

### **Internship Report On**

### Impact of Training Program on Awareness and Practice of Computer Ergonomics among Academic Staff

By

## **East West University**

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Date: 2<sup>nd</sup> August, 2018

Mr. Feihan Ahsan

**BRAC Business School** 

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Subject: Submission of Internship Report

Dear Sir,

It is my great pleasure to submit my internship report on the program "Impact of Training

Program on Awareness and Practice of Computer Ergonomics among Academic Staff"

at East West University. I have put my best effort to make this report effective. This report

also reflects my experience and knowledge that I have gathered while working under the

organization. I am thankful to you for your guidance. I tried to maintain and follow the

guidelines given by you and my organizational supervisor while preparing this report.

It has been a joyful and learning experience to work under this organization and prepare this

report. I express my gratitude for your support.

Thank You.

Sincerely Yours,

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### Acknowledgement

I want to express my appreciation to the Almighty Allah for all HIS blessings. I would also like to thank my family for their support and encouragement through my academic and internship program.

My special thanks goes to my internship supervisor, **Mr. Feihan Ahsan** for his kindness and support throughout the internship program. He gave me all the necessary guidelines which helped me write and improve this report when needed.

I want to thank my organizational supervisor, **Ms. Rubayat Kabir**, the principal researcher and the Senior Lecturer of Department of Social Relations of East West University for giving me the opportunity to be a part of this program and this organization. Her support, guidelines and knowledge throughout this program has helped me immensely. I would also like to like to thank the others researchers involved in this program, **Dr. Marzia Zaman Sultana** and **Dr. Lutfun Nahar** for their kindness and support. With that, I would also like to all the member of my team and other employees of East West University.

### **Executive Summary**

Computer Ergonomics is the practice of setting up the computer and the work space according to the user's comfort and work need. This set up is usually practiced to reduce physical stress on the user. The purpose of this program was to raise awareness about Computer Ergonomics in order to increase the practice of proper computer and workspace usage among academic staff at different universities.

This internship report is based on the program "Impact of Training Program on Awareness and Practice of Computer Ergonomics among Academic Staff" funded by the Center for Research and Training, East West University and conducted by three faculty members of the Department of Social Relations. This program has been supervised by Ms. Rubayat Kabir, the principal researcher of this program. The period of this internship was from March 1, 2018 to May 31, 2018.

I worked as a Trainer of the program. During this time, I was assigned to explain the program and provide first had training to the participating academic staffs. I was also involved with the data collection and data entry of the survey taken during this program. I got the chance to interact with the academic staff of different universities and study more about their work environment. This program has taught me a lot about Computer Ergonomics and most importantly about how research works are conducted.

With my best effort and knowledge, I have tried to present the information in a comprehensive manner.

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# PART 1: ORGANIZATION PROFILE



### 1. EAST WEST UNIVERSITY:

Established in 1996, East West University is one of the most established private universities of Bangladesh. It allows the students to challenge themselves and bring about a change in conventional thinking for the betterment of not only themselves but also the economy. East West University believes in the philosophy "Excellence in Education".

### 1.1. History

Private universities in Bangladesh started to establish around in the early 1990s. At that time, the government felt that the public universities were not enough to meet the demand for tertiary education in Bangladesh. Moreover, most of the existing public universities, in order to maintain the quality of education, were very selective. As a result, each year many students were unsuccessful in getting admitted into the universities. These issues led the government to permit the establishment of private universities and the Private University Act (Act 34) of 1992 was passed. After being given permission by the government under the Private University Act, East West University started in 1996. East West University is the first major project of a non-profit, non-political, charitable organization called the Progoti Foundation for Education and Development (PFED). It is maintained by a group of academics, business leaders, professionals and education enthusiasts led by Dr. Mohammed Farashuddin, economist and former governor of Bangladesh Bank. At its inception, the university started with 6 faculty members and 20 students. Today there are over 216 faculty members and approximately 10400 students enrolled through a process of selection.

Members of the Board of Trustees of the University are: Mr. Jalaluddin Ahmed, Mr. S.M. Nousher Ali, Mr. Farooque B. Chaudhury, Dr. Rafiqul Huda Chaudhury, Mr. Syed Manzur Elahi, Dr. Mohammed Farashuddin, Mr. Mohammed Zahidul Haque R.Ph., Dr. Saidur Rahman Lasker, Dr. Muhammad A. Mannan, Professor M. Mosleh-Uddin, Mr. Shelley A. Mubdi, Mr. M.A. Mumin, Dr. Khalil Rahman, Mr. H.N. Ashequr Rahman and Mrs. Razia Samad.

