



NEWS

Issue No. 3
 March, 2012

Announcement

**CAFT – Home Science
 21 Days Training
 on
 “Experiential Learning
 Programme (ELP) In
 Home Science under
 SAU's - Guidelines for
 Programme
 Implementation”
 From 16th November
 to 6th December 2012**

CAFT - HOME SCIENCE

Ergonomics of Workplace and Product Design

With the advancement in science and technology and material engineering, there are numerous products that are marketed as being sophisticated in terms of features they provide to consumers. An understanding of the key elements involved in the design and manufacturing of consumer products for functionality, and the tools used to model functionality should help shed light on why functionality is priority in products.

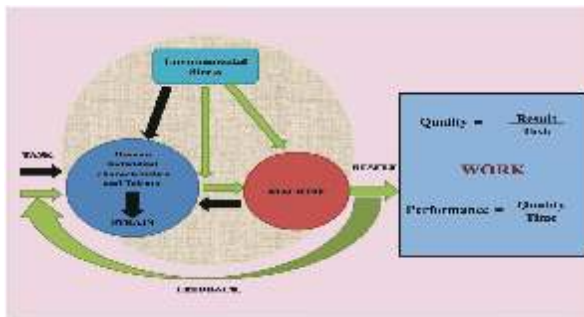
Customers' demand for quality products prompted manufacturing companies to consider quality as their key product design goal. Environmental Protection Agency (EPA) has prompted



companies to project Design for Environmental Friendliness or Green Design as an important product design goal. While all these different design goals have gained recognition and acceptance, product performance and the user needs, as a design goal, has often been taken for granted by designers. Hence ergonomic design is the key term today. Ergonomics can be an integral part of design, manufacturing, and use. Knowing how the study of anthropometry, posture, repetitive motion, and workspace design affects the user is critical to a better understanding of ergonomics as they relate to end-user needs.

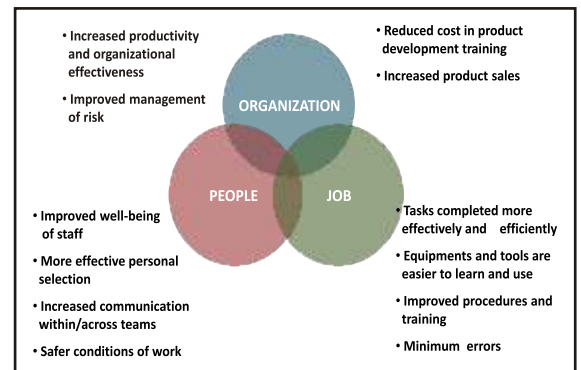
What is Ergonomics?

Ergonomics is a science focused on the study of human fit, and decreased fatigue and discomfort through product design. It is the science of work: of the people who do it and the ways it is done; the tools and equipment they use, the places they work in, and the psychosocial aspects of the working situation." Ergonomics is employed to fulfill the two goals of health and productivity. It is relevant in the design of such things as safe furniture and easy-to-use Interfaces to machines. It is concerned with the 'fit' between people and their work. It takes account of the worker's capabilities and limitations in seeking to ensure that tasks, equipment, information and the environment suit each worker.



Work Environment

The physical aspects of a workplace environment can have a direct impact on the productivity, health and safety, comfort, concentration, job satisfaction and morale of the people within it. Important factors in the work environment that should be considered include building design and age, workplace layout, workstation set-up, furniture and equipment design and quality, space, temperature, ventilation, lighting, noise, vibration, radiation, air quality.

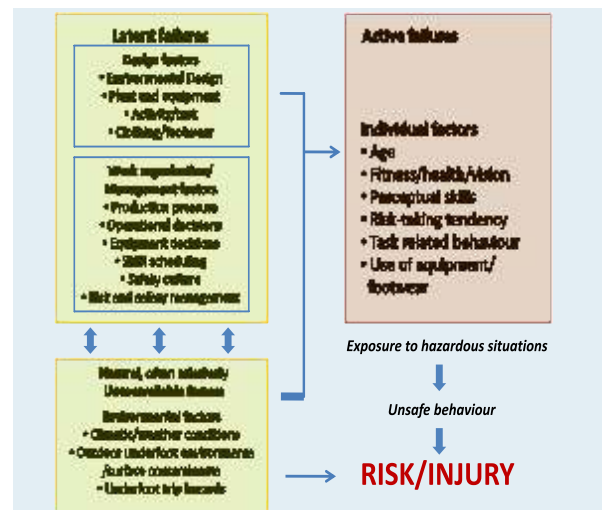


Why should your work area be ergonomic?

It's common for injury and illness to happen at work. Both can cost you and your employer time and money. They can also affect how well you do your job.¹ In one study, more than half of the workers who used computers for at least 15 hours a week had joint problems in the first year of a new job.

What kinds of injuries happen at work?

