & Entrepreneurship****Dr. Anjali Chandrakant Pande**

Associate Professor

Department of Home-Economics Narayanrao Rana Mahavidyalaya, Badnera,  
Distt.-Amravati**Introduction :**

Women Empowerment is the process of empowering the women. It is that creates power in individuals over their own lives, society and in their communities. People are empowered when they are able to access the opportunities available to them without limitations and restrictions such as in education profession and life style. Feeling entitled to make your own decision creates a sense of empowerment. Empowerment includes the action of rising the status of women through education rising awareness, literacy and training. Women empowerment is all about equipping and allowing women to make life - determining decisions through the different problem in society. Alternately, it is the process for women to redefine gender rolls that allows them to acquire the ability to choose between known alternatives whom have otherwise been restricted for such an ability. Women empowerment has become significant topic of discussion in development and economics. It can also point to the approaches regarding other trivialized genders in particulars political or social contact.

Empowerment of women is a necessity for the very development of society, since it enhances both the quality and the quantity of human resources available for development. Women's empowerment and achieving gender equality is essential for our society to ensure the sustainable development of the country.

Entrepreneurial activities have been shown to influence economic development and growth. The powerful role women can play in this process has been the theme of much entrepreneurial research, mostly from developed nations. The contribution of entrepreneurs to economic advancement is likely to differ in developing countries, and remains a relatively unexplored research topic. Women, who constitute nearly half the population, can be a strong resource for sustainable socio-economic development given adequate support, but are unfortunately given only secondary roles, especially in developing and under-developed countries.

Economic growth and development of any country are determined by human, physical and financial resources. An economy can move on to higher levels of growth either by acquiring a larger quantum of the factors of production or through technical progress. The objective of any planned development is to develop human resources to their brimming utilization. Therefore, industrialization is one of the ways of bringing about socio-economic development in any country. The economic development of a nation is sparked largely by its enterprising spirit.

Women entrepreneurs are those women who think about business or enterprise, initiate it, organize and combine the factors of production. Open the enterprise and undertake



risks and handle economic uncertainly involved in running a business. Women entrepreneurs are creating jobs, innovation and contributing to the GNP of various economies just like their male counterparts. There is growing evidence that women are more likely to reinvest their profits in education, their family and their community. Ironically traditional measures of economic development and business performance do not often capture the true transformational benefits of these transformational businesses.

Any strategy aimed at economic development will be lop-sided without involving women who constitute half of the world population. Evidence has unequivocally established that entrepreneurial spirit is not a male prerogative. Women entrepreneurship has gained momentum in the last three decades with the increase in the number of women enterprises and their substantive contribution to economic growth. The industrial performance of Asia-Pacific region propelled by Foreign Direct Investment, technological innovations and manufactured exports has brought a wide range of economic and social opportunities to women entrepreneurs.

In this dynamic world, women entrepreneurs are an important part of the global quest for sustained economic development and social progress. In India, though women have played a key role in the society, their entrepreneurial ability has not been properly tapped due to the lower status of women in the society. It is only from the Fifth Five Year Plan (1974-78) onwards that their role has been explicitly recognized with a marked shift in the approach from women welfare to women development and empowerment. The development of women entrepreneurship has become an important aspect of our plan priorities. Several policies and programmes are being implemented for the development of women entrepreneurship in India. There is a need for changing the mindset towards women.

**Definition of the terms :****Economic Development**

Economic development is the sustained, concerted actions of policy makers and that promote the and of a specific area.

**Women Entrepreneurs :**

It was operationally defined as 'As enterprises owned and controlled by women having a minimum financial interest of 51% of the employment generated in the enterprises to women.

**Economic Development**

Economic development of a country is usually determined by the growth of per capita income. However, other than per capita income, in the essence of modern economic growth, we also know that, on average, it might be measured with other fundamental changes that occur. Such changes are, among other things, the way people live, as they are more likely to move to cities and work in factories, no longer in farms. That happens as the household industries tend to decline and replaced by larger enterprises. Other indicators that we might see are the tendency of the families to reduce the number of children, so the birth rate begins to fall. Development could be seen also from the point of view of employment progress,





capital, business volume and consumption. In other words, economic development can be seen in the structural change of the society, and implies more than just economic growth.

### Concept of women Entrepreneurs :

Women entrepreneurship has long been associated with concepts such as women empowerment and emancipation. Increasingly, it has also been marketed as crucial for increasing the quality of life of women in the developing world. Further, it has also been encouraged as way of making changes to the status-quo of women in the Muslim world and re-addressing the balance of power within the family unit. The benefits of women entrepreneurship are many and varied and have been researched in great detail in the past. The purpose of this research is to facilitate a discussion on how best to empower women using entrepreneurship. This will in turn help in the marketing of entrepreneurship as a tool for the female empowerment and emancipation.

Women constitute almost 50 per cent of the world population. So the socio-economic participation of women at the international, regional, national and local levels means using significant potential resources more effectively. Moreover, it is noticeable that entrepreneurship development and empowerment are complementary to each other. Women empowerment depends on taking part in various development activities. In other words, the involvement of women in various entrepreneurial activities has empowered them in social, economic, culture and other related fields. It can be understood that women entrepreneurs have been making significant impact in all segments of the economy in the developed countries like Canada, United kingdom, Germany, Australia and the united states, etc.,

Women entrepreneurs engaged in business due to different push and pull factors which encourage women to have an independent occupation and stands on their own legs. For example, move towards independent decision making on their life and career is the motivational factor behind this urge. In other words, women entrepreneurs are persons who accept challenging roles to meet their personal needs and become economically independent. Besides, a strong desire to do something positive is an inbuilt quality of entrepreneurial women, who is capable of contributing values in both family and social life. The challenges and opportunities provided to the women of this digital and dynamic era are growing rapidly that the job seekers are turning in to job creators. On the other hand, many women start a business due to some traumatic events, such as divorce, death of bread winner, sudden fall in family income, permanent adequacy in the income of the family etc.

The rising number of female business owners is currently a global trend especially in the developing countries. In the advanced market economies, women own more than 25 per cent of all business. Many people argue that women are 'pushed' rather than 'pulled' in to business ownership but recent, but recent studies indicate that many women now actively choose self-employment, especially the younger women. Quite interestingly, women entrepreneurs can significantly contribute to poverty reduction, mobilisation of entrepreneurial initiatives and accelerating the achievement of wider socio-economic objectives.



However, the contribution of women entrepreneurs depends on their performance, which, in turn, is affected by the underlying facilitators and barriers. Over the past two decades, women entrepreneurs have come to be recognised for their significant contributions to socio-economic development of their respective countries.

#### **Categories of Women Entrepreneurs :**

- Women in organized & unorganized sector
- Women in traditional & modern industries
- Women in urban & rural areas
- Women in large scale and small scale industries.
- Single women and joint venture.

#### **Women's Role in Economic Contribution :**

Progress of women's role in several sectors, including business, could be seen in some phenomenon mentioned here under :

1. In line with the improvement of women's education, women are no longer the minority in fields that were dominated by men in the past.
2. The field of information technology creates many opportunities for the development of women's talents in this specific field.
3. The increase in the number of women who lead their own business, especially the ones in small and medium scale enterprises.
4. Women's leadership is able to gain high loyalty due to the fact that they are the ones that are able to conduct clean, ethical, transparent and honest management.

On the basis of the above picture, it is obvious that the 21<sup>st</sup> century provides high hopes for the progress in women role. They do have the opportunity to get strategic positions that dominated by men in the past.

In Asia, women are the economy driving force. Their contribution in providing job openings in business sectors continues to rise. They are involved in enterprises at all Levels as managers, entrepreneurs, owners and investors. Combination of influence of more education, technology and fast economic growth make Asian women more assertive concerning their right, more aggressive in reaching their ambition while we already acknowledged that the number of Asian women in the work force from country to country are almost as high as those of men.

Surprisingly in most countries in Asia, women are dominating the service sector. In countries like Singapore and Taiwan women donate respectively 68.1%, 61% of the GNP of said countries. The amount of Asian women employment evidently in quantitative has been similar with European countries. In Vietnam shows 47.7% from the employment are women, in Thailand 46%, Indonesia 45%. The service sector in Asia also experienced surprising growth, and resulting a large working opportunity for women. In Taiwan, Singapore and





Hong Kong in the service sector donate respectively 61%, 68% and 77% of the respective GNP of said countries. While, in Korea and Japan the service sector contributes up to 60.6% and 54.9% respectively. This obviously means women now dominated the service sector.

In the business world, women entrepreneurs play a big role in business development in the Pacific region. In Japan, 5 out of 6 new businesses are created by women, and they have at least five employees. The number of women owned larger companies is not significant, but they start and manage the smaller companies.

#### **Ways to Develop Women Empowerment through Entrepreneurs :**

1. Consider women as specific target group for all developmental programmers.
2. Better educational facilities and schemes should be extended to women folk from government part.
3. Adequate training program on management skills to be provided to women community.
4. Encourage women's participation in decision-making.
5. Vocational training to be extended to women community that enables them to understand the production process and production management.

#### **Conclusion :**

Women represent half the world's population, and gender inequality exists in every nation on the planet. Empowerment with Entrepreneurship among women, no doubt improves the wealth of the nation in general and of the family in particular. Women today are more willing to take up activities that were once considered the preserve of men, and have proved that they are second to no one with respect to contribution to the growth of the economy. Women in developing countries are tremendous forces for change in their families, villages, cities and countries. When they get a chance, which is reflected not only in the business practices, but also in the policy shaping process of governments domestically as well as regionally. The more significant role in economic development through women entrepreneurship is something that should be pursued, and it is not something that can be achieved freely and easily. There has to be a struggle to win that race.

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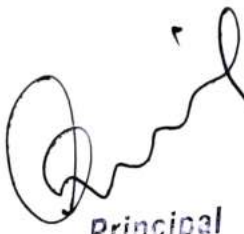
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रासायनिक और जैविक युद्ध और उसका विश्व की राजनीति, अर्थव्यवस्था एवं समाजव्यवस्था पर  
परिणाम : एक विश्लेषणात्मक अध्ययन

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विश्वयुद्ध के दौरान साम्राज्यवादी, पूँजीवादी, शोषक ताकतों ने बड़े व्यापक पैमाने पर रासायनिक एवं जैविक हथियारों का इस्तेमाल किया। जैविक हथियार किसी भी मुल्क की अर्थव्यवस्था और सामाजिक व्यवस्था को बहुत बड़ी चोट पहुँचा सकते हैं। और इसका विश्व की राजनीति, अर्थव्यवस्था एवं समाजव्यवस्था पर जो अत्यंत गहरा प्रभाव पड़ा। और यह आज तक जारी है। जिससे साम्राज्यवाद एवं पूँजीवाद का आतंकवादी चरित्र उजागर होता है। उसका विश्लेषणात्मक अध्ययन करना प्रस्तुत शोध निबंध का मूल उद्देश्य है।

दुनियाँ के सभी जंग पूँजीवादी लूट-खसोट के लिये हुए थे। शोषकों ने ही किया रासायनिक हथियारों का इस्तेमाल!

जर्मन वैज्ञानिक फिट्ज़ हेबर (Fritz Haber) ने प्रथम विश्वयुद्ध के समय रासायनिक हथियारों की तरफ़ी में अहम किरदार निभाया। 22 अप्रैल 1915 को बेल्जियम में उसके साथ लड़ रही फ्रेंच और अल्जिरियन सेना पर जर्मन सेना ने 5730 क्लोरिन गैस के सिलेंडरों के बॉल्व खोल दिये जिससे 180 टन क्लोरिन गैस फैली। पहले दो दिनों में 5000 दोस्त मुल्कों की सेना के जवान मारे गए, 10,000 अपाहिज हुए जवानों में से आधे हमेशा के लिए अपाहिज हुए। 31 मई 1915 को हेबर ने पूर्वी मोर्चे पर रूसियों के खिलाफ क्लोरिन हमला करवाया। ब्रिटिश सेना ने बेल्जियम के लुस नामक जगह पर क्लोरिन गैस का हमला किया जिसमें 5500 सिलेंडरों का इस्तेमाल किया गया। 14 अक्तूबर 1918 को ब्रिटिश सेना ने मस्टर्ड गैस का इस्तेमाल जर्मन सेना के वरविक नाम के बेल्जियम के गाँव पर किया। इसमें एक लाख लोग मारे गये और दस लाख जख्मी हुए। अल्लॉफ हिटलर इस गैस के असर में आया और जर्मनी ने फौरन युद्धबंदी लागू कर दी। सन 1919 में जर्मनी ने हेबर को उसके रसायनशास्त्र में योगदान के लिये नोबेल प्राइज का ऐलान किया।

युद्धों में गैसों की तीन किस्मों का इस्तेमाल हुआ है। (1) Asphyxiants क्लोरिन और फोसजिन (घिवेहमदम) फेफड़ों पर असर करती है, (2) Blistering agent इनमें अलग अलग तरह की मस्टर्ड गैस शामिल है, (3) Blood agents इनमें हायड्रोजन सायनाइड शामिल है जिसे 'प्रुसिक एसिड' या हायड्रो सायनिक एसिड भी कहा जाता है। यह रक्त में ऑक्सिजन को रूकावट करता है। ब्रिटेन ने आरसेनिक पर आधारित गैस "वी" बनाई। यह गैस गैसमास्क से भी छनकर जिस्म में पहुँचकर इन्सान को भयानक दर्द पहुँचाती थी। जर्मनी ने 'वेरफर 1918' नामक गैस बनाई। अमेरिका ने चमड़ी पर छाले लाने वाली गैस "लेविसाईट" बनाई। जर्मनी के हेबर ने "पेस्ट कंट्रोल" के प्रयोगों के नाम पर जहरीली गैसों की खोज जारी रखी। हेबर ने एक ऐसा पदार्थ बनाया जो प्रुसिक एसिड गैस छोड़ता था। इस पदार्थ को 'झिकलॉन बी' (zyklon B) नाम दिया गया।

जर्मन नाजीयों ने इसका इस्तेमाल 20 साल बाद अपने "एक्सटरमिनेशन कैंम्पस" में कल्लेआम के लिये किया। रूस के गृहयुद्ध में जहरीली गैसों का इस्तेमाल किया गया। ब्रिटेन ने अफगानिस्तान और अपने दिगर उपनिवेशों की जनजातियों की बगावत दबाने के लिये इसका इस्तेमाल किया। जपानियों ने भारी तादाद में मस्टर्ड गैस और लेविसाईट, रासायनिक बम, सायनाइड गैस छोड़ने वाले टैंक विरोधी बम, दिगर हथियार और आदमियों के लिये ही नहीं बल्कि जंग में उनके घोड़ों, उंटों और कुत्तों के बचाव के उपकरण बनाये।

जर्मन केमिस्ट गेरहार्ड स्ट्राडर (ळमर्तीतक 'बीतंकमत) ने दिसंबर 1936 में घातक 'ऑरगॅनो फॉस्फेट कम्पाउंड' (Organo Phosphate Compound) बनाया जिसका नाम उसने 'टैब्युन' (Tabun) रखा। जब इसकी एक बुँद नीचे गिर गई और उसकी पुतलियाँ सिकुडकर सुई की नोक बराबर रह गई और उसे सांस लेने में बेहद दिक्कत हुई। अगर कुछ और बुँदे गिर गई होती तो उसका बचना मुश्किल था। टैब्युन को 'नर्व गैस' कहा गया क्योंकि ये 'नर्व सायनेप्सेस' पर असर करती थी। इसकी बेहद कम तादाद इन्सान की जान लेने के लिये काफी है। गैस मास्क भी इससे बचाव नहीं कर पाता क्योंकि यह गैस चमड़ी से सोख ली जाती है। सन 1938 में स्ट्राडर ने इससे भी खतरनाक गैस की खोज की जिसे 'सैरिन' (Sarin) के नाम से जाना गया।

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इस दौरान इटली ने अपने अंबिसिनिया (अभी का नाम इथोपिया) की मुहिम में 'सस्टर्ड' गॅस को हवाई जहाजों से गॅस बमों के रूप में इस्तेमाल किया। सन 1937 में जपानियों ने जहरीली गॅसों का चीनियों के खिलाफ इस्तेमाल किया। द्वितीय विश्व युद्ध में चर्चिल ने बड़े ही बेमन से रासायनिक हमले की योजना की कुर्बानी दी क्योंकि इसके लिये जरूरी हवाई जहाज उसके पास नहीं थे। हिटलर ने इस डर से रासायनिक हथियारों को इस्तेमाल नहीं किया कि दोस्त मुल्क उससे भी बड़ा रासायनिक हमला कर सकते थे।