### 1.2. Structure

East West University has three academic faculties. Each faculty has different departments. A dean is the head of each faculty, while departments are headed by chairpersons. The three founding departments of East West University were The Department of Business Administration, The Department of Computer Science and the Department of English.

### Faculty of Sciences and Engineering

- o Department of Computer Science & Engineering
- o Department of Electrical & Electronic Engineering
- Department of Electronics & Communications Engineering
- Department of Pharmacy
- Department of Applied Statistics
- Department of Genetic Engineering and Biotechnology
- o Department of Civil Engineering

### Faculty of Business and Economics

- o Department of Business Administration
- Department of Economics
- o Department of MBA/EMBA/MBM Programs

### Faculty of Liberal Arts and Social Sciences

- Department of English
- Department of Social Relations
- Department of Sociology
- Department of Law
- o Department of Information Studies & Library Management

### 1.3 Mission and Vision

The principal mission of East West University is to provide tertiary education at a reasonable cost characterized by academic excellence in a range of subjects that are predominantly important to the present and anticipated social needs. The university's mission is also to provide its students with opportunities, resources and knowledge to achieve academic and career goals within an encouraging and supportive environment. East West University is not only determined to uphold high quality in both education and research, it is also executing community service through broadcasting of information, organization of training programs and other activities.

### 2. CENTER FOR RESEARCH AND TRAINING:

Center for Research and Training (CRT) publishes the East West University Journal, a biannual publication of multi-disciplinary research papers following a rigorous process of strict reviews. Center for Research and Training (CRT) also publishes Working Papers, Occasional Papers and Annual Research Abstracts to advertise and record the academic contributions made by the faculty members of East West University. In addition, Center for Research and Training (CRT) works with government and private institutions at national and international levels to aid academic exchanges. The main objective of the center is to create knowledge through academic and applied research and distribute acquired knowledge through training and publication. Center for Research and Training (CRT) operates through a Research Committee comprising of representatives from the Board, Deans and Chairs of the Academic Department.

### 3. DEPARTMENT OF SOCIAL RELATIONS:

The **Department of Social Relations** has been playing an important role at the East West University since its establishment on June 1, 2005. With more than fourteen members of academic staff, it has a strong research base, with interests spanning a wide area of theoretical and applied issues.

The Department is interdisciplinary in nature. The Department plans to offer minor in one or more disciplines in the social sciences and is set to become a full-fledged degree awarding department in the near future. The academic mission of the Department of Social Sciences is to promote a balance of eastern and western values in its courses. The courses are structured in such a way that it provides a solid establishment of social science principles while allowing choice in order to appeal to a wide range of interests.

The Department has a reputation for high quality teaching and personal attention to students. Faculty members in the Department are committed to the interdisciplinary thinking and culture.

The specific objectives of the Department of Social Sciences are to:

- Develop an understanding of the principles that influence human societies
- Help students develop analytical and critical thinking skills
- Guide students in doing social research
- Encourage interdisciplinary and cross-disciplinary forms of education
- Enable students to function in a diverse, global society

The Department of Social Sciences provides an environment that nurtures imagination, individualism and learning. It attempts to promote understanding of the events, ideas, and forces that form the world.

# PART 2: JOB RESPONSIBILITIES

### 1. INTRODUCTION

I was very fortunate to get an opportunity to work in East West University. It is one of the top five private universities in Bangladesh and has been playing a primary role in the tertiary education sector. The duration of my job was from March 1, 2018 to May 31, 2018. This opportunity has provided me with great scope to learn more about conducting research and gain experience which will help me in my future. During this time, I have enjoyed working over there because the environment was very friendly and my colleagues were very cooperative.

Training Program on Awareness and Practice of Computer Ergonomics among Academic Staff". During this period, I was assigned to explain the training program and provide first had training to the participating academic staffs. Apart from these, I was also involved with different activities like data collection and data entry of the survey taken during this program. This training program was carried out in four universities, out of which two were public universities and two were private universities. The public universities were Jagannath University and University of Dhaka and the two private universities were BRAC University and Fareast International University. My job was to provide the training in the two private universities. This gave me a chance to interact with the academic staff of the universities and study more about their work environment as well as learn from them.