Most injuries that happen at work are caused by physical stress and strain, such as sitting in the same position for a long time, making repetitive movements, and overuse. These injuries can cause stress and strain on your muscles, nerves, tendons, joints, blood vessels, and spine.





Symptoms can include pain in your:

- Back.
- Hand, wrist, or arms.
- Neck and shoulders.

You could also be at risk for problems such as tendinopathy and bursitis. These are caused by overuse and repetitive movements. Over time, these kinds of movements can make you feel bad. They can cause long-term health problems. And they use up your sick time.

You may be at greater risk for injuries at work if you have other health problems, such as arthritis or emotional stress.

Most on-the-job injuries are caused by:

- Falls.
- Repetitive movements.
- The way you sit or stand (posture).
- Bending over, lifting heavy objects, or using pressure or force.
- Working with vibrating tools.

How can you prevent injuries at work?

Here are a few ways you can prevent injuries at work:

- Try to place your work so that you can sit in a comfortable position while you do it.
- Try not to put too much stress on one area of your body, such as your lower back or arms.
- Change your position often.
- Turn with your whole body instead of twisting to face your work.
- Take breaks to stretch or get out of your chair every 20 to 40 minutes. If you can, switch to another task.

Why should we evaluate the workplace environment?

When people are working in situations that suit their physical and mental abilities, the correct fit between the person and the work task is accomplished. People are then in the optimum situation for learning, working and achieving, without adverse health consequences, e.g. injury, illness.

What work environment factors should be assessed?

When assessing the workplace environment, consideration should be given to individual human characteristics such as age, sex, experience, physical stature etc., and how well these human characteristics match the physical environment.

Appropriate design of workplace environments will ensure that they accommodate a broad variety of human characteristics.

The four main categories of physical characteristic that need to be considered in the work environment are:

- Clearance, e.g. Headroom, legroom, elbow-room, access;
- Arm reach, which has a bearing on storage of materials;
- Posture, which has a bearing on the location of materials/equipment, heights of working surfaces;
- Strength. Physical environmental factors can have an adverse impact on people. The specific physical factors that limit performance will vary depending on both the work environment and individual differences.

The work area should be set up according to ergonomic design principles. Basic guidelines to follow in the design of the work area to enable the efficient management of tasks include:

- Importance
- Frequency of use
- Function
- Sequence of use
- Work/rest schedules
- Optimal positioning

Every individual should be conscious of their health in their work environment and record any pain, discomfort, injury or illness that they believe is work-related.

How do we evaluate the workplace environment?

The risk management process is used to evaluate the workplace environment. This involves:

- Identifying work environment hazards;
- Assessing the risk of injury/illness from these hazards;
- Implementing appropriate control measures to prevent or minimise the risks;
- Checking that the control strategies are effectively controlling the risks.

The risk associated with each hazard can be controlled by implementing the following hierarchy of controls:

- Eliminating the risk from the workplace, e.g. By removing hazardous playground equipment;
- Substituting a material in the workplace environment with a less hazardous one, e.g. Purchasing non-hazardous cleaning equipment, or replacing slippery floors with non-slip flooring;
- Redesigning the workplace layout to reduce risks, e.g. Rearranging furniture to allow easy access to materials and equipment;
- Isolating, closing off or guarding a particular hazard in the work environment, e.g. Keeping medicines in a locked cabinet;
- Administration — adjusting the time and conditions of an individual's exposure to the risk, e.g. Rotating tasks so that employees do not spend too long in hot or cold conditions, or too long performing a strenuous manual task.
- Providing personal protective equipment as a last resort, when higher-order controls are not practicable, e.g. Providing hearing protection, face shields and sunscreen.

Center For Advanced Faculty Training in Home Science 2011-2012

The CAFT centers of ICAR extends 21 days advanced training to the scientists and academic staff within the National Agricultural Research and Education System in the country for capacity building of faculty and upgrade skills in frontier areas of science and technology. So far CAFT in Home Science has organized 22 trainings in Home Science especially in the discipline of Foods and Nutrition. During the current year Dr. Mahalakshmi V. Reddy, Professor & Head, Department of Resource Management and Consumer Sciences in Collaboration with Dr. K. Mayuri, Professor and Head, Department of Human Development & Family Studies, & Dr. D. Anitha, Department of Apparel & Textiles organized the 23rd training programme in Ergonomics on the title, "Advances in Ergonomics Research and Product Design – Application to Interior Space and Functional Needs of Indian Population" for 21 days training from February 1st to 21st, 2012. Ergonomics is an important area study in both under-graduate and post-graduate curriculum and research activities.