अमेरिका ने इतने गॅस हथियार पैदा किये जितनों का सभी मुल्कों ने मिलकर प्रथम विश्वयुद्ध में इस्तेमाल तक नहीं किया था। जर्मनी ने अपने टॅब्युन, सॅरीन और सोमन गॅस के सांकेतिक नाम **GA, GB व GD** रखे थे। ब्रिटिश सेना ने सन 1940 के आखिर में और 1950 की शुरुवात में अमेरिका ने बनाई '245टी' नामक फसल को खत्म करने वाले रसायन का इस्तेमाल मलाया के कम्युनिस्ट विद्रोहियों के खिलाफ किया। ब्रिटिश सेना ने कम्युनिस्ट विद्रोहियों के इलाकों की सभी वनस्पतियों पर '245टी' का विमानों से छिड़काव किया। सन 1960 के दशक में अमेरिका ने ब्रिटेन की मलाया में मिली कामयाबी को देखकर कम्युनिस्टों के खिलाफ बड़े पैमाने पर 245टी का इस्तेमाल किया जिससे व्हिएतकांगो को जंगल में छूपना, जंगल में फसल उगाना नामुमकिन हुआ। इन रसायनों के झ्रों पर हरा, गुलाबी, सफेद, जामुनी, निला और ऑरेंज रंग के संकेत शब्द दिये गये थे। गुलाबी रसायन 245टी और कम तादाद में डायऑक्सिन (**dioxin**) का मिश्रण था। व्हिएतनाम में सन 1968 में इतना ज्यादा वनस्पती विरोधी रसायन (**herbicide**) इस्तेमाल किया गया कि अमेरिका में खेती के लिये ओर बेकार पौधों के खात्मे के लिये रसायन कम पड़ गए। बड़े पैमाने पर ऑरेंज रसायन के इस्तेमाल से व्हिएतनामी बच्चों में जन्म से खराबियाँ पैदा हुई। इस रसायन की जद में आये लोगों में कॅन्सर पैदा हुआ। अमेरिका ने चमडी पर भयानक जलन पैदा करने वाले **\*CS\*** नामक रसायन का इस्तेमाल व्हिएतकांगो को उनके घूपने के ठिकानों से बाहर निकालने के लिये किया।

अमेरिका ने व्हिएतनाम के देहाती इलाके में सन 1961-71 के दौरान 42 मिलियन लीटर जैवरासायनिक पदार्थ छिड़के जिसकी वजह से 50 मिलियन व्हिएतनामी नागरिक आज तक प्रभावित हैं। उनमें से 6 लाख लोग संगीन बिमारियों के शिकार हैं। अमेरिकी जैविक और रासायनिक कार्यक्रम के मुताबिक दक्षिण अफ्रिका के काले अवाम के खिलाफ अमेरिका ने जैविक और रासायनिक हमले किये।

केन्ट की इनवायरनमेंटल फाउंडेशन और एज्युकेशनल फाउंडेशन ऑफ अमेरिका के डॉ. सुजेन मार्शल के अध्ययन के मुताबिक अमेरिका के पास चार अहम रासायनिक हथियारों के भंडार हैं

- (1) मस्टर्ड गॅस या एजन्ट एच जिससे दम घुट जात है और इससे बच गए लोगों को कॅन्सर हो सकता है।
- (2) जीबी या सॉरिन गॅस जिससे आँखों में तेज जलन, डायरिया, सांस रुकना और फिर अचानक मौत हो जाती है।
- (3) वी.एक्स गॅस जो सूंघने पर जी.बी. गॅस से दो गुना, मुँह के भीतर जाने पर दस गुना, और त्वचा के छिद्रों से जिस्म में जाने पर 170 गुना ज्यादा जहरीली साबित होती है।
- (4) बी.जेड गॅस से याददास्त गुम होने और पागलपन से लेकर दिल का दौरा तक पड़ सकता है।

अमेरिका ने दिये रासायनिक हथियारों का इराक ने इरान के खिलाफ अपने 1980 के दशक की जंग में इस्तेमाल किया। इरान की 1988 में हार की वजह इराक ने रासायनिक हथियारों का इस्तेमाल करना था। इरान जंग के बाद सद्दाम हुसैन ने इसका इस्तेमाल कुर्द बागियों के खिलाफ किया जिसमें हजारों कुर्द मारे गए। खुद अमेरिकी सिनेट की 1994 की रिपोर्ट के मुताबिक कम से कम सन 1985 से 1989 तक अमेरिकी कंपनियों ने इराक को अमेरिका ने ही सद्दाम हुसैन को हर तरह के रासायनिक और जैविक हथियार मुहैया कराये थे। धीरे धीरे भयानक मौत देने वाले सामूहिक विनाश के इन हथियारों में (1) बैसिलस एन्थ्रसिस (*Bacillus anthracis*) जिससे एन्थ्रेक्स होता है। (2) हिस्टोप्लाज्मा कैप्सुलाटम (*Histoplasma Capsulatum*) जो फेफड़ों, मशितष्क, स्पाइनल कार्ड (रीढ़ के मज्जादंड) और दिल पर असर करता है, (3) क्लोस्ट्रिडियम बोटुलिनम (*Clostridium botulinum*) जो एक टॉक्सिन है। (4) ब्रूसेला मेलिटेंसिस (*Brucella Melitensis*) ऐसा जीवाणू है जो जिस्म के अहम अंगों को तबाह करता है, (5) क्लोस्ट्रिडियम परफ्रिंगेंस (*Clostridium Perfringens*) बेहद घातक टॉक्सिन है जो खास बिमारी को पैदा करता है, (6) क्लोस्ट्रिडियम टिटैनी (*Clostridium tetani*) बेहद घातक टॉक्सिक है, भेजे गए। इसके अलावा इस्चेरिचिया कोली (*Escherichia Coli - (E.Coli)*), अनुवांशिक पदार्थ (Genetic materials), इन्सानी और जीवाणू डिएनए (Human and Bacterial DNA) और दिगर दर्जनों विषाणू और जीवाणू इराक भेजे गए। सिनेट रिपोर्ट के मुताबिक इन सभी से इनकी दोबारा पैदावार की जा सकती थी। इन जैव-रासायनिक हथियारों की पैदावार और इसके जंग में इस्तेमाल के लिये जरूरी उपकरण भी भेजे गए।



अमेरिकी हिमायत से दक्षिण अफ्रिका की वंशवादी रंगभेद हिमायती सरकार को जैव रासायनिक हथियार बनाकर इसका इस्तेमाल अफ्रिका के काले अवाम के खिलाफ किया। काले सैनिकों पर प्रयोग किये गये। इससे काले सैनिकों में स्वाभाविक लगने वाला हार्ट अटैक पैदा होता था। पानी में विषाणू और जीवाणू को मिलाया गया। तरह तरह की ऐसी गैसों का इस्तेमाल किया गया जो दक्षिण अफ्रिका और उसके करीब के मुल्कों के दूश्मनों को लकवे का शिकार बनाकर मार डालती है।

**शोषकों ने ही किया जैविक हथियारों का इस्तेमाल!**

वंशवादी अमेरिका अन्यो से भी नए-नए जैविक हथियार खरिदने की कोशिशें करता रहा है। नस्लभेद विरोधी कार्यकर्ताओं और उनके हिमायतीयों ने काले लोगों को ठिकाने लगाने के लिए जैविक हथियार जमा किए थे। दक्षिण अफ्रिका की नस्लभेदी सरकार ने जैविक हथियारों को पैदा करने की गुप्त परियोजना 'प्रोजेक्ट कोस्ट' शुरू की थी, जो 1990 के दशक में उजागर हुई थी। डॉन गुसेन को 1981 में प्रोजेक्ट कोस्ट की रूडप्लान लेबोरेटरी का डायरेक्टर बनाया गया। इस प्रोजेक्ट के मिलिट्री कमांडर वाटर बेसन थे। अक्तूबर 2001 में गुसेन की मुलाकात सीआईए के एक पूर्व एजेंट डॉन मायस से हुई। उसने गुसेन से कहा कि वह चाहे तो जैविक हथियार और उसके प्रतिरोधक अमेरिका को बेचकर अच्छा पैसा कमा सकता है। गुसेन की शर्त थी कि एफबीआई उसे 50 लाख डॉलर नगद, उसे और उसके 20 साथियों के परिवारों के लिए अमेरिका में बसने की इजाजत दिलाए। एफबीआई को यह कबूल था। मई 2002 में गुसेन ने मायस के हाथों दूधपेस्ट के ट्यूब में रखकर घातक ड्राई बैक्टेरिया के नमूने अमेरिकी गुप्तचर संस्था एफबीआई को भेजे। योजना के मुताबिक डरबन से 600 कि.मी. दूर एक एअर पोर्ट पर अमेरिका का एक प्राइवेट विमान उतरना था, जिसके एक ट्रेलर पर दो कंटेनर लाद दिये जाने थे। इन कंटेनरों में 20 लिटर एंटीसिरम और कांच की 200 बोतलों में ऐसे बैक्टेरिया थे, जिन्हें मनुष्य और पर्यावरण के लिए बेहद खतरनाक बताया गया था। इसमें इन्टेस्टाइनल बैक्टेरियम एस्केरिकीया कोली की टॉक्सिन प्रोड्यूसिंग जीन क्लास्ट्रीडियम परन्फिन्जेन्स से संकरित किया गया था। इसकी वजह से खतरनाक गैस गैंगरेन नामक बीमारी हो जाती है। लेकिन एक गलतफहमी की वजह से एफबीआई के अफसरों ने यह बात दक्षिण अफ्रिका के अफसरों को बता दी जिससे सौदा नहीं हो सका।

ब्रिटिश साम्राज्यवादियों ने अपने उपनिवेशों को बढ़ाने के लिये इलाकाई जनजातियों में जिवाणूओं से संक्रमित ब्लैकट और कपड़े बाँटे थे। इन जनजातियों में इन रोगों का मुकाबला करने की कुव्वत नहीं थी इसलिये बड़े भारी पैमाने पर उनकी मौतें हुईं।

माना जाता है कि सन 1944 में जर्मनी में आलू की पैदावार को जो भारी नुकसान पहुंचा था वह इन जैविक हमलों की वजह से था। उसी तरह सन 1945 में जापान में चावल की पैदावार की भारी बर्बादी हुई थी।

जापानियों ने औरों के बराबर आने के लिये और चीन के जिन इलाकों को वे अपनी कॉलनी बनाना चाहते थे वहां के चिनियों का खात्मा करने के लिये जैविक हथियार बनाये। इशिई (Ishii) नामक जापानी वैज्ञानिक ने पिंगफेन इंस्टिट्यूट में "जल शुद्धीकरण प्रकल्प 731" की आड में जैविक हथियारों की पैदावार की। इस इंस्टिट्यूट का इलाका तीन स्वेअर किलोमीटर फैला था जिसमें हवाईपट्टी, बैंकें और प्रयोगशालाएं थी।

एन्थ्रक्स (Anthrax) के जीवाणू बेहद विपरीत हालत में भी जींदा रह सकते हैं और बेहद घातक होते हैं जिससे शहर की पूरी आबादी को खत्म किया जा सकता है और उस इलाके को पीढीयों तक रहने के लिये नाकाबिल बनाया जा सकता है। प्लेग Yersinia Pestis नामक जीवाणू से फैलता है। इसके जीवाणू तीन तरह के होते हैं - 1) ब्यूबोनिक प्लेग (Bubonic Plague) जो मच्छर इ. उड़ने परजीवी कीटों के काटने से फैलते हैं। 2) न्यूमोनिक प्लेग (Pneumonic Plague) के जीवाणू में सांस के जरीये से इन्सान के फेफड़ों में जाते हैं। 3) सेप्टिसमिक प्लेग Septicemic Plague जीवाणू के ताल्लुकात से फैलता है। गैस गैंग्रीन (Gas gangren) में जीवाणू Clostridium Perfringens bacterium से जख्म सड़ने लगते हैं। तेजी से फैलने वाली ब्रुसेल्लोसिस (Brucellosis) बीमारी का शिकार इन्सान हफ्तों तक नाकाम हो जाता है। ग्लैंडर्स (Glanders) बीमारी Bacterium Pseudomonas Mallei नामक जीवाणू से होती है। इसमें नाक और सांस की नली की म्युकस त्वचा को यह जीवाणू खा जाता है और इन्सान की लिम्फैटिक सिस्टिम (Lymphatic System) पर हमला करता है। Salmonella and Clostridium botulinum bacteri यह दो जीवाणू खाने में बेहद घातक बायोटॉक्सिन छोड़ते हैं। बोटुलिजम टॉक्सिन की बेहद कम मात्रा में भी बेहद घातक होती है।

Tularemia खरगोशों और इन्सानों पर असर करता है। इन्सानों को यह कई हफ्तों के लिये बीमार बनाता है। प्रोडक्शन युनिट 723 मांस से या मांस के सुप (broth) से भरी ट्रे में इन जीवाणू की पैदावार करते थे। सड़े



मांस की बदबू नाकाबिले बर्दाश्त होती थी। माना जाता है की पिंगफॅन प्रयोगशाला में हर महिने कई टन जीवाणू पैदा किये जाते थे।

जापानी अपने प्रयोगों की जांच के लिये चीनी इलाकों में जाकर अमूक महामारी फैली होने का प्रचार करते थे। फिर जापानी सैनिकों की टोलियाँ चीनी इलाकों के कुँओं में और दिगर जलाशयों में जीवाणू डालती थी। बिमारी फैलने के बाद वे मरिजों को बेहोश कर उनके जिस्म से नमूनों के तौर पर जरा सा मांस निकालकर जिस्म को फिर से सी देते थे। मरे लोगो को कुएं में डाल देते थे। जापानी सिपाही संकमित गाँवो को जला भी देते थे। ये प्रयोग पूरी गोपनीयता से चीनी कैदियों पर किये गए। जापानियों ने चीनी कैदियों के जिस्म पर ही इन रोगों के जीवाणू की पैदावार करनी शुरू की। जापानीयों का सोचना था कि जो जीवाणू जीन्दा चिनियों के जिस्म की प्रतिरोधी कुवत का मुकाबला करते हुए पैदा होंगे वे और भी ज्यादा खतरनाक साबित होंगे। 3000 कैदियों का कोटा पूरा करने के लिये कईयों को सडकों पर चलते हुए ही कैद कर लिया गया था। चीनियों को खुले में खंबे से बांधा जाता था। विमान से उनपर जीवाणू छिडके जाते वक्त उन्हें अपनी निगाहें आकाश की ओर करने पर मजबूर किया जाता था। लगातार अध्ययन किया जाता था कि वे किस तरह बिमारी से मर रहे है। कुछ कैदियों को Stakes or panels से बांधकर उसके पास Clostridium Perfringens bacteria को छोडने वाले बमों का विस्फोट किया जाता था। इन कैदियों के घाव ओर जिस्म गॅन्ग्रीन से कैसे सड रहे है इसका बाकायदा रिकॉर्ड रखा जाता था। जब उनके जिस्म में इन जीवाणुओं की पैदावार हो जाती तो इन कैदियों की क्लोरोफॉर्म से बेहोश कर उनके जिस्म का सारा खून निकाल लिया जाता था। जब जिस्म से रक्त का प्रवाह धिमा पड जाता तो जापानी सैनिक कैदियों के छाती पर कूदते थे ताकि जिस्म का एक एक कतरा खून भी निकल आए। इस दौरान शेकडों जापानी सैनिक भी जीवाणुओं के असर से मर गए। इसके बावजूद ये प्रयोग जारी रहे। इशीई ने 18 और नए केन्द्र कायम कर लिये। जापानी आत्मसमर्पण के बाद ईशिई ने अपने जैव हथियारों की रिपोर्ट अमेरिकी सरकार के हवाले की। उसे और उसके साथियों को जंग अपराधों के इल्जामों से आजाद किया गया और 'युनिट 371' के काले कारनामों पर पर्दा डाल दिया गया।

लंदन के 'इम्पैक्ट इंटरनॅशनल जर्नल' में यह इल्जाम लगाया गया है कि पश्चिमी गोरे वंशवादियों ने एड्स की महामारी को जैविक हथियार की शक्ल में काले अफ्रिकी लोगों के खिलाफ इस्तेमाल किया है। केन्या के नोबेल शांति पुरस्कार विजेता वांगारी मथाई ने भी इल्जाम लगाया है कि गोरे वंशवादियों ने कालों का जनसंहार करने के लिये एड्स महामारी पैदा की है। एड्स के विषाणुओं को पश्चिम की किसी प्रयोगशाला में पैदा किया गया। पश्चिमी देशों ने यह दलील दी की एड्स का विषाणू सबसे पहले अफ्रिकी मुल्कों मे बंदरों से लोगो में फैला जबकि काले लोग हजारो सालों से बंदरो के बीच रहते आये है। काले लोगो को एड्स के उपचार के नाम पर जो विषाणु दिये गए उनका असर भी किसी महामारी से कम नहीं है।