### 2. RESPONSIBILITIES OF THE JOB

Before starting this job, I only had a vague knowledge about computer ergonomics. It was a term that I heard before but was not fully aware of as computer ergonomics is not something that is widely practiced in Bangladesh. So to understand the terminologies, the first thing I had to do was to be aware of the terms and study about the training program. My supervisor was very supportive in providing proper references and was very helpful in explaining everything step by step.

### 2.1 Study of the Questionnaire:

After being aware of the terms, the second responsibility I was assigned with was to help the supervisor in preparing the survey questionnaire (see Appendix) that was to be carried out during the training program. This questionnaire play a vital part in the program as it gave an in depth understanding of the participants' awareness and practice of computer ergonomics. After a rough draft of the questionnaire was prepared, I was asked to proof read it and submit my views regarding the questionnaire and suggest changes where necessary.

### 2.2 Self Training:

Before the execution of the main training program, I was asked to self-train. I had to practice the correct postures and exercises that was being provided in the training module, which will be discussed further later in the report. Self-training also included presentation of the training module in a proper manner. After the self-training had been completed over a period of one week, a mock training was run on the academic staffs of East West University. The importance of this mock test was to understand how well I have understood the importance and objective of the research as well as how to provide the main training program.

### 2.3 Field Work:

As per the instruction of my supervisor, out of the two private universities, I had to start the training program (Impact of Training Program on Awareness and Practice of Computer Ergonomics among Academic Staff) at first at BRAC University. My supervisor gave me the option of choosing the department I wanted to begin with. Being a student of BRAC Business School, I decided to approach the academic staff of BRAC Business School. I would like to mention that it was specified to me by my supervisor to carry out the training program on a

one-to-one basis which means I had to interact with each of the faculty members separately. Firstly, I explained the objective and importance of the program and asked for their consent to carry on with the following survey and training. After handing over the questionnaire to the participant, an assessment of the work had to be performed. This assessment included the observation of the following:

- Work Surface
- Chair
- Keyboard/Mouse
- Monitor
- Physical Environment

On completion of the survey and assessment, the main training program had to be carried out where I had to show and explain the participant the following, correct postures and, computer and desk stretches, which is explained elaborately in the project part of the report.

Over a period of one month, the training program was carried out in the following departments:

- BRAC Business School
- BRAC Institute of Language
- Department of Economics and Social Sciences
- Department of Computer Science and Engineering
- Department of Mathematics and Natural Sciences

The academic staff of BRAC University who participated in the training program was insightful and helpful. They were very much interested and helpful all throughout the training program. They provided their expert advice and recommendations on the research.

After the work had been completed in BRAC University, the next private university I had to move to was Fareast International University. Using the same method of approach as BRAC University, I had to conduct the training program in Fareast International University. The departments that were covered in Fareast International University were:

- Faculty of Business Administration
- Faculty of Liberal Arts and Social Science
- Faculty of Engineering
- Faculty of Science
- Faculty of Law

### 2.4 Data Entry and Reporting:

The other job responsibility I had to do other than conducting the training and collecting the data, was to enter the collected data into a spreadsheet and report the immediate progress to my supervisor on a daily basis.

# PART 3: PROJECT "IMPACT OF TRAINING PROGRAM ON AWARENESS AND PRACTICE OF COMPUTER ERGONOMICS AMONG ACADEMIC STAFF"

### 1. OBJECTIVE AND IMPORTANCE OF THE STUDY

Computer Ergonomics is one of those terms that we have probably heard somewhere or read in an article but have not fully acknowledged it. It is because computer ergonomics is something that is not widely practiced in Bangladesh. To begin with, computer ergonomics are work laws that one should implement on themselves and as well as working atmosphere while working on a computer.

One may ask why computer ergonomics is important. If a person spends prolonging hours sitting at a computer every day, they should be aware that sitting at one position for longer period of time can take a toll on their health. Computer ergonomics are set up to control the health issues that might occur due to sitting and working at a computer for a long time. Awareness and practice of computer ergonomics is important for the general health and safety for people who spend long hours sitting behind a computer.

The normal complains that most people have after sitting for long hours at office are most of the time due to an amalgamation of poor posture and poor ergonomics. When performing a task over and over again each day, the body begins to adapt to that nature of work, which begins to create a small amount of strain each time. This strain is usually too small but over time it accumulates to something greater. Health issues that develop over a long period of time usually do not go way easily.