The Objectives of the Training :

- To gain insights on the human approach to designing spaces for productive and nurturing environments
- To examine needs of children, adult, elderly and population with physical and visual disabilities and a subsequent re-designing of their living environment.
- To get up-to-date with advanced ergonomic principles and safety issues in functional products and other accessories
- To apply ergonomic principles to design and evaluate products with respect to work environment and usefulness to the special needs of different age groups and gender.
- To assess and design functional clothing for various occupational and disabled population



Release of CAFT – H.Sc News Letter by Shri V.Nagi Reddy, Vice Chancellor of ANGRAU on 1st February 2012 during the inaugural function of CAFT – H.Sc, 21 days Training

Training commenced on 1st of February 2012, and it was inaugurated by Sri V Nagi Reddy, IAS, Principal Secretary to Agriculture & Cooperation, Govt. of A.P & the Vice Chancellor, ANGRAU. The Guest of Honour was Dr Debkumar Chakrabarti, Professor & Head, Department of Design, IIT, Guwahati, Assam, who also delivered the Keynote Address on the topic- “Ergonomics and Today's Relevance”. Dr P Geervani, Former V C, SPMU, Tirupathi and Nominated Member ICAR also attended the programme. Dr A Sharada Devi, D H Sc, ANGRAU presided over the programme.

In the first week of the training programme participants were exposed to basics and advanced ergonomic concepts – Issues contributing to health and safety, occupational health issues, body's response to work & work environment, aspects of Ergonomics and Product design, through lectures, interactive sessions, workshops for concept building and skill training. These were delivered by faculty members of ANGRAU and experts in the field of design from different parts of the country like Prof.Dr.Debkumar Chakrabarti IIT,Gauwhati, Prof.Dr.G.G.Ray and Dr.B.K.Chakravathy from IIT, Bombay, Dr.D.Majumdar from DRDO, Mr.Ajeesh and Ms.Jeena Jose from RECOUP, Bangalore and also local experts from Osmania university – Prof. Hyavadana from Textiles Technology, Prof. Ar. Sudhakar, Prof & Head, SPA, JNTU, Ar. Aditya, Asst. Prof. from School of planning and architecture, JNTU were invited to deliver lectures. These were mind-boggling and thought provoking sessions.

During second week participants were exposed to real life situations to understand the missing link between the user and environment and exposure to basic and advanced methodologies for assessment of workers discomfort, strain, stress and injuries. They had hands on experience in the use of ergonomic equipment, tools and software for measuring ergonomic injuries during physical and mental work like stress and strain, use of ergonomic scales, guidelines and check points for assessing the problems and evolving solutions. In the third week, group activities were planned to use the theoretical knowledge and skill training on assessing product safety, designing products, evolving ergonomic checkpoints for work space safety and health. Hands on training were provided to participants by undertaking live design projects.

Valedictory programme of this training was held on 21st February, 2012. Director of BITS Pilani-Hyderabad, Dr.V.S Rao was the chief guest and Dr.Geervani, Ex-Vice Chancellor of Mahila University was the Guest of Honour of the occasion. The event was presided over by Dr.A.Sharada Devi, Dean, Faculty of Home Science. Participants were provided with a 'Certificate of Participation’ and CD of the Training Literature, PPT of Lectures and notes, Project works of Participants’

Inaugural keynote address Prof. Dr. Debkumar Chakrabarti Department of Design, IIT- Guwahati

Ergonomics (/Human Factors) sees optimum use of human (physical, physiological and behavioural) resources for maximum benefit. It promises 'better design for people' and 'Perform well with comfortable products'

It works for

- Optimum use of human resources for maximum benefit
- Humanising technology
- Humane values in different walks of life

Ergonomics aspects

- Hardware - Human machine interface technology
- Environmental – Human environment interface technology
- Cognitive - Human software interface technology
- Macro ergonomics- Human organisation interface technology Domain
- Study of human behaviour, abilities, limitations and other context specific characteristics
- Discovery of appropriate applications of the same information (after proper analysis of context) to the design of tools, machines, systems, tasks, jobs, and environments.

Objectives: to enhance

- Productivity
- Safety
- Comfort for effective use
- Establishes user friendliness and Compatibility between man and his surroundings and articles for his use.
This goal is reached by
- Development of measuring protocols and experiments to study the interaction between man, product and surroundings
- Interpretation of different parameters in relation to load, performance, health, safety and comfort
- Understanding of mechanisms causing health damage and performance improvement
- Specification of directives for product design based on product research

It achieves:

For the producer/supplier, the added value of Product Ergonomics is:

- Higher-quality products
- First-time-right product development
- Time-to-market reduction
- Satisfied customers.

For the users of the products experience:

- Fewer (psycho-physical) injuries
- Better performance
- More comfort.

Application areas

- Product research (material and product properties)
- Users research in the lab and on location
- Design and testing of new prototypes.

Ergonomics sees a shift from initial 'Man- machine-environment system where man is the worker' to 'Users-commodities-environment-context specific compatibility where man is user and machine has expanded to Commodities and Task/system.

Target beneficiaries of this approach would be design students and application area would be in developing a range of consumer products,



which has led to think of Usernomics, which strongly advocates for all product design requiring human interaction. User Interface Design process has taken usability to a higher level of effectiveness and accountability.

The form and function of the article and the needs of human being –the users' information together make an integral concept of designing a 'Human compatible' product and a complete system that needs to be practiced.