सन 1993 के वसंत में इटली में hoof - and - mouth नामक बीमारी से 4000 जानवरों की मौत हुई। बाद में पता चला कि युगोस्लाविया से जो जानवर मंगाये गये थे उनमें इस रोग से ग्रस्त जानवर की वजह से बिमारी फैली थी। युरोपियन कम्युनिटी के बीच "गाय-युद्ध" शुरू हुआ जब उन्होंने पूर्वी युरोप के 18 मुल्कों और सोवियत युनियन से गाय जैसे सभी जानवरों से बनी पैदावार पर पाबंदी लगा दी। जैविक हथियार किसी भी मुल्क की अर्थव्यवस्था और सामाजिक व्यवस्था को बहुत बड़ी चोट पहुंचा सकते है। सन 1951 में अमेरिकी वायू सेना के लिये फसल विरोधी जैव हथियारों की पैदावार की गई। अमेरिका ने 30 टन Wheat rusts की पैदावार की जो सारी धरती के गेहूँ को तबाह करने के लिये काफी थी। इसका अहम निशाना सोवियत संघ के उक्रेन की फसलें थी। अमेरिका ने एक टन Rice blast disease के जीवाणुओं की पैदावार की। इसका मकसद चीन की चावल की फसलों को बर्बाद करना था।

**विश्वयुद्ध के समय इस्तेमाल किये गये हथियार एवं उसका परिणाम :**

1) क्लस्टर बम - हर क्लस्टर बम 200-700 छोटे बमों से बना होता है। छोटे बमों का विस्फोट होने पर लगभग 300 फौलादी तुकडे उडते है जिसकी जद में आनेवाला खून के लोथडे में तब्दील हो जाता है। इन्हे लडाकू हवाई पोत से छोडते ही तयशुदा समय पर उसके छोटे बम बाहर फँके जाते है। हर छोटे बम के साथ एक पैराशुट लगा होता है जिससे उसके नीचे आने की रफ्तार कम हो जाती है जिससे वे दूर दूर तक फैल जाते है और उनके विस्फोट से ज्यादा से ज्यादा इलाके में तबाही होती है। उनके विस्फोट के समय को टाला भी जा सकता है ताकि वे टाईम बम या बमों की खाणों के रूप में तब्दिल हो जाए। ऐसे बमों की तादाद लगभग 5-30 फीसदी तक रखी जाती है। मिट्टी, पौधे, या लताएं उगकर इन्हे अपने में छीपा सकती है। कोई बच्चा, इन्सान, जानवर या वाहन उससे टकराते ही उसका जबरदस्त विस्फोट होता है। जैसे जैसे समय बितता है वे कभी भी फट पडते है। इससे हजारो बच्चे, स्त्री, पुरुष अपनी जान गवा चुके है। लोक डर के मारे उस इलाके में काम नहीं



करना चाहते जहाँ ये क्लस्टर बम छोड़े गये थे। इस तरह क्लस्टर बम फसल और जमीन के इस्तेमाल को अगले कई सालों तक के लिये रोक देते हैं। अमेरिकी गठबंधन सेना ने युगोस्लाविया, अफगानीस्तान, विएतनाम, लाओस, कंबोडिया आदी मुल्कों में लाखों की तादाद में क्लस्टर बमों का इस्तेमाल किया गया। अमेरिकी सरकार बमों की सफाई के आंतराष्ट्रीय समझौते पर दस्तखत नहीं करना चाहती क्योंकि ऐसा करने के बाद अमेरिका क्लस्टर बमों का इस्तेमाल नहीं कर पाएगा।

2) CBU - 72 Fuel - Air Explosive — इस क्लस्टर बम के विस्फोट के बाद भयानक आग फैलती है। घेरे में आये हुए लोग, जानवर और पेड़-पौधे जलकर राख हो जाते हैं और बंकरों में छुपे लोग दम घूटने से मर जाते हैं। फटते ही वह हवा में ज्वलनशील पदार्थ के बादल को बड़ी तेजी से फैला देता है। जैसे ही ये धूँ के बादल जमीन पर उतरते हैं इस बम की प्रणाली उसे "इग्नाइट" कर देती है। जिससे बड़ा विस्फोट होता है। नागरिक जीन्दा जल जाते हैं। उनके जिस्म एक बड़े इलाके तक कुचले जाते हैं। जब इसकी चपेट में स्कुटर, मोटर, गाड़ियाँ आती हैं तो उनके इंधन का भी विस्फोट होता है।

3) MOAB Massive Ordnance Airburst Bomb — मोआब यह CBU-72 Fuel-Air Explosive बम है। इस बम का असर एक छोटे परमाणु बम जैसा ही है लेकिन इससे रेडिएशन पैदा नहीं होता। इन क्लस्टर बमों में तीन बड़ी बैरलों में ethylene g भरी होती है। हर बैरल में 100 पाउंड गैस होती है। हर बैरल में 75 पाउंड ethylene oxide होता है जिसका व्यावसायिक इस्तेमाल glycol ethylene जैसे बेहद जहरिले पदार्थों को बनाने में होता है। इसका फ्युज 30 फिट की उँचाई पर इसे इग्नाइट कर देता है जिससे बैरल खुल जाती है और हवा के साथ जहरिले विस्फोटक धुँ के बादल पैदा होते हैं। बिना इग्नाइट किये भी यह खतरनाक है क्योंकि इसका जहरिला धुँआ अंडरग्राउंड बंकरों के अंदर तक पहुँच सकता है। इस धुँ से फेफड़ों को नुकसान होता है, सिरदर्द और उल्टियाँ होती हैं, साँस लेने में तकलीफ होती है, कैंसर और जन्म संबंधी विकृतियाँ भी पैदा हो सकती हैं। यह बेहद विस्फोटक गैस है और इसके विस्फोट से हवा के बर्स्ट होने से जो दबाव पैदा होता है वह 30 किलो प्रति स्क्वेअर सेंटीमीटर यानि परंपरागत बमों से 30 गुना ज्यादा है। इससे 2700 डिग्री सेल्सियस गर्मी पैदा होती है जो तीन किलोमीटर प्रति सेकंड की रफ्तार से यानि आवाज की रफ्तार से भी तेजी से फैलती है। इससे ताकतवर हवारहित इलाका (Vacuum) पैदा हो जाता है जो हवा और खुली पड़ी चीजे अपनी ओर खींच लेता है। नतीजे में मशिन हिलने लगता है जिससे अंधापन और फेफड़ों का काम करना बंद हो जाता है, कान के ईअरड्रम और जिस्म के अंदरूनी हिस्से फट जाते हैं। इसके तुफान में उड़ती चीजों से इन्सान को चोट पहुँचते रहती है। इसके अलावा ethylene oxide फेफड़ों में जाने के नतीजे अलग हैं। इस बम का इस्तेमाल अमेरिका ने सन 2003 में इराकी नागरिकों के खिलाफ किया।

ब्रिटिश सैनिकों के डेपलेटिड युरेनियम (डिः) बमों से पैदा हुई रेडियो एक्टिविटी से कैंसर का खतरा पैदा हो गया है। अध्ययन में बसरा के अबु खासिब में रेडियो एक्टिविटी का स्तर सबसे ज्यादा पाया गया। रेडियो एक्टिव धूल से कैंसर और नवजात शिशुओं में विकृतियाँ पैदा हो गई हैं।


समग्र रूप से देखा जाए तो विश्वयुद्ध के दौरान विश्व के कई देशों ने लाखों की संख्या में जनबल को खोया। इसके अतिरिक्त विश्व की सामाजिक, राजनीतिक एवं अर्थव्यवस्था पर व्यापक परिणाम देखे गए। इसका प्रभाव भारत पर भी हुआ। संक्षेप में कहा जा सकता है कि युद्ध के दौरान अर्थव्यवस्था ने कई मायनों में भारत में पूँजीवाद को बढ़ावा दिया। उपरोक्त शोध निबंध साम्राज्यवाद के आतंकवादी चारित्र को उजागर करता है।

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# Inter Disciplinary International Conference

on  
Academic Research and Innovation in Teaching  
&  
Arising Inclination in Professional Education

(ARIT – AIPE 2019)

27<sup>th</sup> - 28<sup>th</sup> December, 2019

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## Need and Scope of Innovation in Home Economics

**Dr. Anjali Chandrakant Pande**

Associate Professor, Department of Home-Economics Narayanrao Rana Mahavidyalaya,  
Badnera, Dist. Amravati

### Introduction

Education is the foundation of our economy. What (and how) we learn in school determines who we become as individuals and our success throughout our lives. It informs how we solve problems, how we work with others, and how we look at the world around us. In today's innovation economy, education becomes even more important for developing the next generation of innovators and creative thinkers. However, there is a significant gap between the potential of modern education and what many students are actually learning. The adoption and exploration of innovative ideas in education is often slow. Instead, many educators still cling to old and increasingly ineffective methods of teaching. In common with other subjects, Home Economics reacted positively to new innovations in the subject. Key developments over the past years included the promotion of investigative and pupil-centred activities in an attempt to improve the quality of education within the subject area. The industrious efforts of teachers to produce new and relevant approaches to their subject, a systematic study of the essential nature and scope of Home Economics in the modern curriculum had been undertaken. Home Economics is one of the subjects in the Technology Education. It comprises major areas of study on food, clothing, home and family which intertwine with the knowledge contexts proposed in the Technology Education.

### Benefits of Technology in the Classroom

There's quite a bit of evidence that technology, when used in the right way, helps students learn. One study, for example, showed that a medical school class with iPads scored 23% higher on exams than classes without this device.

Technology, such as tablets, isn't only useful for absorbing knowledge; it helps with communication as well. Teachers and administrators use such devices to send materials and information to students and parents. Students hand in homework and term papers online and can access educational applications and programs to further assist with learning.

### Here are some of the clear benefits of using technology in the classroom:

- It makes learning interesting and engaging, especially for younger generations raised on the latest technology.
- It allows for faster and more efficient delivery of lessons, both in the classroom and at home.
- It reduces the need for textbooks and other printed material, lowering long-term costs incurred by schools and students.
- It makes collaboration easier. Students, teachers, and parents can communicate and collaborate more effectively.
- It helps to build technology-based skills, allowing students to learn early on the advantages and disadvantages of the tools technology offers.

### Finding Innovative Applications of Technology

While technology, in and of itself, does not always spur innovation in the classroom, there are countless innovative ways to use technology to better teach and engage students. Here are some examples:

**Robots in the Classroom** – South Korean schools have experimented with robot teachers. This makes lessons more interesting and entertaining for kids and enables teachers from anywhere in the world to be "present" in the classroom.

**Mobile Technology** – Smart phones and other mobile devices are increasingly used in education. Mobile apps let teachers conduct digital polls, enhance verbal and presentation skills, and incorporate technological skills with core competency lessons. There are many Home Economics Apps available on the mobile which can be useful for teaching learning process.



**3D Learning** – Students enjoy 3D games and movies, so why not use this technology to help them learn? GEMS Modern Academy in Dubai does just this, providing students with a 3D lab that offers interactive multimedia presentations.

**Assisting Special Needs Students** – Assistive technology is especially useful for students with learning disabilities. For example, phonetic spelling software helps dyslexic students and others with reading problems to convert words to the correct spelling.

### **Innovations in Teaching Methods**

When we think of innovation nowadays, we usually think of technology. However, in a field such as education, it's just as important to focus on innovations in areas such as child psychology, learning theories, and teaching methods. This is particularly true at a time when many educators believe that the U.S. education system is failing. There are quite a few areas where innovations in education will help improve the system for everyone.

**Addressing the Needs of Individual Students** – Another longstanding problem in education is the one-size-fits-all approach. It's well known that everyone has different styles of learning. Some students are visual learners, while others are verbal or auditory learners. Technology allows teachers to individualize lessons to different students and their unique styles of learning.

**Practical Education and Soft Skills** – One criticism of education is that it's impractical and doesn't prepare students for living in the real world. When it comes to actually teaching students how to become innovative thinkers, they need to learn leadership skills, to be encouraged to think creatively, and to be taught independent thinking and learning. Innovative classrooms are beginning to place more emphasis on the soft skills needed to thrive in today's world.

### **Innovation in Home Economics help students to :**

- Be responsible citizens and informed consumers willing to contribute to the well-being of individuals, families and society in terms of meeting basic human needs
- Demonstrate good use of management and organizational skills in handling physical and socio-economic resources for self, family, community and society
- Analyze contextual factors contributing to the well-being of individual, family and society with application of knowledge from the food science and technology strand or fashion, textiles and clothing strand
- Devise and implement strategies to solve complicated problems in technological contexts, in particular, food / fashion, using a range of appropriate techniques and procedures
- Evaluate critically the impact of social, cultural, economic, scientific and technological developments on the well being of individuals, families and society as a whole

### **Innovation in Food Science and Technology helps students to :**

- Understand and appreciate the nature and properties of food and the cultural, social and economic influences on the evolution of nutritional science, food science and technology and food product development.
- Investigate the cultural, physical, chemical, nutritional, biological and sensory characteristics of food, and how these properties are exploited in designing and producing food products to meet specified criteria.
- Understand and apply scientific principles behind food preparation and the food production process in different settings to solve problems creatively.
- Develop capability, values and attitudes to make informed decisions that foster a healthy lifestyle and contribute positively to the social and economic future of a society.

### **Innovation in Fashion, Clothing and Textiles helps students to :**

- understand the nature of fashion design, the characteristics of fibers and fabrics; the construction, production and marketing of clothing and textile products; and the evolution of fashion trends, textile technology and clothing production methods.



- Investigate the historical, cultural, technological and social factors in the development of fashion, clothing and textiles and their relationship to the well-being of the individual, family and society.
- Apply appropriate principles and techniques in presenting fashion ideas and illustrations, and in pattern and garment construction for specific requirements and considerations in different settings
- Develop an aesthetic sense and creativity through the design and production processes of fashion, clothing and textile products

### Conclusion

Every country develops its own system of education which undergoes transformation to meet the challenges of the changing times. Educational system in India is also confronted with several new choices, opportunities and challenges to ensure that a modernized, progressive and qualitatively superior system of education can be implemented at all levels. Innovation in Home Economics are improving the content of learning process and updating the development of life quality comprehension, what can be achieved by acquiring a variety of handicraft and modern technology.

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## E-learning & rural areas

*Dr. Sangita G. Bhangdiya,  
HOD of Political Science,  
Narayanrao Rana Mahavidyalaya, Badnera*

Covid-19 has caused a worldwide outcry. As if the whole world has stopped. WHO has declared it as pandemic. Covid-19 has spread through China to the whole world. Due to its influence, no region remained untouched. The number of Covid-19 infected people in India is now 77729(13/5/2020). The third cycle of lock down is underway. All social, economic, cultural, educational activities have come to a standstill due to the lock down. This will have an impact on the country's economy. Already, inflation and unemployment are at a high level in the country. In such a situation, due to corona which is pandemic, India and most of the country adopted the policy of lock down, every country will have to suffer its socio-economic consequences. The Organization for Global Economic Cooperation and Development (OECD) has projected the growth rate of the world's economy at 2.4% for the year 2020. OECD has also warned that if this global pandemic spreads, the growth rate of the world economy is expected to come down to 1.5%.

Covid-19 is impacting the economy as well as normal life. Domestic servants, laborers working in organized and unorganized sector, taxi drivers, small business owners, hotels, restaurant, malls, cinema, home-working women, flower business, vegetable and fruit business, tourism, roads all of them have been affected badly by this pandemic. According to the International Labor Organization, at least 90 percent people in India are in non-organized areas. There are only 47% of workers in payroll jobs in cities 70% of those working in the formal sector do not even have a

fixed contract. 49% of the workers do not have social security benefits. 53% of the working people who work in the unorganized sector do not have social security system and this has been found by the latest Recurring Labor Survey (2017-18). India has also taken several measures for poverty alleviation and social security, but due to this pandemic, the number of people below the poverty line will increase again. World Bank figures (2018) show that the poverty rate in urban Indian population is 14% while the number of poor in rural India is 25%. Covid-19 has also affected tourism in India. Due to restrictions on traffic, the movement of tourists has also reduced. During January to March, the arrival of foreign and domestic tourists has decreased by 67 % and 40% respectively. Thus, not every region has survived the Covid-19 outbreak.