Computer ergonomics work to reduce the following health conditions that can result from working on the computer for a long time:

- Blurred vision/headaches: The computer monitor if not positioned properly or issues with brightness and contrast can cause blurred vision from glaring the screen for a long time. It can also cause headaches.
- Carpal tunnel disease: In this the nerve that runs from the hand to the forearm becomes pinched. This can result in numbness and pain in the arm. Studies shows that one of its main reasons is spending hours typing or using a computer.

- Neck and back strain: Sitting for lengthy period of time can take its toll on the back as well as the neck.
- Posture: Poor posture is caused by sitting at a desk all day, which leads to back pain and slouching.

The main objective of this study is to raise awareness and increase the practice of computer ergonomics so that people acknowledge it and imply them on their daily lives.

### 2. METHODOLOGY

As mentioned before, the overall training program was carried out in four universities, two public and two private. The criteria for choosing the universities were:

- A university which has been established for more than 10 years
- A university which has been established for less than 10 years

Since most of the public universities have been established for way more than 10 years, two reputed universities were chosen at random. The categories for choosing the universities could only be implied on private universities. The public universities were **Jagannath University** and **University of Dhaka**. However I was given the responsibility of conducting the training at the private universities, which were **BRAC University** and **Fareast International University**.





The method of the whole program that I was instructed to follow was:

- One to one approach with the academic staff: I had to interact with each academic staff separately to explain the objective of the project.
- Handing out the survey questionnaire: Every participant was given a questionnaire to fill up for self-assessment and feedback of the training.
- **First hand training:** In this part, a full detailed explanation and demonstration of the training module was given to the participant.
- Handing over posters: A two part poster contains images of the correct postures and stretches.
- Mailing the training module: A soft copy of the training module was mailed to the participants for further understanding.

### 3. TRAINING MODULE

This is detailed training module that was explained and provided during the training program "Impact of Training on Awareness and Practice of Computer Ergonomics Among Academic Staff"

### 3.1 GOOD POSTURE

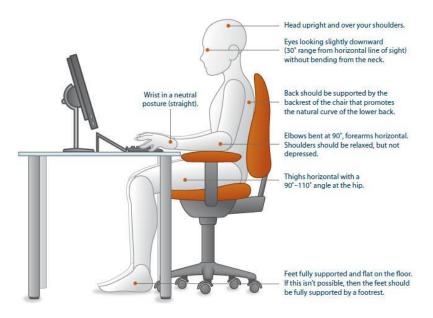


Fig: 3.1

The image (Fig. 3.1) illustrates the proper sitting posture. However, it may differ according to the user's well-being. One must their change your stance frequently by adjusting the setting of the chair and alternating between tasks. This will allow proper blood flow and reduce strain in the body.

### 3.2 THINGS TO MONITOR

Chairs, work surface, accessories, monitor and input devices can help in maintaining good posture but it is also up to the person to learn and practice proper posture.

### i) CHAIR

There are some basic guidelines to look for in a suitable office chair:

- Provides lumbar support.
- Height can be adjusted.
- Width is appropriate for the individual using the chair.
- Backrest is adjustable.
- Seat depth well-fitted or adjustable.
- Adjustable or removable armrests.
- Five-prong base.
- Breathable fabric.
- Well-fitted small, medium or large chair.



Fig: 3.2

<u>Height:</u> While standing, the height of the chair should be so the highest point of the seat is just below the kneecap (Fig: 3.2). This allows the feet to rest firmly on the floor when seated. The objective is to evenly distribute body weight.

**Back support:** When sitting, the height of the backrest should be adjusted so that the lumbar pad (Fig: 3.3) supports the natural curve of the lower back (lumbar curve). The back support should be slightly tilted backward (110 degrees is usually recommended).



Fig: 3.3

<u>Seat tilt:</u> Seat tilt can be adjusted to improve the user's comfort. A tilt of five degrees is usually recommended.

<u>Depth:</u> When sitting, the seat pan (the part where one sits) should allow using the back support without the front of the seat pressing against the back of the knees.

<u>Width:</u> The seat pan should be wide enough so it does not apply pressure to the thighs. On the other hand, the seat should be narrow enough to be able to reach the armrests when properly adjusted.

**Armrests:** Armrests can provide support to the upper part of the forearms, reducing the stress on the shoulders and back. Armrest should be adjusted to elbow height (Fig: 3.4)



Fig: 3.4

### ii) WORK SURFACE

The top of the work surface should be at elbow height. Necessary adjustments can be made by raising or lowering the height of the chair. If necessary, a keyboard tray can be used to bring the keyboard and mouse to elbow height. The keyboard tray should have room for both the keyboard and mouse, and should not compromise legroom. Materials used frequently should be located within easy reach (Fig. 3.5).