Ergonomics-Relevance to Home science Research and Development

**Dr P. Geervani,
Former V C, SPMU, Tirupathi**

Ergonomics is an emerging area of Development which is of interest to many disciplines at present unlike in the past. Home science faculty has entered this area almost a decade back in a small way and is working on expanding its horizon both in research and application. Basically the goal of Home science is to improve the quality of life of in rural communities with the application of science and technology. The faculty with its five disciplines has been striving to develop appropriate technology for improving the quality of life of families subsisting on agriculture. The focus has been mostly on health and nutrition, housing, shelter, textiles and clothing, environment, nurturing children, developmental needs of children, adolescents, needs of vulnerable segments of population, livelihood opportunities through rural and women friendly enterprises, communication and extension aspects etc. Ergonomics was a part of the curriculum. Recently more attention is paid to Research on Ergonomics considering its importance and its association with work efficiency.

Family Resource management department areas of teaching being Housing both interior and exterior, Reduction of drudgery of specially women and improving work efficiency, improving and management of household and community resources perhaps it is appropriate to take up studies on ergonomics. Let us relate how home science can integrate with Ergonomics.

- Working efficiently
- Working in comfort
- Reducing drudgery
- Equipment
- Housing

Target population Apart from all this we should consider our target population. Is it adults male, female, short stout, tall etc. what are our priorities when we striving for work efficiency? Is it home work or farm work? If so out of all works which is the task performed with least efficiency now? Why? Where do we need to focus has to be debated. Choice depends on identification of needs and also facilities.

Ergonomics, to me is a broad area which requires integration of physical scientists, engineers, Home scientists, agriculture scientists, occupational, therapists etc. Each one has a different role to play. Before home science faculty takes up this area assessment of basic knowledge required to take up research should be imparted at UG and PG level. Too much specialization without acceptance from the end users also should not be attempted. It can be inter disciplinary and Interfaculty coordinated research.

"Collaborative New Product Concept Management: A Flexible Model for Innovation"

B. K. Chakravarthy

Today organizations seek to develop competitive advantage that could be sustained over the long run. Innovative products have been of immense value to organizations in this context. The role played by innovation in generating ideas for innovative products is evident. Therefore it becomes imperative that an organization establishes processes that lead to or support innovation.

The research methodology followed is to have a stepwise

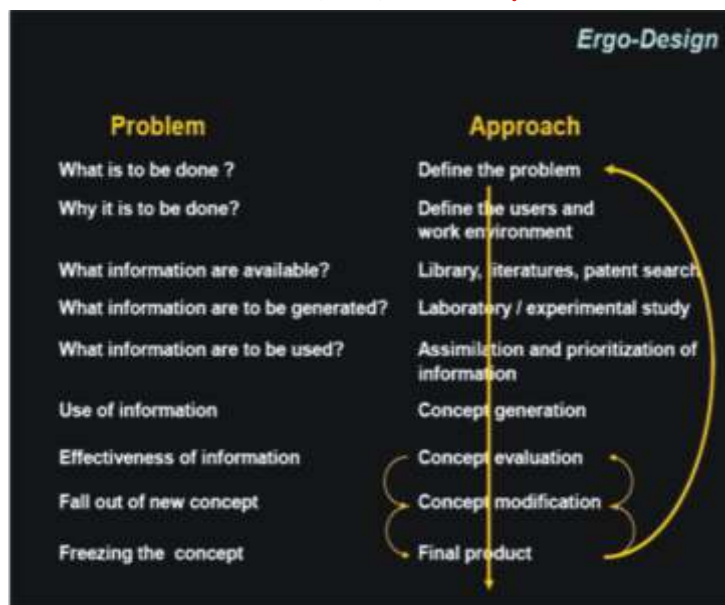
development in the collaborative model for innovation. This type of evolution of the model lends itself to effective implementation in the industry.

The proposed model for innovation consists of two intervened processes. The new product, concept management process and the collaborative teaming process. The concept management is divided into four steps for having better and precise control on the stages and earmarking the responsibility and the level of interaction of the participants from both within and outside the organization. This also helps in filtering the quality and type of interaction at each stage. The steps are,

- Concept creation and generation,
- Concept focus and evaluation,
- Concept detailing and
- Concept refinement and finalization, creating a multistage concept development process.

This helps in enthusing innovation and flexibility in the system so that innovative ideas with potential can be nurtured and taken ahead in the process.