The most important area which can be called the origin of the development Ganga, that is education sector, has also been badly affected by the outbreak of Covid-19. Mahatma Gandhi had said that education is an instrument which can play a lively role in improving the social, economic condition of the nation. It empowers citizens with their analysis capability, improves their confidence level, and sets the goal of increasing efficiency. Hence the education sector is an area that needs to attract the attention of the government. The challenge is to continue the process of teaching and learning during this crisis and at the same time reduce the spread of the disease. According to WHO guidelines, almost all countries have decided to close schools colleges. The education process is



started in the country which has developed and enabled new technological systems. But it is not possible to maintain the continuity of education process in developing countries like India due to Covid-19. The entire education system is struggling to find a permanent solution in India. The school system has its own problems. The government school lacks basic facilities and technology. E-learning tools are being used in many private schools, but this solution is not satisfactory.

Universities have the same status as schools. Many colleges do not have the proper infrastructure to adopt new technology, to bring a change in the traditional system. Most colleges in India are still trained through the 'chalk and talk' method. The traditional method is accepted in colleges of humanities branch and rural area colleges. In such a situation, is it possible to maintain the continuity of the education process? To know the answer and to study the education policies of the government, "e-learning and rural area" this subject has been taken.

UGC Prof. R.C. Kuhar Committee has given a report about the college examinations in view of the increasing impact of Covid-19 and to get out of this situation safely. This report will act as a guiding element for every university. Each university may decide to change it by considering the situation and available resources of their respective enclaves.

Prof. Kuhar committee has recommended to continue academic work from 16/3/2020 to 15/5/2020 by 'Work from Home' through e-learning. But this recommendation cannot be done only by keeping the students of the city or sub city in front. It is also important to consider the students of rural areas. Many students in rural areas or inaccessible areas still do not have smartphones. According to the report of

Telecom statistic India 2019 March, 62 million people use internet in India. Of these, 227.01 million rural and 409.72 million people run the Internet. Total 53.47 million people in Maharashtra have an internet connection. Of these, 33.26 million are urban and 20.21 million are rural people. The figures show that the number of people running internet at the rural level is less than urban. If the education process is continued through e-learning, then it is necessary to fulfill the basic needs first. If someone has a smartphone then there is no connectivity problem and has no need to recharge the phone. Most of the students in rural area colleges are laborers, farm laborers, below poverty line students. In this situation, how they can be taught by e-learning tool? Being used for teaching in many colleges, there is a need to teach through a different medium, but it is not fair for rural area

I tried to know this situation through questionnaires from the professors of Humanities of Sant Gadge Baba Amravati University, Maharashtra. And 31 professors took part in this study. They were asked, that if their college is in rural area? Are most of the students in rural areas? How many students are connected through the e-learning medium for their subject? How many students are connected through the e-learning medium? These questions were answered. On the basis of the information related to the study, a chart is in the chart below. In this chart, the names of the colleges are given without revealing the names.

Sl. No.	Name of the College	Total Students	Students using e-learning	Percentage
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The study shows that out of 7811 students, 2539 or only 45.30 per cent students are taught through e-learning. 54.70 per cent students are deprived of education. The college is in rural area or the majority of students in that college are from rural area. In the above colleges, through ICT, only professors are in touch with 90 to 100 per cent of the students. Among them, colleges in Murtijapur and Murtijapur are in urban areas.

And the proportion of students coming from rural areas is also low. Also, the college at Shendurjana Adhav is located in a rural area but after discussing with the professor, it was learned that they are in touch with all the students through WhatsApp group. No other ICT tools are used. There are ten professors who are in touch with more than 50 and 50 per cent students through e-learning, while there are 18 professors who are in touch with less than fifty per cent students. It is a college with students from all rural and ultra-rural areas.

This means that while realizing the concept of Work from Home, about 55 per cent of the students could not complete the course. The e-learning tool is not successful in the context of rural colleges and rural students. Reasons are:

1. Not all students in rural and ultra-rural areas have smartphones.
2. Even if they have smart phone, there is no money to recharge it.
3. Most of the girls in rural areas do not have a smartphone.
4. Parents are agricultural labourers or manual labourers, their financial condition is weak.
5. There is a big problem of internet connectivity in the village.
6. Many professors do not find it easy to use e-learning tools.
7. In-class study process is very easy. If there are some obstacles in the study process, they can be easily removed but through the e-learning it becomes a problem.
8. According to many professors, the teaching method in the classrooms are more effective.
9. Students cannot solve their problems completely in e-learning.



10. Classroom teaching makes it easier to communicate with students.

11. Responses are required for teaching and learning. But in e-learning it doesn't happen very effectively.

The learning process is underway through new technology to combat covid-19. There is no other option today. The education system in the country was not ready for such a situation. Although there are some difficulties, e-learning is an effective medium. But for that, basic facilities have to be created and while creating it, care has to be taken to make rural areas more technological, overcome poverty, and train professors, only then will e-learning become more effective.

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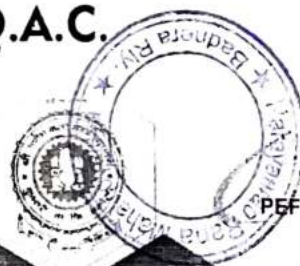


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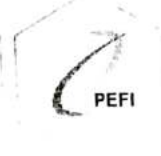
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## A STUDY OF BOLDNESS BEHAVIORAL ATTITUDE OF PLAYERS OF VARIOUS COMBAT GAMES

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### Abstract

The purpose of the study was to compare the Boldness Behavioral Attitude of Players of Various Combat Games. For the present study researcher has selected 30 players from Amravati within group design was used for the present study. 10 Players from each (Boxing, Wrestling and Karate Players) who were participated in Inter University Tournament of Sant Gadge Baba Amravati University, Amravati was selected for study by Purposive non – probability random sampling method. The age range of respondents was 18-25 years. Multi Assessment Personality Series (MAPS) Questionnaire was used for collection of data. This scale was developed by Sanjay Vohra. The scale contains 147 complete sentences and each item is provided three alternatives the players had to select one of the three alternative statements. And only the score of boldness was taken for this study. To see the difference between Boxing, Wrestling and Karate players in reference to Boldness Behavioral Attitude One Way Analysis Of Variance was applied. Significant level was kept at 0.05 level. Result shows that by seeing the Mean of boldness of players of different combat games there is differences. To see these differences was significant or not researcher has calculate One - Way Analysis of Variances, it was found that there was significant different between players of different game in reference to Boldness because the calculated 'f' value i.e. 7.58 which is much greater than tabulated 'f' value 3.35. Above study revealed that difference was found between the means of Boxing, Wrestling and Karate Players. In conclusion it can assumed that if players differ in the extent that they change their behavior based on their previous and current experiences, this may represents a potential mechanism through which social roles can be generated and reinforced to create even longer lasting differences between players. In other words, psychological factors may be maintained by participation in various games and sports activities because of their role in social coordination.



**Keyword: Boldness Behavioral Attitude, Boxing, Wrestling and Karate Players.**

## Introduction

Boldness implies daring, courage and confidence. Rather than going with the flow boldness goes against the tide. It dares to disagree with popular opinion for the sake of affirming what is true, right, and just. When others do wrong, boldness stands for what is right. Every person searches for things, people, or ideas in which to find stability and security. Some choose to put their trust in popular opinion, the security of friends, or the prosperity of wealth. However, opinions change; friends can betray a trust and wealth can vanish overnight. Truth, right, and justice on the other hand, provide a foundation which has remained far more stable throughout history than has opinion, popularity or abundance. Boldness is the gift of God to overcome this enemy. Boldness is confidence in the gospel, a message that defies fear to the uttermost. Boldness is necessary if we are going to be risk-takers and not self-preservers. And risk-taking is absolutely necessary for the progress of salvation. Finally, as I started into this issue, it became apparent to me that boldness is a highly neglected topic and one that it is vital to every believer. So many people are controlled by fears of all kinds. The person who receives the gift of boldness is delivered from a multitude of transgressions and lives in peace. Boldness is totally opposite of fearfulness. To be bold implies a willingness to get things done despite or taking risks. Boldness may be a behavioral attitude that only certain individuals are able to display. For example, in the context of sociability, a bold person may be willing to take the risk shame or rejection in social situations arising, or to bend the rules of etiquette or politeness. An excessively bold player may be aggressively while performing his skill or taking a shot.

Boldness may be contrasted with courageousness of an individual and latter implies having fear but confronting it. But perhaps we could think about how evolutionary significance of boldness might play a part of debate. Players are a fiercely social and cooperative in nature and protecting members of our close social group has a sound evolutionary basis. By reducing the risks to those with whom we interact or share the same genes, moreover our own genetic material is preserved. We're also having a strong social interaction with different group increases the chances of humanity. At the same time it's too simple to say that those players having higher boldness is associated with higher aggression. In this case, the researchers suggest that the players who are more exposed to take risk cope with this by responding more aggressively and so more boldly to threat his attitude. Players today usually constrain their aggression within carefully outlined legal and social rules so that they can show their optimum level of performance. But perhaps the aggressive nature of player in rugby still scratch an evolutionary itch inspired by an





individual's impulse to be bold. Hence researcher wants to know the boldness level of players of different games.

## Method

For the present study researcher has selected 30 players from Amravati within group design was used for the present study. 10 Players from each (Boxing, Wrestling and Karate Players) who were participated in Inter University Tournament of Sant Gadge Baba Amravati University, Amravati was selected for study by Purposive non – probability random sampling method. The age range of respondents was 18-25 years.

## Measures

Multi Assessment Personality Series (MAPS) Questionnaire was used for collection of data. This scale was developed by Sanjay Vohra. The scale contains 147 complete sentences and each item is provided three alternatives the players had to select one of the three alternative statements. And only the score of boldness was taken for this study.

## Statistical Analysis

To see the difference between Boxing, Wrestling and Karate players in reference to Boldness Behavioral Attitude One Way Analysis Of Variance was applied. Significant level was kept at 0.05 level.

Table – 1

Mean & Standard Deviation of Boldness

Game	Mean	S D
Boxing Players	8.2	1.29
Wrestling Players	9.8	0.89
Karate Players	7.4	0.92

Table – 2

Comparison of Boldness of Players of different Games

SV	SS	df	MS	F
	27.288	2	13.644	7.58*
	48.6	27	1.8	

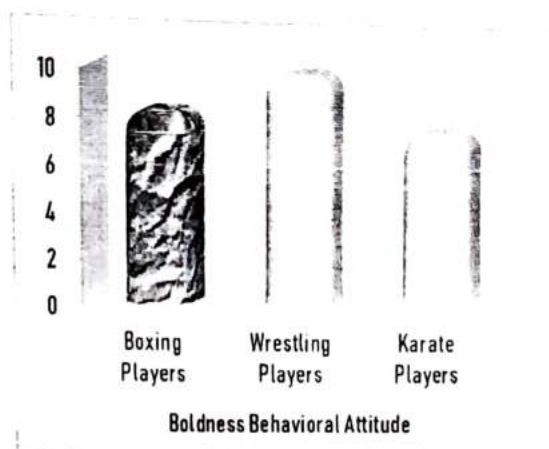
\*Significant at 0.05 level      tab 'f' at (2,27) = 3.35

## Result

Above tables shows that by seeing the Mean of boldness of players of different combat games there is differences. To see these differences was significant or not

researcher has calculate One - Way Analysis of Variances, it was found that there was significant different between players of different game in reference to Boldness because the calculated 'f' value i.e. 7.58 which is much greater than tabulated 'f' value 3.35.

### Graph



### Conclusion

Above study revealed that difference was found between the means of Boxing, Wrestling and Karate Players. To see these differences was significant or not One Way Analysis of Variance was applied. It was found to be significant. It can assumed that if players differ in the extent that they change their behavior based on their previous and current experiences, this may represents a potential mechanism through which social roles can be generated and reinforced to create even longer lasting differences between players. In other words, psychological factors may be maintained by participation in various games and sports activities because of their role in social coordination.

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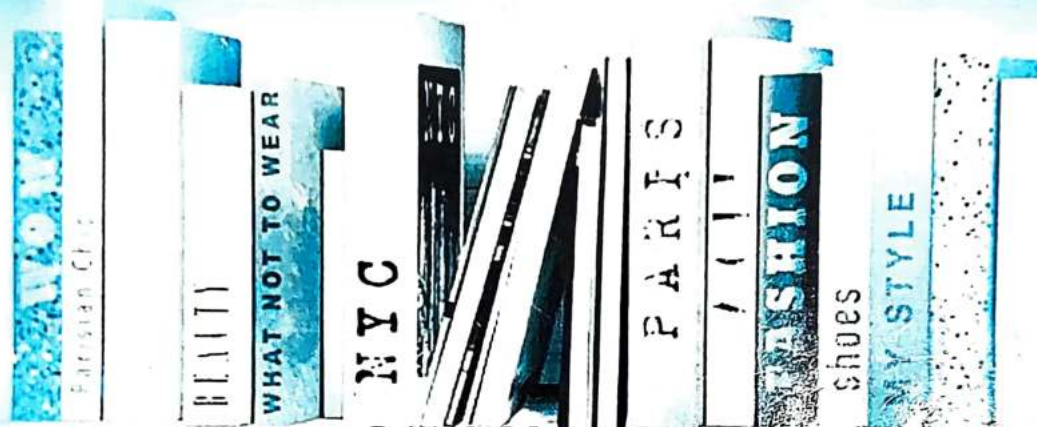
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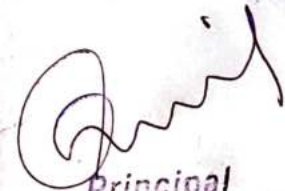
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# Study of Vital Capacity and Pulse Rate of various Runners

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## Abstract

The purpose of the study was to compare vital capacity and pulse rate of Sprinters, Middle Distance Runners and Long Distance Runners. For this study researcher selected 30 Runners [10 Sprinters, 10 Middle Distance Runner and 10 Long Distance Runner] from Amravati were selected as subjects for the purpose of the study. Subjects were selected with purposive sampling method. The age of the subjects were ranged between 20-25 years. Subjects did not use any ergogenic aids or supplementations and also they were all free from any injuries during the collection of data. Physiological variables were as follows: Vital Capacity and Pulse Rate. Vital Capacity was measured with Wet Spiro meter in (Lit). Pulse Rate was measured manually with the help of index and middle fingers. To compare the selected physiological variables of Sprinters 'f' test was applied by the researcher for this study, level of significance was 0.05 at 27df. Result shows that, On the basis of means of Vital Capacity and Pulse Rate there was difference found between sprinters, middle distance runners and long distance runners. To see this differences was significant or not at 0.05 level of significance. Researcher further calculated 'f' test & above table shows that both the physiological variables found to be significant because the calculated 'f' value of Vital Capacity (5.84) and Pulse Rate (3.85) is greater than the tabulated 'f' value 3.354 at 0.05 level of significance. Concluding, we can say that all the vital capacity and pulse rate variables shows significant difference between Sprinters, Middle Distance Runners and Long Distance Runners. By seeing the mean of Vital Capacity and Pulse rate of athletes it has been observed that a long distance runner shows less heart rate as compared to middle distance runners and sprinters. It means that a long distance runner poses a healthy heart rate as compared to middle distance runners and sprinters. The reason behind the significant may be attributed that the longer period of long-distance training will strengthen the cardiovascular system, enhance your heart and increase your muscles' blood flow, which eases your body's ability to deliver oxygen to your muscles. As well as in the parameter of Vital Capacity the long distance runners were found to be better as compared to middle distance runners and sprinters.

**Keyword:** Athletes, Pulse Rate and Vital Capacity.

## Introduction

Sprint races are the short distances races in which athletes try to run at their maximum speed to the entire distance of the race. Sprint is the oldest running rivalries and are said to have started from the 180 meters stadion race held during the ancient Olympic Games. The stadion race was named upon the scene in which it occurred, called the stadion, is an old greek word, and today we called as stadium. The stadion race was said to be the most renowned occasions and the champ was considered as the victor of the whole diversions. At ancient time the dashes race were utilized to starts with a loud audio signal - a trumpet blow which has evolved into a gunshot today. There have been some noteworthy changes that have been made throughout the years as far as the essential guidelines of the game. Sprinters today begin in a crouch position while around then they used to begin upstanding, without cloths (Naked).

The sprint race has generally been considered as one of the glamour events in athletics. The sprint races are generally relies on the competitor's capacity that how he or she quickens



to his or her most extreme speed in the fastest time as could be expected under the least exerting measures of lactic acid that gather in their muscles as they quicken to their greatest speed in the fastest time to complete the distance. In 200m dash sprinters attempt to stay as near within line as could reasonably be expected yet without venturing the line as it would be justification for exclusion. This is notable as capacity to "keep running as a decent curve". Dissimilar to the 100m run requires unadulterated touchy power, in 200m competitor must keep up their speed and have "speed perseverance". The 400m dash race is a run around the standard track in the arena. Sprinters are lunched in their beginning positions so they run a similar separation. In 400m most extreme run speed is required; competitors likewise require of lactic corrosive.

Middle distance running events are the track event races which are longer than sprints, up to 3000m. The standard middle distances running events are the 800m, 1500m, etc, although the 3000m may also categorized as a middle-distance event. Middle distance running includes race distances with performance dependent on various physiological factors. The physiological factors of successful runners are different in a different runners from those of sprinters and long distance runners. Vital Capacity, Maximal oxygen uptake, etc are variables that have been shown to restrain performance during long distance runner and rapid velocity and anaerobic factors have been shown to restrain performance during sprinting. Performance of middle distance runner is always depends on both aerobic and anaerobic variables which allow a runner to maintain their performance during a race.

A long distance race is running event includes such events as the 5000m run, 20km & 50km Walking race, 100m for Women, 110m for Men and 400m Hurdle race, Relay race, Cross-country race and Marathon. Physiologically, long distance race is largely aerobic in nature and requires vigorous stamina as well as high degree of mental strength. The primary prerequisite of aerobic energy production is the delivery and utilization of oxygen by a cell.

The physiological parameters appears to assume a vital job a very important role in the modern competitive sports in production of more excellent performance, since rivalries are sorted out more oftentimes than any time in recent memory the aggregate sets at a place at a specific time it might ascend at other place, in addition in view of physiological parameters and contrast in time the competitors a similar time at somewhere else. It is notable that the individual performance in any games fellows diurnal physiological parameters. Lamentably little research were done is accessible on these parts of games and sports. Subsequently, physiological parameters, for example, vital capacity, pulse, hemoglobin, blood pressure, and so on get an exceptional thought and it is a vital essential for extraordinary execution in any activity.

It was speculated that there would be noteworthy distinction in physiological factors between sprinters, middle distance runners and long distance runners. Hence the researcher has taken the study "Study of Vital Capacity and Pulse Rate of various Runners".

### Methodology

The purpose of the study was to compare vital capacity and pulse rate of Sprinters, Middle Distance Runners and Long Distance Runners. For this study researcher selected 30 Runners [10 Sprinters, 10 Middle Distance Runner and 10 Long Distance Runner] from Amravati as subjects. Subjects were selected with purposive sampling method. The age of the subjects were ranged between 20-25 years. Subjects did not use any ergogenic aids or supplementations and also they were all free from any injuries during the collection of data. Physiological variables were as follows: Vital Capacity and Pulse Rate. Vital Capacity was measured with Wet Spiro meter in (Lit). Heart Rate was measured manually with the help of index and middle fingers.



### Administration of the Test

**Pulse Rate:** Manually with the help of Index and middle fingers pulse rate were taken in numbers of beat per minute.

**Vital Capacity:** Wet Spiro meter was used to measure the vital capacity in (Lit).

### Statistical Analysis

To compare the selected physiological variables of Sprinters 'f' test was applied by the researcher for this study, level of significance was 0.05 at 27df. It is shown in following tables:

**TABLE**  
Comparison of Vital Capacity and Pulse Rate of Sprinters, Middle Distance Runner and Long Distance Runners

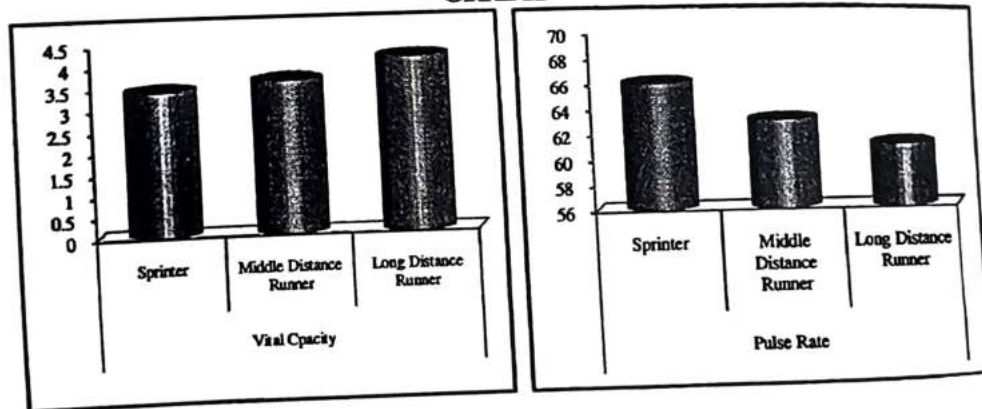
Physiological Variables	SV	SS	Df	MS	F
Vital Capacity	between	85.871	2	42.935	5.84*
	error	198.50	27	7.352	
Pulse Rate	between	0.870	2	0.435	3.85*
	error	3.051	27	0.113	

\*0.05 level of Significance (2,27df) tabulated 'F' = 3.354

### Result

On the basis of means of Vital Capacity and Pulse Rate there was difference found between sprinters, middle distance runners and long distance runners. To see this differences was significant or not at 0.05 level of significance. Researcher further calculated 'f' test & above table shows that both the physiological variables found to be significant because the calculated 'F' value of Vital Capacity (5.84) and Pulse Rate (3.85) is greater than the tabulated 'F' value 3.354 at 0.05 level of significance.

### GRAPH



### Conclusion

Concluding, we can say that all the vital capacity and pulse rate variables shows significant difference between Sprinters, Middle Distance Runners and Long Distance Runners. By seeing the mean of Vital Capacity and Pulse rate of athletes it has been observed that a long distance runner shows less heart rate as compared to middle distance runners and sprinters. It means that a long distance runner poses a healthy heart rate as compared to middle distance runners and sprinters. The reason behind the significant may be attributed that the longer period of long-distance training will strengthen the cardiovascular system, enhance your heart and increase your muscles' blood flow, which eases your body's ability to deliver oxygen to your muscles. As well as in the parameter of Vital Capacity the long distance runners were found to be better as compared to middle distance runners and sprinters.



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Dr. Khushal J. Alaspure

Director of Physical Education, Narayanrao Rana Mahavidyalaya, Badnera, India

### Abstract

The purpose of the study was to investigate the various aggressive behaviours of players of various games. The sample included Sixty male players 20 Cricket Players, 20 Softball Players and 20 baseball Players of recognized club (Mandal) of Amravati were selected as subjects for the purpose of the study. Subjects were selected with random sampling methods. The age of the players were ranged between 20 to 30 years and at least participated in the State tournaments or interuniversity tournaments. All the players were voluntarily agreed to participate in this study. Data were collected by The Buss-Perry Aggression Questionnaire (BPAQ). Statistical analysis was done on the bases of ANOVA. The results shows that there are significant differences were found between different aggressive behaviour of Various players. In reference to Physical Aggression and Anger shows significant differences as the calculated value F is 10.4 & 6.82 which is greater than tab  $F_{0.05}(2,57) = 3.158$ . Whereas in reference to Verbal and Hostile shows insignificant differences as the calculated value F is 2.84 & 2.87 which is lesser than tab  $F_{0.05}(2,57) = 3.158$ . In conclusion we can say that Physical Aggression and Anger shows significant differences, Baseball Players shows high level of physical aggression and anger it may be attributed that baseball players required high level of concentration and presence of mind as compared to softball and cricket players or it may be depends upon various approaches as biological, regular practicing, environment, attitude, etc.

**Key Word:** Aggressive Tendency, Cricket, Softball and Baseball Players, Buss-Perry Aggression Questionnaire

### Introduction

Aggression, in other sense, is behavior, or a disposition, that is forceful, hostile or attacking. It may occur either in reprisal or without provocation. In brief definitions that are used in social sciences and behavioral sciences, aggression is an intention to cause harm or an act intended to increase relative social domination.

The word aggression derived from the Latin root *aggredi*, "ad" means (to or toward) and *gradior* (walk). Literally, the word aggression means to walk towards or

approach to "move against" or to "move with intent to hurt or harm". But aggression in sports is a word frequently used nowadays there is some confusion to its meaning. Aggression is seemed to be a vicious outbreak, such as a fight, but in sports it is always used when an athlete compete and gives hundred percent efforts.

Aggression has directional components as inwards and outwards. Some aggression is intended for inward and in its extreme form, may cumulate its self-destructive behaviour which including as a suicide. Other aggressive behaviour is intended for outwards towards other sports may be classified according to the degree of



aggression that is tolerated or encouraged within rules. Sports in which the competitions are obliged to alternately agree and then terminate their action may be more stressful than those in which alternating behaviour is not required.

There are a multiplicity of types of aggression, depending on the purpose and immediate situation that stimulates the aggressive response. The aggressive behaviour it can be physical, verbal, anger or hostility; and can be characterized as either positive or negative behaviour. As the given name suggests physical, it describes as physical harm, it expressed by raising a tight fist, breaking a pen's tip, throwing a book or it may be hitting on a wall. Verbal aggression is stated as insults or warning of such action. The verbal aggressions may include shouting, arguing, cursing and sarcasm. Anger aggression may be described as a feeling of being threatened or mistreated. Anger occurs in numerous forms such as losing a match, feeling of not being selected, feeling of jealous, guilt and embarrassment. Hostile aggression refers to measures that are motivated by anger and the main aim is to cause harm or injury to opponents.

Aggressiveness is quite a complex structure and it can be seen to have lots of variables and factors. The importance of this research is to find out which type of aggressive behavior were most seen in Kabaddi players.

By finding the factors of various aggressive behaviours of national Kabaddi players we will be able to manage their aggressive behaviour.

#### Methods

Sixty male players 20 Cricket Players, 20 Softball Players and 20 baseball Players of

recognized club (Mandal) of Amravati were selected as subjects for the purpose of the study. Subjects were selected with random sampling methods. The age of the players were ranged between 20 to 30 years and at least participated in the State tournaments or interuniversity tournaments. All the players were voluntarily agreed to participate in this study.

#### Administration of the test:

The Buss-Perry Aggression Questionnaire (BPAQ) was used for collection of data which is a self-report scale consisting of 29 statements measure consisting of four subscales: Physical aggression consists of 9 statements, Verbal aggression consists of 5 statements, Anger consists of 7 statements and Hostility consists of 8 statements. The questionnaire answered on a 5-point Likert scale with items answered on a five point scale from extremely uncharacteristic of me to extremely characteristic of me. The Buss-Perry Aggression Questionnaire (BPAQ) is an explanatory factor analysis technique that is used to reveal physical, verbal, anger and hostility behaviour of players. Prior to the administration of the test all the instructions were imparted to all players that they had to follow while marking their responses and the same were collected back after having filled by the players.

#### Statistical Analysis

Analysis of Variance (ANOVA) with Least Significant Difference (LSD) post hoc test was utilized in order to determine the means significant difference between different aggressive behaviour of various players. The level of significance was set at 0.05 levels.



Table no 1

Variables	SV	SS	df	MS	F
Physical	between	116.63	2	58.31	10.4*
	error	319.55	57	5.6	
Verbal	between	12.23	2	6.11	2.84
	error	122.7	57	2.15	
Anger	between	15.63	2	7.81	6.82*
	error	65.3	57	1.14	
Hostile	between	12.93	2	6.46	2.87
	error	128.05	57	2.24	

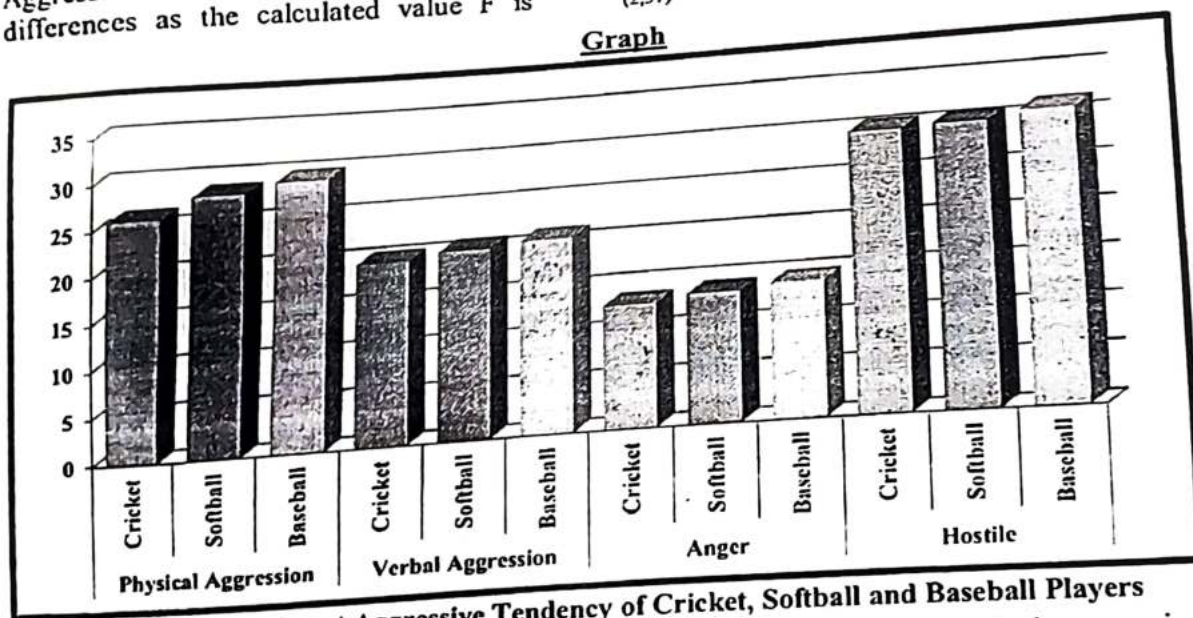
\*Significant at 0.05 level of confidence

$F_{0.05(2, 57)} = 3.158$

Above table revealed that there was significant differences were found between different aggressive behaviour of Various players. In reference to Physical Aggression and Anger shows significant differences as the calculated value F is

10.4 & 6.82 which is greater than tab  $F_{0.05(2, 57)} = 3.158$ . Whereas in reference to Verbal and Hostile shows insignificant differences as the calculated value F is 2.84 & 2.87 which is lesser than tab  $F_{0.05(2, 57)} = 3.158$ .

Graph



Comparison of different Aggressive Tendency of Cricket, Softball and Baseball Players

#### Discussions:

The results of the findings indicate that there was significant differences were found between different aggressive behaviour of Various players. In reference to Physical Aggression and Anger shows significant differences, Baseball Players

shows high level of physical aggression and anger it may be attributed that baseball players required high level of concentration and presence of mind as compared to softball and cricket players or it may be depends upon various approaches as biological, regular practicing, environment, attitude, etc.

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# विशेषांक शोध समग्र

राष्ट्रीय शोध संगोष्ठी

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## आधुनिक जीवन में योग एवं व्यायाम की भूमिका



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### Abstract

Exercise is any bodily activity that enhances or maintains physical fitness and overall health and wellness. It is performed for various reasons, to aid growth and improve strength, preventing aging, developing muscles and the cardiovascular system, honing athletic skills, weight loss or maintenance, improving health and also for enjoyment. Many individuals choose to exercise outdoors where they can congregate in groups, socialize, and enhance well-being.

### Introduction

Exercise involves engaging in physical activity and increasing the heart rate beyond resting levels. It is an important part of preserving physical and mental health. Whether people engage in light exercise, such as going for a walk, or high intensity activities, for example, uphill cycling or weight training, regular exercise provides a huge range of benefits for the body and mind. Taking part in exercise of any intensity every day is essential for preventing a range of diseases and other health issues.

### Effects of Yoga exercises

#### Fitness

Individuals can increase fitness following increases in physical activity levels. Increases in muscle size from resistance training is primarily determined by diet and testosterone. This genetic variation in improvement from training is one of the key physiological differences between elite athletes and the larger population. Studies have shown that exercising in middle age leads to better physical ability later in life. Early motor skills and development have also shown to be related to physical activity and performance later in life. Children who have more proficient motor skills early on are more inclined to being physically active, and thus tend to perform well in sports and have better fitness levels. Early motor proficiency has a positive correlation to childhood physical activity and fitness levels, while less proficiency in motor skills results in a tendency to partake in a more sedentary lifestyle.

#### Cardiovascular system

The beneficial effect of exercise on the cardiovascular system is well documented. There is a direct correlation between physical inactivity and cardiovascular mortality, and physical inactivity is an independent risk factor for the development of coronary artery disease. Low levels of physical exercise increase the risk of cardiovascular diseases mortality.

Children who participate in physical exercise experience greater loss of body fat and increased cardiovascular fitness. Studies have shown that academic stress in youth increases the risk of cardiovascular disease in later years; however, these risks can be greatly decreased with regular physical exercise.