Design Methodology Dr Gaur G Ray, Professor, IDC, IIT Bombay



Environmental Ergonomics Dr.Dhurjati Majumdar Associate Director, DRDO, New Delhi

Environmental Ergonomics- concentrates on the interaction between the user and his or her physical environment. The physical environment is e.g. characterised by Heat, Cold, Noise, Vibration, Light, Radiation, Indoor air quality, Colours and Environmental pollutants. The physical aspects of a workplace environment can have a direct impact on the productivity, health and safety, comfort, concentration, job satisfaction and morale of the people within it

Ergonomic Recommendations for Workers

Workers should avoid exposure to extreme heat, sun exposure, and high humidity when possible. When these exposures cannot be avoided, workers should take the following steps to prevent heat stress:

- Wear light-colored, loose-fitting, breathable clothing such as cotton.
- Avoid non-breathing synthetic clothing.
- Gradually build up to heavy work.
- Schedule heavy work during the coolest parts of day.
- Take more breaks in extreme heat and humidity.



- Take breaks in the shade or a cool area when possible.
- Drink water frequently. Drink enough water that you never become thirsty.
- Avoid drinks with caffeine, alcohol, and large amounts of sugar.
- Be aware that protective clothing or personal protective equipment may increase the risk of heat stress.
- Monitor your physical condition and that of your coworkers.
- Wear several layers of loose clothing. Layering provides better insulation during cold weather.
- Make sure to protect the ears, face, hands and feet in extremely cold weather.
- Boots should be waterproof and insulated.
- Move into warm locations during work breaks; limit the amount of time outside on extremely cold days.
- Carry cold weather gear, such as extra socks, gloves, hats, jacket, blankets, a change of clothes and a thermos of hot liquid.
- Include a thermometer and chemical hot packs in your first aid kit.
- Avoid touching cold metal surfaces with bare skin.
- Monitor your physical condition and that of your coworkers.

Application of Ergonomics in Developing Countries

Dr. A. Mrunalini,

Technical Coordinator, AICRP-FRM, ANGRAU

World constitutes a

- Highly heterogeneous arrays of cultures
 - Availability of resources and
 - Different levels of infrastructural growth
 - Heterogeneous ways of living & working
- The demographic characteristics represent highly populated countries with growth rates usually posing Overburden on health, Education and employment infrastructure

Ergonomics issues in Agriculture:

- Proper design of hand tools and other farm equipment for the user's physical and functional attributes.
- Anthropometric data base for designing farm equipment as per physical attributes of the Indian population.
- Physiological data base (hand strength, maximum aerobic capacity) for designing functional attributes of the tool.
- Estimating the physiological costs, energy expenditure, workloads and endurance limits for different occupations.
- To view as occupational safety issue for protection and intervention strategies during fertilizer application, heat stress by improving the equipment needs.
- Ergonomic communication to improve farm practices to farmers.



Ergonomics in the Design of School Environment

Dr. Mahalakshmi V.Reddy,

CAFT -Course Director, Dept. of RMCS, CHSc, ANGRAU

Children spend one-quarter of a day in school. Of this, 60-80% of time is spent in the classroom. Classroom features, such as workspace, play space and personal space play an important role in children's growth and performance as this age marks the period of anatomical, physiological and psychological developments. The key space in pre-school environment includes the classroom(s), an outdoor space, a multipurpose room, a teachers' workspace, and an administrative office. An environment that operates a full-day program may also need a food preparation area. In addition, consideration should be given to an entrance area that provides a comfortable and inviting place for parents and caregivers to drop off and pick up their children. All spaces in this environment should be easily accessible for all including children who are physically challenged.

Design Issues in Child-safe learning Environment

A well-designed environment aims to create a classroom that is highly functional, aesthetically attractive, age-appropriate, child-directed, and teacher-supported. A well-designed group care environment promotes children's individual and social development. The setting, layout, and equipment give many opportunities to challenge themselves through seeing, touching, feeling, and moving. Early studies in environmental psychology suggested that crowding (or inadequate space) would lead to aggression in children; therefore these should be taken into consideration when planning an appropriate environment. Wider space lead to a greater quantity of motor activity, such as running, jumping and skipping.. A Landscape for Learning can be built into the design or renovation of any classroom. These can be sculpted to provide a variety of age-appropriate activity areas. The walls frame the activity areas, while the center of the classroom remains fairly open, allowing for the circulation of children and adults, as well as providing flexible space that can change depending on the teachers' observations of the children's interests. Easily operable quality windows and doors can provide a more secure building envelope. A well designed environment prevents injuries that are most common among children: falls, burns, poison, choking and drowning. Eliminating all risks would also eliminate challenges essential to children's growth and development.

Senior citizens - Living environment and safety issues

Dr. S. Ratna Kumari

Associate Professor, Dept. of HDFs, CHSc, ANGRAU

Aging gracefully is preferable, but aging safely is essential. For many seniors, the threat of serious injury, even at home, is very real. Something as simple as an electrical cord in a walkway can be dangerous. As people age and become slower and less physically adept, creating a safe and secure living environment is crucial. However, by paying close attention to potential household dangers, many risks of serious injury, or worse, can be reduced or even eliminated.

Effects of major accidents on daily living

An accident can change the life of an older person significantly leading to loss of independence and confidence. This may further affect emotional & physical wellbeing and contribute to low self esteem & poor mental health. Home accidents are a major cause of injury and death. For those over 60, the risk of death and injury may be greater than for others. Older people need to take special precautions to ensure a safe living environment. Most accidents in the home can be prevented by the elimination of hazards. The following are suggestions that you can make your home a safer place to live.