#### Immune system

Although there have been hundreds of studies on physical exercise and the immune system, there is little direct evidence on its connection to illness. Epidemiological evidence suggests that moderate exercise has a beneficial effect on the human immune system; an effect which is modeled in a J curve. Moderate exercise has been associated with a 29% decreased incidence of upper respiratory tract infections (URTI), but studies of marathon runners found that their prolonged high-intensity exercise was associated with an increased risk of infection occurrence. However, another study did not find the effect. Immune cell functions are impaired following acute sessions of prolonged, high-intensity exercise, and some studies have found that athletes are at a higher risk for infections. Studies have shown that strenuous stress for long durations, such as training for a marathon, can suppress the immune system by decreasing the concentration of lymphocytes. The immune systems of athletes and nonathletes are generally similar. Athletes may have slightly elevated natural killer cell count and cytolytic action, but these are unlikely to be clinically significant.

#### Neurobiological

The neurobiological effects of physical exercise are numerous and involve a wide range of interrelated effects on brain structure, brain function, and cognition. A large body of research in humans has demonstrated that consistent aerobic exercise (e.g., 30 minutes every day) induces persistent improvements in certain cognitive functions, healthy alterations in gene expression in the brain, and beneficial forms of neuroplasticity and behavioral plasticity; some of these long-term effects include: increased neuron growth, increased neurological activity (e.g., c-Fos and BDNF signaling), improved stress coping, enhanced cognitive control of behavior, improved declarative, spatial, and working memory, and structural and functional improvements in brain structures and pathways associated with cognitive control and memory. The effects of exercise on cognition have important implications for improving academic performance in children and college students, improving adult productivity, preserving cognitive function in old age, preventing or treating certain neurological disorders, and improving overall quality of life.



## Methodology

### 1. Walking

Any exercise program should include cardiovascular exercise, which strengthens the heart and burns calories. And walking is something you can do anywhere, anytime, with no equipment other than a good pair of shoes. It's not just for beginners, either. Even the very fit can get a good workout from walking.

### 2. Interval training

Whether you're a beginner or an exercise veteran, a walker or an aerobic dancer, adding interval training to your cardiovascular workout will boost your fitness level and help you lose weight.

"Varying your pace throughout the exercise session stimulates the aerobic system to adapt," says Cotton. "The more power the aerobic system has, the more capacity you have to burn calories."

### 3. Squats

Strength training is essential, the experts say. "The more muscular fitness you have," says Cotton, "the greater the capacity you have to burn calories."

And our experts tended to favor strength-training exercises that target multiple muscle groups. Squats, which work the quadriceps, hamstrings, and gluteals, are an excellent example.

### 4. Push-ups

If done correctly, the push-up can strengthen the chest, shoulders, triceps, and even the core trunk muscles, all at one time.

"I'm very much into planking exercises, almost yoga-type moves," says Petersen. "Anytime you have the pelvis and the core [abdominals and back] in a suspended position, you have to rely on your own inherent strength to stabilize you."

### Conclusion

Regular physical activity can improve your muscle strength and boost your endurance. Exercise delivers oxygen and nutrients to your tissues and helps your cardiovascular system work more efficiently. And when your heart and lung health improve, you have more energy to tackle daily chores.

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## Impact Of Suryanamaskar On Joint Mobility Of Academic Students

Dr. Khushal J. Alaspure  
Director of Physical Education, Narayanrao Rana Mahavidyalaya, Badnera

### Abstract

The purpose of this study was to see the effect of 6 week suryanamaskar on trunk joint mobility of academic students of Narayanrao Rana Mahavidyalaya, Badnera. To achieve this purpose twenty (n = 40) voluntary interested students of various departments were randomly selected from the said college. Subjects were divided into two groups (Experimental group - 20 & Control group - 20). The criterion variable of trunk joint mobility was measured by Goniometer. The scoring unit of goniometer is in degree (max-360 degree). The reading showed by the apparatus at four sides i.e. left, right, forward and backward will be added together to get the final score. Pre test was taken prior to the Suryanamaskar training and post test was taken after six weeks of Suryanamaskar. Suryanamaskar were practices every morning i.e. five days (Monday to Friday) per week. First week the session consisted of 5 minutes warm-up 2 times suryanamaskar and 5 minutes cool-down, increased 2 times suryanamaskar every week. After six week training post test were administered and data were collected. To see this difference is significant or not at 0.05 level of significance. Researcher further calculated 't' test & above table shows that on the basis of mean difference there was difference between the means of pre and post test of control and experimental group of academic students in reference to trunk joint mobility. To see this difference is significant or not at 0.05 level of significance. Researcher further calculated 't' test & above table shows that there is significant difference between pre and post test of experimental group of trunk joint mobility, as the calculated 't' value 2.534 is greater than tabulated 't' value 2.024. But there is insignificant found between pre and post test of control group of trunk joint mobility, as the calculated 't' value 1.296 is lesser than the tabulated 't' value 2.024. Concluding we can say that experimental group shows significant difference in reference to trunk joint mobility the differences may be attributed that Surya namaskar is basically a sun salutation that leads to healthy body, mind and soul. However, morning time is the best time for suryanamaskar. Sun rises is the time when sun rays help revitalize the body and refresh the mind. It also increases the ability of muscle to perform movement with large amplitude (range of motion). It also refers to functional capacity of a joint to move through a normal range of motion.

**Keywords:** Suryanamaskar, Trunk Joint Mobility, Goniometer, etc.

### Introduction

Flexibility practices help relax firm joints that may occurs due to inactivity, stress, illness or injury. Joints and muscles can also stiffen as you age, which is another reason why you should incorporate stretching into your daily routine. Workouts that improve flexibility not only help to alleviate body stiffness, but they also enhance blood circulation and promote relaxation. To do these exercises safely, you must learn the proper techniques to avoid overstretching or pulling your muscles during movement.

### Yoga

Yoga combines a variety of poses designed to tone and lengthen muscles. Increased flexibility is one of yoga's primary benefits, along with greater freedom of movement and increased relaxation. There are various schools of yoga, including Bikram yoga, which promotes strength and flexibility in a heated environment; Power yoga, which combines meditative breathing, strength training and stretching; and Hatha yoga, which also promotes flexibility and relaxation through deep breathing and stretching. Before trying yoga at home, take a few classes with a certified instructor to learn how to execute each pose safely. Once you learn the proper techniques, do 15 to 20 minutes of yoga daily to keep your joints flexible.

Joint Mobility often also referred to as flexibility or suppleness can be defined as the ability to perform movement with greater range of motion or large amplitude. It is controlled partly by the energy liberation processes of the body and partly by the coordinative processes of central nervous system.

Though there are different way to keep you healthy, yoga promotes overall health in a balanced way. Yoga helps in recharging the body by promoting self healing, removing negative energies and enhancing personal powers. It simplifies your mind and thought process. One of the yoga postures which is simple form of daily workout for the mind and body is the Surya Namaskar. Thus, if you haven't stretched your body since ages and considering something effective then the suryanamaskar is just right for you.

In ancient times, worshiping to the sun has been practiced in India for prosperity and this has even been mentioned in the Vedas. Salutation to the Sun in the early morning was added as a daily routine for Hindus. Form that time people of all civilizations offered prayers to the sun, the ideal source of life and energy. Such practice is named as suryanamaskar.

Suryanamaskar is a complete meditative technique in itself as it includes various asanas like- Pranamasan, hasta utthanasan, padahastasan, ashwasanchatanasan, ashtanaganamasakar, bhujangasan, and parvatasan.



Increasing flexibility through stretching the body parts is one of the basic tenets of physical fitness. Flexibility is the ability of muscle to perform movement with large amplitude (range of motion). It also refers to functional capacity of a joint to move through a normal range of motion.

### Methods

The purpose of this study was to see the effect of 6 week suryanamaskar on trunk joint mobility of academic students of Narayanrao Rana Mahavidyalaya, Badnera. To achieve this purpose twenty (n = 40) voluntary interested students of various departments were randomly selected from the said college. Subjects were divided into two groups (Experimental group – 20 & Control group – 20). The criterion variable of trunk joint mobility was measured by Goniometer. The scoring unit of goniometer is in degree (max-360 degree). The reading showed by the apparatus at four sides i.e. left, right, forward and backward will be added together to get the final score. Pre test was taken prior to the Suryanamaskar training and post test was taken after six weeks of Suryanamaskar. Suryanamaskar were practiced every morning i.e. five days (Monday to Friday) per week. First week the session consisted of 5 minutes warm-up 2 times suryanamaskar and 5 minutes cool-down, increased 2 times suryanamaskar every week. After six week training post test were administered and data were collected.

### Statistical Procedure

Statistical analyses was done on the basis of 't' test. The level of significance were set at 0.05

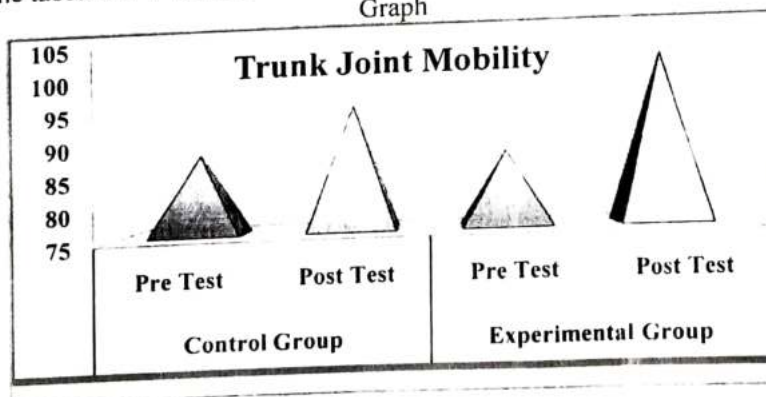
**TABLE**  
**Comparison of pre & post test**

Comparison of pre & post test									
Variables	Group	Test	Mean	S.D	S.E	M.D	D.F	Obt "t"	Tab "t"
Trunk Joint Mobility	Controlled	Pre test	88.2	17.26	5.707	7.4	38	1.296	2.024
		Post test	95.6	18.8					
	Experimental	Pre test	87.5	17.86	6.036	15.3		2.534*	
		Post test	102.8	20.24					

\*Significant at 0.05 Level

The above table shows that on the basis of mean difference there was difference between the means of pre and post test of control and experimental group of academic students in reference to trunk joint mobility. To see this difference is significant or not at 0.05 level of significance. Researcher further calculated 't' test & above table shows that there is significant difference between pre and post test of experimental group of trunk joint mobility, as the calculated 't' value 2.534 is greater than tabulated 't' value 2.024. But there is insignificant found between pre and post test of control group of trunk joint mobility, as the calculated 't' value 1.296 is lesser than the tabulated 't' value 2.024.

Graph



### Conclusion

Concluding we can say that both the groups experimental as well as control group shows difference in mean whereas experimental group shows significant difference in reference to trunk joint mobility the differences may be attributed that Surya namaskar is basically a sun salutation that leads to healthy body, mind and soul. However, morning time is the best time for suryanamaskar. Sun rises is the time when sun rays help revitalize the body and refresh the mind. It also increases the ability of muscle to perform movement with large amplitude (range of motion). It also refers to functional capacity of a joint to move through a normal range of motion.

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## COMPARATIVE STUDY OF PHYSIOLOGICAL PROFILE OF UNIVERSITY PLAYERS AND LOCAL PLAYERS

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### ABSTRACT

*The purpose of the study was to compare some physiological profile of university players and local players. For the present study researcher has selected 40 male kabaddi players (20 Interuniversity players and 20 local players practice in various clubs of Amravati) with the help of purposive sampling method. The age of the athletes were ranged between 18 to 25 years. The following tools were used to collect the data on:- a. Hemoglobin Level was checked by Sahli's hemoglobinometer. b. Pulse Rate was taken manually. c. Exhale Capacity was measured by Peak Flow Meter. Statistical Analysis: To compare the physiological profile of university kabaddi players and local kabaddi players statistical analysis was done on the basis of 't' test and the level of significant was kept at 0.05. Result shows that Hemoglobin level shows insignificant difference as the calculated 't' value 1.092 is lesser than tabulated 't' value 2.024. Whereas Pulse Rate and Exhale Capacity shows significant difference as the calculated 't' value 5.744 and 6.108 is greater than the tabulated 't' value 2.024. Hence both the variables found to be significant. Concluding the above study we can say that the hemoglobin level of local kabaddi players is higher than the university players but it is found insignificant it may be attributed that normal levels of hemoglobin in the blood typically depend on sex, age and general health. Abnormally low or high levels of hemoglobin can indicate a range of health conditions, including anemia and sickle cell disease. Whereas the pulse rate and exhale capacity of local kabaddi players is higher than the university players as well as it is found to be significant it may be attributed that local kabaddi players practice regularly and throughout the year as compared to to university players and also they participate regularly in local tournaments.*

*Keywords: Hemoglobin, Exhale Capacity, Pulse Rate, University and Local Players.*

### INTRODUCTION

Physiology is the study of body function. In physiology we study how our organs, systems, tissues, cells and molecules within cells work and how their function are put together to maintain our internal environment. Physiology is the study of how human body functions. Physiologists study the various characteristic of living things. Their studies range from the most basic unit of organism, the cell, to the more complex organs and organ systems such as the brain and respiratory systems.

In physiology we study how different parts of organs of an organism work together to achieve a particular function in our body, for example the digestion of food involves the action of hormones and their chemicals produced by the stomach, liver and pancreas, muscle contraction occur through the action of chemical massages produced by nerves that supply the muscles. If we learn how the body functions normally, then we can understand what happens when organs function abnormally and we can take care of our body. With training and conditioning the heart becomes more efficient and is able to circulate more blood while bearing less frequently for standard amount of work, the heart beats slowly as the training



period proceeds. The heart rate changes indicate a decreasing load on the cardiovascular adaptation to exercise.

The physiological parameters seems to play a very important role in the modern competitive sports in production of more excellent performance, because competitions are organized more frequently than ever the sum sets at a place at a particular time it may rise at other place, moreover because of physiological parameters and difference in time the athletes the same time at another place. It is well known that the individual performance in any sports activities follows diurnal physiological parameters. Pattern method may be derived to condition the athletes to produce peak performance with change in diurnal physiological parameters.

Therefore, physiological parameters such as cardio-vascular endurance, vital capacity, heart rate and hemoglobin receive a special consideration and it is an important requisite for outstanding performance in any sports activity. Hence, researcher has taken the study "comparative study of physiological profile of university players and local players"

### METHODOLOGY

For the present study researcher has selected 40 male kabaddi players (20 Interuniversity players and 20 local players practice in various clubs of Amravati) with the help of purposive sampling method. The age of the athletes were ranged between 18 to 25 years. Subjects did not use any ergogenic aids or supplementations and also they were all free from any injuries during the collection of data.

### Administration of the test

The following tools were used to collect the data on:-

- Hemoglobin Level was checked by Sahli's hemoglobinometer.
- Pulse Rate was taken manually.
- Exhale Capacity was measured by Peak Flow Meter.

### Statistical Analysis:

To compare the physiological profile of university kabaddi players and local kabaddi players statistical analysis was done on the basis of 't' test and the level of significant was kept at 0.05.

**Table : 1**  
Comparison of university & local kabaddi players in reference to physiological parameters

Variables	Players	Mean	S.D	M.D	D.F	Obt 't'	tab 't'
Hemoglobin	University	14.96	0.97	0.32		1.092	
	Local	15.28	0.88				
Pulse Rate	University	70.17	2.11	4.87	38	5.744	2.024
	Local	65.3	3.15				
Exhale Capacity	University	410	30.94	70		6.108	
	Local	480	40.85				

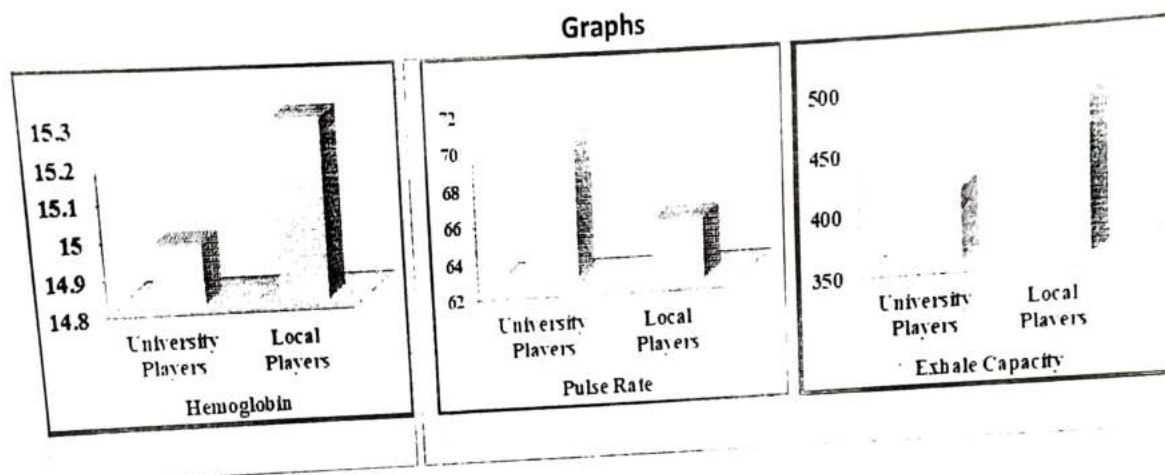
\*0.05 level of Significance (38df)

tabulated 't' = 2.024



The above table shows that on the basis of mean difference there was much difference between the means of Interuniversity Players and Local Players in reference to Hemoglobin. Pulse Rate and Exhale Capacity. To see this differences were significant or not at 0.05 level. Researcher further calculated 't' test & above table shows that Hemoglobin level shows insignificant difference as the calculated 't' value 1.092 is lesser than tabulated 't' value 2.024. Whereas Pulse Rate and Exhale Capacity shows significant difference between University players and Local Players as the calculated 't' value 5.744 and 6.108 is greater than the tabulated 't' value 2.024. Hence both the variables found to be significant.

**Graphs**



## CONCLUSION

Concluding the above study we can say that the hemoglobin level of local kabaddi players is higher than the university players but it is found insignificant it may be attributed that normal levels of hemoglobin in the blood typically depend on sex, age and general health. Abnormally low or high levels of hemoglobin can indicate a range of health conditions, including anemia and sickle cell disease. Whereas the pulse rate and exhale capacity of local kabaddi players is higher than the university players as well as it is found to be significant it may be attributed that local kabaddi players practice regularly and throughout the year as compared to to university players and also they participate regularly in local tournaments.

## REFERENCE

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# International Conference on Recent Trends in Commerce and Humanities



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## COMPARATIVE STUDY OF PHYSIOLOGICAL PROFILE OF UNIVERSITY PLAYERS AND LOCAL PLAYERS

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### ABSTRACT

*The purpose of the study was to compare some physiological profile of university players and local players. For the present study researcher has selected 40 male kabaddi players (20 Interuniversity players and 20 local players practice in various clubs of Amravati) with the help of purposive sampling method. The age of the athletes were ranged between 18 to 25 years. The following tools were used to collect the data on:- a. Hemoglobin Level was checked by Sahli's hemoglobinometer. b. Pulse Rate was taken manually. c. Exhale Capacity was measured by Peak Flow Meter. Statistical Analysis: To compare the physiological profile of university kabaddi players and local kabaddi players statistical analysis was done on the basis of 't' test and the level of significant was kept at 0.05. Result shows that Hemoglobin level shows insignificant difference as the calculated 't' value 1.092 is lesser than tabulated 't' value 2.024. Whereas Pulse Rate and Exhale Capacity shows significant difference as the calculated 't' value 5.744 and 6.108 is greater than the tabulated 't' value 2.024. Hence both the variables found to be significant. Concluding the above study we can say that the hemoglobin level of local kabaddi players is higher than the university players but it is found insignificant it may be attributed that normal levels of hemoglobin in the blood typically depend on sex, age and general health. Abnormally low or high levels of hemoglobin can indicate a range of health conditions, including anemia and sickle cell disease. Whereas the pulse rate and exhale capacity of local kabaddi players is higher than the university players as well as it is found to be significant it may be attributed that local kabaddi players practice regularly and throughout the year as compared to university players and also they participate regularly in local tournaments.*

**Keywords:** Hemoglobin, Exhale Capacity, Pulse Rate, University and Local Players.

### INTRODUCTION

Physiology is the study of body function. In physiology we study how our organs, systems, tissues, cells and molecules within cells work and how their function are put together to maintain our internal environment. Physiology is the study of how human body functions. Physiologists study the various characteristic of living things. Their studies range from the most basic unit of organism, the cell, to the more complex organs and organ systems such as the brain and respiratory systems.

In physiology we study how different parts of organs of an organism work together to achieve a particular function in our body, for example the digestion of food involves the action of hormones and their chemicals produced by the stomach, liver and pancreas, muscle contraction occur through the action of chemical massages produced by nerves that supply the muscles. If we learn how the body functions normally, then we can understand what happens when organs function abnormally and we can take care of our body. With training and conditioning the heart becomes more efficient and is able to circulate more blood while bearing less frequently for standard amount of work, the heart beats slowly as the training



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period proceeds. The heart rate changes indicate a decreasing load on the cardiovascular adaptation to exercise.

The physiological parameters seems to play a very important role in the modern competitive sports in production of more excellent performance, because competitions are organized more frequently than ever the sum sets at a place at a particular time it may rise at other place, moreover because of physiological parameters and difference in time the athletes the same time at another place. It is well known that the individual performance in any sports activities follows diurnal physiological parameters. Pattern method may be derived to condition the athletes to produce peak performance with change in diurnal physiological parameters.

Therefore, physiological parameters such as cardio-vascular endurance, vital capacity, heart rate and hemoglobin receive a special consideration and it is an important requisite for outstanding performance in any sports activity. Hence, researcher has taken the study "comparative study of physiological profile of university players and local players"

### METHODOLOGY

For the present study researcher has selected 40 male kabaddi players (20 Interuniversity players and 20 local players practice in various clubs of Amravati) with the help of purposive sampling method. The age of the athletes were ranged between 18 to 25 years. Subjects did not use any ergogenic aids or supplementations and also they were all free from any injuries during the collection of data.

### Administration of the test

The following tools were used to collect the data on:-

- Hemoglobin Level was checked by Sahli's hemoglobinometer.
- Pulse Rate was taken manually.
- Exhale Capacity was measured by Peak Flow Meter.

### Statistical Analysis:

To compare the physiological profile of university kabaddi players and local kabaddi players statistical analysis was done on the basis of 't' test and the level of significant was kept at 0.05.

Table : 1  
Comparison of university & local kabaddi players in reference to physiological parameters

Variables	Players	Mean	S.D	M.D	D.F	Obt 't'	tab 't'
Hemoglobin	University	14.96	0.97	0.32		1.092	
	Local	15.28	0.88				
Pulse Rate	University	70.17	2.11	4.87	38	5.744	2.024
	Local	65.3	3.15				
Exhale Capacity	University	410	30.94	70		6.108	
	Local	480	40.85				

\*0.05 level of Significance (38df)

tabulated 't' = 2.024

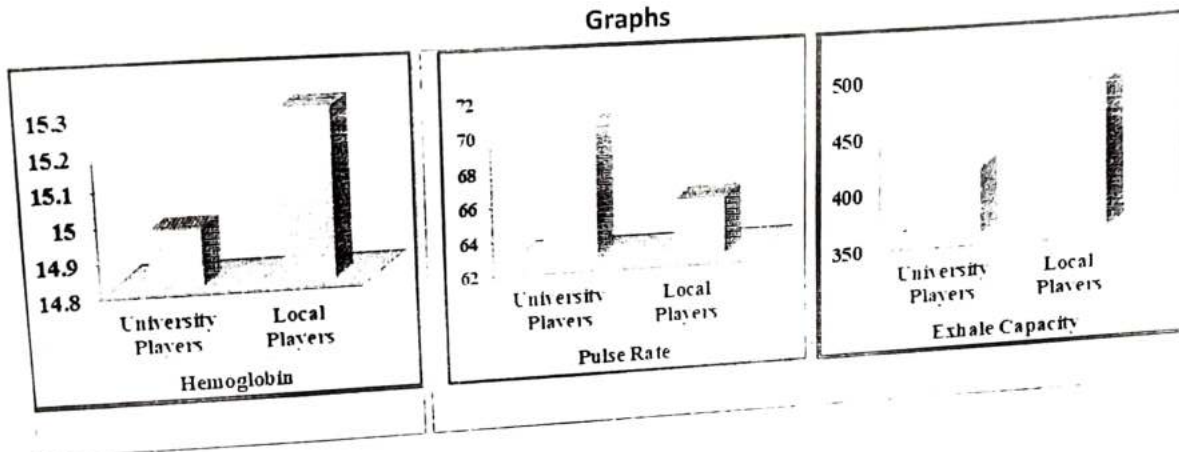


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The above table shows that on the basis of mean difference there was much difference between the means of Interuniversity Players and Local Players in reference to Hemoglobin, Pulse Rate and Exhale Capacity. To see this differences were significant or not at 0.05 level. Researcher further calculated 't' test & above table shows that Hemoglobin level shows insignificant difference as the calculated 't' value 1.092 is lesser than tabulated 't' value 2.024. Whereas Pulse Rate and Exhale Capacity shows significant difference between University players and Local Players as the calculated 't' value 5.744 and 6.108 is greater than the tabulated 't' value 2.024. Hence both the variables found to be significant.

Graphs



## CONCLUSION

Concluding the above study we can say that the hemoglobin level of local kabaddi players is higher than the university players but it is found insignificant it may be attributed that normal levels of hemoglobin in the blood typically depend on sex, age and general health. Abnormally low or high levels of hemoglobin can indicate a range of health conditions, including anemia and sickle cell disease. Whereas the pulse rate and exhale capacity of local kabaddi players is higher than the university players as well as it is found to be significant it may be attributed that local kabaddi players practice regularly and throughout the year as compared to to university players and also they participate regularly in local tournaments.

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# Review of Research

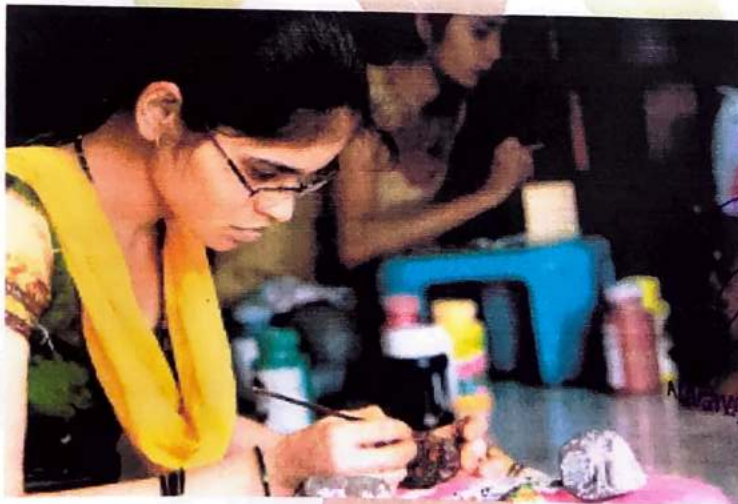


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## WOMEN EMPOWERMENT IN RURAL AREA AND THE ROLE OF GOVERNMENT



**Dr. Anjali Chandrakant Pande**

Associate Professor, Department of Home-Economics,  
Narayanrao Rana Mahavidyalaya, Badnera, Distt.-Amravati.

**Abstract :** In this modernized world there has been a radical progress in the field of economy. In this context women's participation is of greater .....

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# REVIEW OF RESEARCH

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## WOMEN EMPOWERMENT IN RURAL AREA AND THE ROLE OF GOVERNMENT

Dr. Anjali Chandrakant Pande

Associate Professor , Department of Home-Economics , Narayanrao Rana Mahavidyalaya, Badnera,  
Distt.-Amravati.

### ABSTRACT

*In this modernized world there has been a radical progress in the field of economy. In this context women's participation is of greater importance. In India though women have played a key role in the society, their entrepreneurial ability has not been properly tapped due to the lower status of women in the society. The development of women entrepreneurship has become an important aspect of our plan priorities. Several policies and programmes are being implemented for the development of women entrepreneurship in India.*



**KEY WORDS:** modernized world , lower status of women , women entrepreneurship.

### INTRODUCTION :

In the words of former president APJ Abdul Kalam "empowering women is a prerequisite for creating a good nation, when women are empowered, society with stability is assured. Empowerment of women is essential as their thoughts and their value systems lead to the development of a good family, good society and ultimately a good nation."

### RURAL WOMEN ENTREPRENEURS

**Meaning-**Rural women entrepreneurs are those entrepreneurs who actually hail from and reside in rural areas i.e. either from a 'Panchayat' and mobilize human resources requirements from those areas in which they live.

**Definition-**"An enterprise owned and controlled by women saving a minimum financial interest of 51 percent of the capital and giving at least 51 percent of the employment generated in the enterprise to women."

### The government of India

Entrepreneurship development of India, it would be of utmost importance to ensure the facilitating factor of women's development, especially in rural areas. If properly supported, the rural disadvantaged have a great opportunity to maintain their livelihood through engaging themselves in various type of income generating activities.

Rural women entrepreneurs are facing various critical problems in India so the government of India has taken significant policies and rules for women entrepreneurship development in rural India. Rural

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women are one of the sources to our country to make developed India as we have 50% of women population from rural. So it is the responsibility of the country to make certain policies to help the rural women to develop entrepreneur skills and surface the problems to become a flourishing entrepreneur. Women entrepreneur in rural & backward regions needs special assistance and incentives from the government and other associate agencies.

### **Empowerment:**

Meaning- "The situation of authority or to be authorized or to be powerful"

"Empowerment is a process which gives women power or authority to challenge some situation."

### **Economic empowerment –**

Economic empowerment of women by entrepreneurship led to the empowerment of women in many things such as socio-economic opportunity, property rights, family development and at last the nation development.

### **Problems faced by women empowerment in rural India**

#### **1. Problem of Finance:**

Money is viewed as "life-blood" for any venture, be it enormous or little. In any case, ladies business people experience the ill effects of deficiency of money on two tallies.

Right off the bat, ladies don't for the most part have property on their names to utilize them as guarantee for getting assets from outer sources. In this manner, their entrance to the outside wellsprings of assets is restricted.

#### **2. Scarcity of Raw Material:**

The greater part of the ladies ventures are tormented by the shortage of crude material and important data sources. Added to this are the high costs of crude material, from one viewpoint, and getting crude material at the base of rebate, on the other. The disappointment of numerous ladies co-agents in 1971 occupied with bin making is a model how the shortage of crude material sounds the demise chime of undertakings kept running by ladies (Gupta and Srinivasan 2009).

#### **3. Stiff Competition:**

Ladies business people don't have authoritative set-up to siphon in a great deal of cash for campaigning and promotion. In this way, they need to confront a hardened challenge for advertising their items with both sorted out area and their male partners. Such a challenge at last outcomes in the liquidation of ladies ventures.

#### **4. Limited Mobility:**

Unlike men, women mobility in India is highly limited due to various reasons. A single woman asking for room is still looked upon suspicion. Cumbersome exercise involved in starting an enterprise coupled with the officials humiliating attitude towards women compels them to give up idea of starting an enterprise.

#### **5. Family Ties:**

In India, it is mainly a women's duty to look after the children and other members of the family. Man plays a secondary role only. In case of married women, she has to strike a fine balance between her business and family. Her total involvement in family leaves little or no energy and time to devote for business.

#### **6. Lack of Education:**

In India, around three-fifths (60%) of ladies are as yet unskilled. Lack of education is the underlying driver of financial issues. Because of the absence of training and that too subjective instruction, ladies don't





know about business, innovation and market information. Additionally, absence of instruction causes low accomplishment inspiration among ladies. Along these lines, absence of instruction makes one sort or different issues for ladies in the setting going of business ventures.

### 7. Male-Dominated Society:

Male hawkishness is as yet the request of the day in India. The Constitution of India discusses correspondence between genders. In any case, by and by, ladies are viewed as abla, for example feeble in all regards. Ladies experience the ill effects of male misgivings about a ladies' job, capacity and limit and are dealt with as needs be. In nutshell, in the male-overwhelmed Indian culture, ladies are not treated equivalent to men. This, thus, fills in as a boundary to ladies section into business.

### 8. Low Risk-Bearing Ability:

Women in India lead a protected life. They are less educated and economically not self-dependent. All these reduce their ability to bear risk involved in running an enterprise. Risk-bearing is an essential requisite of a successful entrepreneur.

### GOVERNMENT POLICIES TO ENHANCE WOMEN EMPOWERMENT

1. Government has to establish proper training classes at least monthly ones to encourage entrepreneurial skills among rural women.
2. Bankers and government should organize loan awareness schemes programs in the villages to educate rural women about the benefits provided by them.
3. Develop a policy to verify the amount provided by the banks.
4. Encourage women entrepreneurs by providing gift schemes who perform business well and participate well in entrepreneurial skill programmes.
5. There should be a continuous attempt to inspire, encourage, motive and co-operate women entrepreneurs.
6. To organize training programmes to develop professional competencies in managerial, marketing, financial production process, profit planning, to maintaining books of accounts and other skills. This will encourage women to undertake business.
7. There is need to change negative attitude of society towards women
8. District Industries centers and single window agencies should make use of assisting women in their trade and business guidance.
9. Better educational facilities and schemes and vocational training programmes will be arranged for development of rural women entrepreneurship.