General Safety Standards

First, consider whether the home meets the following general safety standards.

- Emergency numbers are posted by each telephone.
- Appliances, lamps, and cords are clean and in good condition.



- A sufficient number of outlets are located in every room where they are needed.
- The thermostat of the water heater is set at 110F or lower to prevent accidental scalding.
- Medications are stored in a safe place according to instructions on the label of the package or container.
- Carpeting and rugs are not worn or torn.
- Small, loose rugs have nonskid backing and are not placed in traffic areas.
- Kitchens are considered one of the most dangerous areas of a home for seniors. Many accidents and falls occur in the kitchen due to a range of common scenarios: cooking fires, grease and spills on the floor, reaching for objects, appliance injuries, inappropriate objects placed in a microwave. Ensure that any room in the house, especially the kitchen, is 'elderly parent friendly' and will allow easy and safe access even for those using canes and walkers.

Visual ergonomics and safety issues

Dr. T. Neeraja,

Professor, Dept of RMCS, CHSC, Hyderabad

Today the use of computers at workplace has become common. Because computer use is such a high visually demanding task, vision problems and symptoms are very common. Most studies indicate that computer operators report more eye-related problems than non computer office workers. The compilations of the series of symptoms that are due to the use of computers are known as computer vision syndrome (CVS). These condition most often occur when the viewing demand of the task exceeds the visual abilities of the computer user. The symptoms can vary but mostly include eyestrain, headaches, blurred vision (distance or near), dry and irritated eyes, slow refocusing, neck and backache, light sensitivity, double vision, and color distortion. The causes for the inefficiencies and the visual symptoms are a combination of individual visual problems and poor office ergonomics. Poor office ergonomics can be further divided into poor workplace conditions and improper work habits.

Visual ergonomics is the multidisciplinary science concerned with the understanding of visual processes as they affect the interactions between humans and other elements of a system. Visual ergonomics is concerned with designing the work place that demand visual attention of the worker by applying visual theory and principles. Eyes lead the body, so both body and eyes cannot be considered without the other. "Visual fatigue" is the conditions experienced by individuals whose work involves extended visual concentration. It results from visual inefficiencies or from eye-related symptoms caused by a combination of individual visual abnormalities and poor visual ergonomics. The visual fatigue may lead to visual strain and visual stress.

Appraisal of Ergonomic Checkpoints for Safer and Healthier Work Spaces

Dr D Ratna Kumari

Associate Professor, Dept of RMCS, CHSC, Hyderabad

The application of ergonomic principles has still reached only a limited number of workplaces despite its very great potential for improving working conditions and productivity. Ergonomic checkpoints provides a collection of practical, easy-to-use ergonomic solutions for improving the working conditions. These checkpoints, which can be used to check either workplace conditions on the spots or workplace plans at the design stage, are suited in particular to small and medium-sized enterprises. Different sets of ergonomic checkpoints are used for ergonomics application in small enterprises, construction sites, computer workstations, agriculture and various other workplaces.

In order to make it easy to use the checkpoints, it is important to develop checkpoints that present easy-to-implement improvements adjusted to each local situation. This is done by designing ergonomic checkpoints that reflect local good practices with a clear emphasis on

simple, low-cost improvements. The ILO Ergonomic Checkpoints can serve as the basis for this development. The roles of ergonomic checkpoints are enhanced when the compiled checkpoints

- Correspond to good examples locally achieved,
- Focus on low-cost types of improvements in multiple technical areas, and
- Are used in combination with action checklists suited to group discussion.

These features are useful in further developing action-oriented ergonomic checkpoints for various settings.

Design process for functional clothing

Dr. A. Sarada Devi

Dean of Home Science, ANGRAU

Design is a highly complex and sophisticated skill. It is not a mystical ability given only to those with recondite powers but a skill which, must be learnt and practiced like the playing of a sport or a musical instrument. The design process is a sequence of events which demands creative behaviour from its participants. Its activity is to improve existing conditions and to find clear paths out of dilemmas. The ability to generate creative ideas evolves in part from experience and in part from the way individuals process and use information. No design proposal may be best design for solving the design problem. Recombining of certain attributes from different proposals may give satisfying results.



Design Evaluation involves taking a critical look at the decisions made in the design process. It may involve numerical ratings based on tests or the informal subjective opinion. Evaluation is undertaken before a full-scale design is begun. The more complex and expensive the construction process is, the more likely it is that this will occur. It is preferable to set up evaluation procedures prior to ideation.