#### • Government Policies and programmes-

1. UNIDO –United nation industrial development organization.
2. (TREAD)-Trade Related Entrepreneurship Assistance and Development.
3. Bharatiya Mahila Bank .
4. Mahila Coir Yojana .
5. Mahila Udayam Nidhi .
6. Stree Shakti Project.
7. Support to Training & Employment programme for women.
8. National Policy for Skill development and Entrepreneurship 2015

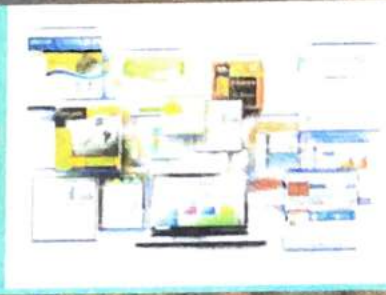


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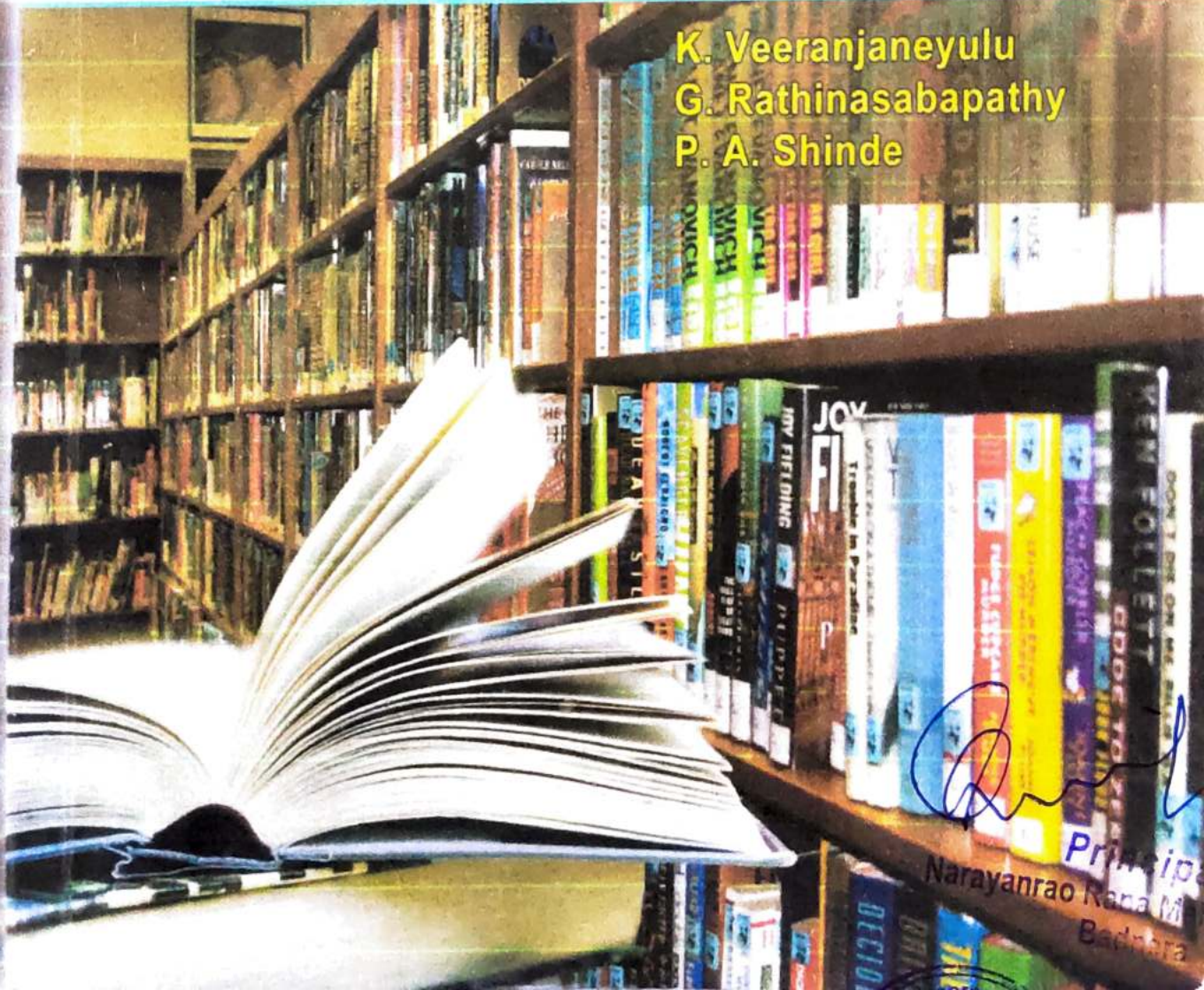
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# Emerging Library & Information Science and Technologies



K. Veeranjanyulu  
G. Rathinasabapathy  
P. A. Shinde



  
Principal  
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## Foreword

India agriculture is demographically the broadest economic sector and still plays a significant role in the overall socio-economic fabric of India. India ranks second in farm output and exporting to more than 120 countries thus become the seventh largest agricultural exporter worldwide.

The Indian Council of Agricultural Research (ICAR) and the 73 State Agricultural Universities along with other colleges are playing a vital role in the overall development of agricultural sector. The academic research and extension programmes of the universities have played a pivotal role in the overall development of agricultural sector of the country.

Library is the heart of university system. We cannot think a university without a good library since the role of the library is very important in academic system, equal importance is given to laboratory and library spending during the National Institutional Ranking Framework (NIRF).

In this context, I am very happy to note that the MPKV Library is organising a National Conference on "Emerging Library, Information Science and Technologies (ELIST 2017)" during 20-21 July 2017 and I congratulate Prof P.A. Shinde, University Librarian, MPKV, Rahuri for taking up the responsibility even though he is retiring very shortly. I am also very happy to note that this scientific event has been of great interest for a wide range of LIS professionals from the width and breadth of the country.

This volume represents the papers presented in the ELIST 2017 and contains about 40 papers dealing with various aspects of Library and Information Science viz., library automation, networking, digitization, institutional repository, scientometrics, user studies, information literacy etc.

I congratulate Dr. K. Veeranjanyulu Dr. G. Rathinasabapathy, Prof. P. A. Shinde, the Editors of the Conference Volume for their commendable work and hope the volume will be of immense use to the LIS professionals.

(P.S. Pandey)

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# USE OF ELECTRONIC RESOURCES IN AGRICULTURAL UNIVERSITY LIBRARIES IN MAHARASHTRA: A STUDY

**Harshal R.Nimbhorkar**

Librarian

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## ABSTRACT

In the state of Maharashtra there are four Agricultural university libraries which are rendering availability and accessibility of e-resources (electronics resources) to the library users to fulfill the objectives of the agricultural university libraries in Maharashtra State. This paper discusses the findings of the study undertaken in the following four agricultural universities viz., Mahatma Phule Krishi Vidyapeeth, Dr.Panjabrao Deshmukh Krishi Vidyapeeth, Marathwada Krishi Vidyapeeth and Dr.Balasaheb Sawant Kokan Krishi Vidyapeeth to find out the use of electronic resources in Agricultural University Libraries in Maharashtra State.

**Keywords:** User study, Agriculture, e-Resources, Consortia, Maharashtra

## Preamble

University of Agricultural Sciences, Maharashtra was established on the provision of Maharashtra Council of Agricultural Education and Research (MCAER) Pune is a body, which has been constituted under section 12 of Maharashtra Agricultural Universities (Krishi Vidyapeeth) Act 1983. In exercise of the powers converted upon MCAER vide provision in the provision of sub-section 3 of section 12 of the Act common regulations for admission to various degree programmes have been formulated.

## Need for the Study

The present study is a probe into this specialized area of using, and impact of electronics resources. In library collection, it concentrates on the major steps, processes and issues to be confronted in dealing with the incorporation of electronic resources into agricultural university libraries. It is important to understand and develop sound theoretical and operational knowledge about acquisition and use of e-resources and its role of licensed online e-journal online databases and its impact on library print collection and its users. This study will certainly bridge the gap in existing studies and further make understanding deeper on the subject of use of electronics resources in a much needed manner.

4. To evaluate the frequency visit, time spent, purpose and utilization of e-resources by the Agricultural university library users.
5. Find out the preferences of respondents in using various categories of e-resources.

### **Hypotheses Formulated**

For the present study the following hypotheses are proposed and tested:

**H-1:** "Users are not fully satisfied with the electronic information resources available in the Agricultural university libraries in Maharashtra".

**H-2:** "The Agriculture universities libraries in Maharashtra do not provide adequate electronic information services."

**H-3:** "Electronic Journals and databases are the most favored electronic resources available in the Agriculture university library"

**H-4:** "The ICAR improves the present quality for regular financial grants provided in Agricultural university libraries in Maharashtra"

### **Scope and limitation of the study**

The present study covers the type of users that is students, faculty staff and research scholars pursuing their study, teaching and involving research activities, respectively up to 2009 to 2011 that is limitation of users for collection of a primary data period covering up to 2011 that is limitation by period and confined users. The investigator has conducted the survey of four Agricultural university libraries in the state of Maharashtra that is limited to geographical area.

### **Sample Study**

The present study has taken a random sample out of the four Agricultural university libraries were total 6173 library users and distributed 400 questionnaires with a percentage of samples (6.47%) of the four agricultural university libraries in Maharashtra state.

### **Data Collection Methodology**

Survey method has been followed to collect data owing to its inherent advantages with questionnaire as the main tool for data collection. Questionnaire was administered to all the university librarians of the four Agriculture universities. In addition a separate Users Questionnaire was devised for the U.G., P.G. students, Faculty staff and research scholars of agriculture university libraries. ate of Maharashtra

### **Statistical tools used for analysis and interpretation of data**

Analysis and interpretation of data was done for the purposes analyzed using on the basis of ANOVA (Analysis of Variance), to study whether there is any significant difference due to type of library services and also due to category of



## Research Methodology

Research methodology indicates the layout followed in a study. It explains the aims, assumptions, and scope and limitation; data collection methodology use for the study is planned and carried out as follows:

### Statement of the Problem

A survey was conducted to find out whether these libraries are fully equipped to select, manage and organize in their collection for both print and non print (electronic resources). Further opinions of faculty and research scholars are sought with regard to nature and scope of the existing collections and services rendered in their Agricultural university libraries in Maharashtra.

### Agricultural University libraries in Maharashtra

The present status of four Agricultural university libraries in Maharashtra given in table 1.

**Table 1**

Sr. No	Name of Agricultural University Library	Location	Region	Establishment Year
1	Mahatma Phule Krishi Vidyapeeth	Rahuri	Western Maharashtra	20th Oct.1969
2	Dr.Panjabrao Deshmukh Krishi Vidyapeeth	Akola	Vidarbha Region	20th Oct.1969
3	Marathwada Krishi Vidyapeeth	Parbhani	Marathwada Region	18th May 1972
4	Dr.Balasaheb Sawant Kokan Krishi Vidyapeeth	Dapoli	Kokan Region	18th May 1972

(MCAER Prospects2012-2013)

### Objectives of the study

The study primarily aims to know about preference given electronics resources carried out in selected agricultural university libraries in Maharashtra. The ultimate purpose of e-resources is their utility. Hence, it is intended to study the use of e-resources by the library users. The specific objectives related to the present study are as follows:

1. To study the different types of electronic resources and services available in the Agriculture university libraries of Maharashtra.
2. To determine the level of satisfaction of the library users on e- resources.
3. To know the awareness of e. resources among the users of agriculture university libraries of Maharashtra.

4. To evaluate the frequency visit, time spent, purpose and utilization of resources by the Agricultural university library users.
5. Find out the preferences of respondents in using various categories of resources.

### **Hypotheses Formulated**

For the present study the following hypotheses are proposed and tested:

**H-1:** "Users are not fully satisfied with the electronic information resources available in the Agricultural university libraries in Maharashtra".

**H-2:** "The Agriculture universities libraries in Maharashtra do not provide adequate electronic information services."

**H-3:** "Electronic Journals and databases are the most favored electronic resources available in the Agriculture university library"

**H-4:** "The ICAR improves the present quality for regular financial grants provided in Agricultural university libraries in Maharashtra"

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user, a statistical technique namely two ways ANOVA is applied. For the analysis purpose, data in percentage is concerned, and chi-square test was used to compare an observed group of frequencies with an expected group of frequencies.

### Discussion and Findings

The study shows how library users gave preferences for different use of internet. At all four agriculture universities out of 400 library users 241(60.25%) download and save the information on internet .94(23.5%) library users take print and 65(16.25%) library users only read the information. It shows that maximum library users download and save the information on internet.

In agricultural universities, following electronic resources are expected to be available. In case of four agricultural universities, the availability of the resources along with the list of electronic resources is given below: (y- Availability of resource, N- No availability of resource)

**Table 2** Availability of e-resources

Sr. No.	E-resources	PKV Akola	MPAV, Rahuri	DBSKAV, Dapoli	MAV Parbhani	Total
1	CeRa	Y	Y	Y	Y	4
2	Krishiprabha	Y	Y	N	Y	3
3	e-Granth	N	N	N	N	0
4	open j-gate	N	Y	N	Y	2
5	Uni.online thesis	Y	Y	N	Y	3
6	NDLTD	Y	N	N		1
7	e.TAD	Y	Y	N	Y	3
8	Inflibnet	Y	N	N	Y	2
9	Online e-journal	Y	Y	N	Y	3
10	e-books	Y	N	N	Y	2
11	JMU	Y	Y	N	N	2
12	Indiastat.com	N	Y	N	N	1
13	Online Databases	Y	Y	Y	Y	4
	Total	10	9	2	9	

From the table 2 we see that in the library of PKV Akola, 10 out of 13 (77%). E-resources are available. In the library of MPAV, Rahuri and MAV Parbhani, 9 out of 13 (69%) e-resources are available. But in the library of DBSKAV, Dapoli, only 2 out of 13 (15%) e-resources are available. From the above table it can also be seen that the e-resources namely CeRa and Online Databases are

available all the 4 universities. The e-resources namely Krishiprabha, Unionline thesis, e.TAD, online e-journal are available in 3 universities. The e-resources namely open j-gate, infolibnet, e-books and JMU are available in 2 universities. The e-resources NDLTD and Indiatat.com are available in only one university whereas the e-resources Union online thesis is not available in any of the universities.

In the university library, CDROM data bases are also expected to be available. However, the database Agricola is not available at any agricultural university in Maharashtra. The database namely CB Abstract is available at PKV, Akola and MAV Parbhani only. However, the data bases FSTA and AGRIS are available only at MAV Parbhani.

- It is the information about where library users access e-resources out of 400 library users 228 (57%) library users use e-resources at computer centre, 136(34%) users at university library, 216(54%) at home, 216(54%) at home, 132(33%) at on Campus location, 128 (32%), at off Campus location, 72(57%) at hostel, and dept. total 72(57%) . From the above study it is clear that maximum library users use e-resources at computer centre.
- The first priority given by the library users for seeking their information total 112 (28%) for using online data bases, 97(24.25%) library users searching On-line public access Catalogue (OPAC), 64(16%) library users searching information on various reference Sources total 38 (9.5%) library users searching e-mail and 14(3.5%) library users searching internet websites. Reveals that most of the respondents are seeking information from on line data bases on the internet.
- It is information about the details of library software which is use at different university libraries .MPKV library and BSKKV library are using SLIM 21 library software, MKV library is using SLIM++ library software, and PDKV library is using LIBSYS library automation software.
- Every year there are specific budget allocated to every university library. In 2009-10 PDKV library and BSKKV library did not received any grant in the comparison MPKV library receive 13192700 rupees grant and MKV library receive 374100 rupees grant .In 2010-11 PDKV library received 254000 rupees grant,MPKV library received 9019200 rupees grant,MKV library received 822000 rupees grant and BSKKV library did not received any grant. In 2011-12 PDKV library received 12754000 rupees grants, MPKV library received 14148000 rupees grant, MKV library received 3258200 rupees grant and BSKKV library received 3500000 rupees grant from ICAR.

## CONCLUSION

It has been concluded after through study that library maximum users are using library for different purposes such as for issue books, for referring journals, for Xerox facilities and other services and they are satisfied with the library services.



Various e-resources namely Cera, Krishiprabha, e-Granth Open J gate, Uni.online thesis, NDLTD, eTAD are available in Agricultural universities. And library users often use these e-resources for their academic study work PDKV library users are mostly aware about these e-resources We can observe that satisfaction level of library service is lowest for BSKKV library Dapoli .Satisfaction level found lowest for BSKKV, Dapoli may be due to the reason that there is no full time university librarian.

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