Clothing for Physically Challenged

Dr. D. Anitha

Associate Professor, Dept of APTX, CHSC, Hyderabad

Clothing has been recognized as a primary need of mankind and the most personal component of daily life. Among the functional aspects, clothing for the disabled persons requires a keen sense of understanding as no two individual are alike in terms of necessity or deformity. Self confidence can be gained by giving these people with appropriate clothing that helps them equalize with their counterparts. Appropriate clothing that is designed and constructed in accordance with physical limitations is very important to them. It reduces the dependence for dressing and undressing apart from providing physical comfort, psychological well being and participation in social interactions. In addition to providing a function, it can be made to act as a fashion item with transformative and aesthetic attribute as wearing 'fashionable clothing' can compensate the deficiency of disability and to conceal it.

Functionality, attractiveness, ease in use, affordability and safety are all attributes that are expected especially for people with disabilities. Suitable clothing can not only improve the patient's appearance and make him appear more like a fit member of the community, but can also give



greater comfort and makes dressing easier. To achieve this ergonomics can form an integral part of design, When products fit the user, it results in more comfort, higher productivity, and manufacturing, and use as it focuses on study of human fit and decreases fatigue and discomfort through product design.



ANGRAU Post-Graduate Research in the area of Ergonomics, Occupational Health and Safety

Assessment of Illumination and Noise Levels in Class Room Environment

D. Ratna Kumari, 2003 Guide Dr. S.Renuka

Ergonomic Workstation Design for Branch Manager in Banking Industry

Sujata Kumari, 2003 Guide : Dr.T.Neeraja

Designing the Student's Furniture for Class Room Environment

Chanda Nelofer Khanam, 2005 Guide: Dr. Mahalakshmi. V.Reddy

Ergonomic Evaluation of Kitchen Tools

U.Venkata Kiran, 2005 Guide: Dr.S.Renuka

Design Solutions to Higher Education Institutions for Orthopaedically Challenged

Soma Kalia 2007 Guide: Dr. Mahalakshmi V. Reddy

Designing Functional Residential Interiors for Wheelchair Users

Manisha Mohanta, 2009 Guide: Dr. Mahalakshmi V.Reddy

Designing Classroom Furniture for Pre-School Children (3-5 Years)

J.Meenakshi, 2009 Guide: Dr.P.Radha Rani

Designing Kitchen for The Visually Challenged

Mariya Sultana, 2011 Guide: Dr.D.Ratna Kumari

On going Studies

Work Related Musculo Skeletal Disorders among Women Working in Packing Units of Pharmaceutical Industries - Guidelines for Ergonomic Interventions

V.Prasuna Guide: Dr.T. Neeraja

Ergonomic Evaluation and Development of a Fixed Frame Work Station Design for Fabric Embellishment Workers

D Esther Guide: Dr A Mrunalini

Designing Ergonomic Interventions for Cooks in Restaurants

E Shireen Himabindu Guide: Dr.Mahalakshmi V Reddy

Indian Bread Making Tools – Consumer Evaluation and Design Modification

P. Rajya Lakshmi Guide: Dr.D.Ratna Kumari

Ergonomic Evaluation of Labels on Ready to Eat Meal Products and their Influence on Consumer Buying

Deepika J, Guide: Dr. T Neeraja

Impact of Light Sources on Humans and Materials in Retail Cloth Stores

Deepika J, Guide: Dr. T Neeraja

Ergonomic Evaluation of Work and Workstation Design of Sugar Cane Juice Vendors

Krishna Priya Guide: Dr. V Vijaya Lakshmi

COLLEGE EVENTS

MILLET FEST 2012

Milletts are potential grains among the cereal grains with superior nutrient and nutraceutical components and hence, could be a worthy addition to one's diet. Among them Jowar, Bajra, Ragi, Korra, Variga and Sama are mostly used in AP. Nutritionally they are fair source of proteins, which are highly digestible and an excellent source of dietary fibre with good amounts of soluble and insoluble fractions. The carbohydrate in millet content is low and slowly digestible, which makes the millets a nature's gift for the modern mankind engaged in sedentary activities.

Today there is a significant change in the lifestyle of people owing to the rapid industrialization, improved socio-economic status, enhanced health facilities and increased life expectancy. Economic affluence coupled with sedentary lifestyles and changing food patterns are contributing to several chronic degenerative diseases such as obesity, diabetes mellitus, cardiovascular diseases, cancer, etc. New research findings indicate the potential value of millet based diets in prevention of such disorders. In fact, the preventive role of corrective nutrition is an ever evolving process. Thus, for the health conscious genre of the present world, millets are perhaps one more addition to the proliferating list of healthy foods, because of their nutritional superiority.

Millet Fest 2012 from 24-26 March 2012 was organized with the coordinated efforts of Acharya N.G. Ranga Agricultural University and Department of Agriculture, Government of A.P. elucidates the knowledge of the forgotten grains to the citizens from all walks of life in twin cities with the following objectives.

1. To create awareness about nutritional and health benefits of millets for acceptance in diets.
2. To showcase the drudgery free processes and product making technologies to the food entrepreneurs.
3. To popularize the millet based breakfast, main meal and snack recipes for inclusion in daily menu as well as in daily diets.
4. To increase the area of millet cultivation by creating demand for millet products.

The participants include research institutions, National and regional level non governmental organisations, Krishi Vigyan Kendras, entrepreneurs engaged in processing, product making and marketing.

The activities conducted during these three days were

- Exhibition -Millet nutrition and technology information, Processing machinery and products.
- Sales- grains, suji, flour, ready to cook mixes, traditional snacks, pasta, baked products, millet meal etc.
- Events- Demonstrations, cookery contest, health check-up, diet counseling.



Release of Booklet on Millets by Sri Kanna Lakshminarayana, Hon.Minister of Agriculture and ATM, Govt. of Andhra Pradesh at Inaugural function of Millet Fest – 2012 on 24th March, 2012.

Interaction with Entrepreneurs at Millet Fest 2012, by Sri. Kanna Lakshminarayana, Hon.Minister of Agriculture and ATM, Govt. of Andhra Pradesh during Inaugural function.





World Consumer Rights Day Celebrations on 15th March, 2012



The Department of Resource Management and Consumer Sciences, College of Home Science, Hyderabad organized a one day Seminar on Children as Consumers – Insights And Implications, on the occasion of world consumer right's day on 15th march 2012. About 120 participants attended the programme. The Chief Guest Mr. N. Ganeshan, Consumer Care Center, Hyderabad, delivered keynote address on 'Children as Consumers – insights and implications'. Dr. Anurag Chaturvedi, Associate Dean, who chaired the programme in her presidential address, said that there is always a conflict between producer-parents-children and that all the elements in the society should come onto a common platform about the strategy to benefit producers, parents and children.

Special lectures were given by Mr N Ganeshan Session on 'Impact of Media and Marketing on Children, Swami Bodhamayananda, from Ramakrishna Mutt, Hyderabad spoke on 'Children as Consumers- Changing Values and Resource Consumption Practices' and Mr. Gowri Shankar Rao, legal advisor, CAPCO delivered a lecture on 'Our Money- Our Rights'. Sri V. Madhusudan, OSD, School Education Dept., Govt. of AP was the chief guest for the Valedictory Programme. In his Valedictory keynote address on he spoke on 'Right of Children to Free and Compulsory Education Act'. He explained about the norms to be observed by schools, government, parents etc. Dr. K. Mayuri, Professor and Head, Dept. of HDFS, Chaired the programme Dr T Neeraja, Professor proposed the Vote of Thanks and concluded the event.

ANNOUNCEMENT

TRAINING PROGRAMME FOR SAU FACULTY

Title of 21 Days Training - "Experiential Learning Programme (ELP) In Home Science Under SAU's - Guidelines For Programme Implementation"

From 16th November 2012–to 6th December 2012

Justification of the proposed programme : The credit hours under Experiential Learning Programme (EPL) for Home Science undergraduates has been increased from 10 credits to 20 credits for the batch admitted in 2009-10. The number of working days under this programme will be 180 days. The student has to gain firsthand knowledge in the manufacturing process of different products in each department. They acquire various skills in surveying a market to identify the needs of the target market, develop need based designs for the selected group and process them into products through use of advanced equipment and machinery. In this process they involve in various roles as merchandiser, as quality control inspector besides maintaining the enterprise with a smooth flow of goods from raw material to the final customer. The students after acquiring these skills have the opportunity for self employment in various fields.

Since this being a new concept from ICAR education system, managing ELP units is a challenging task to the faculty involved in offering this programme. They need to be oriented towards successful implementation of this programme.

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Proposed Training Areas Under CAFT - Home Science

- Consumer Product Enhancement through Nanotechnology
- Managerial Issues and Challenges in Adolescence
- ICT for professionalism in Home Science education
- Occupational Health and Safety issues and management in formal and informal sector
- Obesity – a public health disorder – prevention strategies
- Geriatric nutrition, physical and psychosocial challenges

CAFT Home Science Web Portal

CAFT Home Science Web Portal will be placed for access from June 2012 with latest Updates.

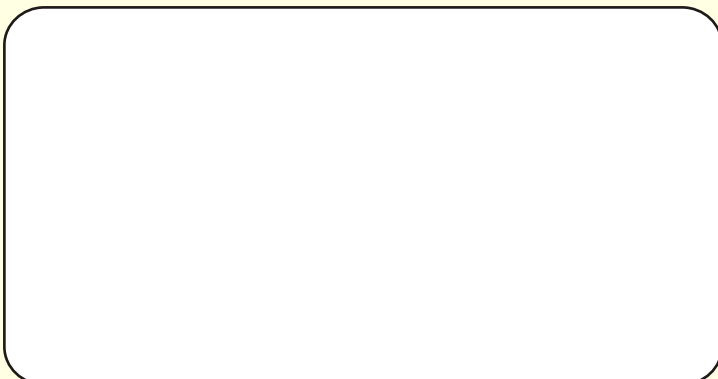
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