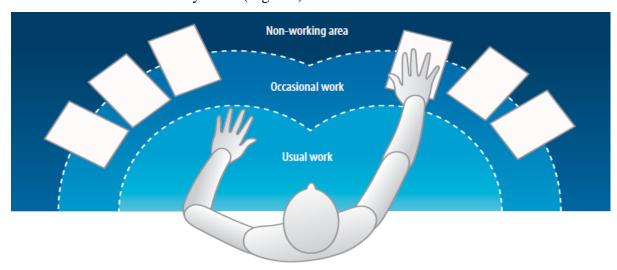


Fig: 3.5

### iii) INPUT DEVICES

When using a keyboard and mouse, the upper arms should be relaxed and elbows bent at a right angle (90 degrees) and the wrists should be straight.

**<u>Keyboard:</u>** The keyboard should lie flat (Fig: 3.6). If a tilting keyboard tray is used, the end of the keyboard should be on the same level as the forearms.

**Mouse:** The mouse should be at the same level as the keyboard and easy to reach. To further reduce the risk, the use of mouse should be limited and the keyboard functions should be used instead.

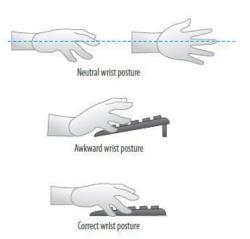


Fig: 3.6

### iv) MONITOR

**<u>Distance:</u>** The distance from the monitor depends on vision, age and the size and resolution of the monitor. It is preferred to have the monitor as far away as possible and increase the size of the font.

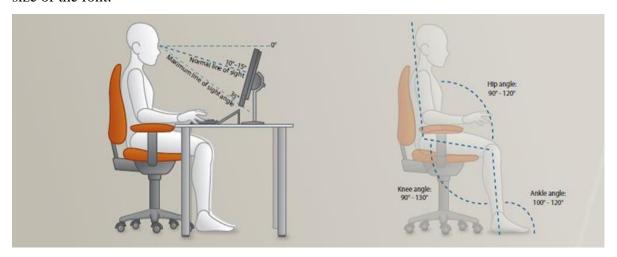


Fig: 3.7

<u>Height and location:</u> The monitor should be placed directly in front with the top of the monitor just below eye level. The monitor should also be tilted 15 degrees for proper accommodation of the eye (Fig: 3.7). If the user wears bifocals, the monitor will need to be even lower.

**Lighting and glare:** To test for glare, the monitor should be turned off. If the screen shows reflections, it has glare. Since this glare is caused by light shining directly onto the screen, the sources should be identified. Regular eye breaks are recommended when using the computer.

### v) OTHER ACCESSORIES

<u>Palm rest/support (wrist rest):</u> Palm rests are designed to elevate the palm to keep the wrists straight. The hands should be over the keys while keyboard work is being performed. This also applies to the mouse and other input devices which have a palm rest.

**Document Ramps:** While typing on the keyboard by looking at a paper, the use of document ramp is highly recommended. When using a document ramp, it should be placed between the keyboard and monitor. This will minimize refocusing when the eyes go from one to the other.

**Phone:** The phone should be kept within easy reach. If it is used while keying or writing, a headset or a speakerphone should be used to avoid awkward positioning of your neck.

### vi) LAPTOP

When possible, a docking station should be used while using a laptop. These allow the laptop to connect a keyboard and mouse basically turning it into a desktop computer. When a docking station cannot be used, a keyboard and mouse can still be connected to the laptop for comfort. Breaks should be taken more often when using a laptop.

### 3.3 COMPUTER AND DESK STRETCHES (SEE APPENDIX)

Sitting at a computer for a long time often cause neck and shoulder problems and, sometimes, lower back pain. To avoid these problems, regular stretches can be performed.

### 4. LIMITATIONS

- Getting appointment with the faculty members was slightly difficult as they are busy throughout the day and have only little time in between their breaks.
- When I first joined, I was hesitant to share my work related problems with my coworkers and supervisor. However, when I gradually opened up, my supervisor helped me a lot and her support throughout the period of work increased my confidence.
- In the beginning, I was not aware of the terminologies of the research as it was something very new to me but due to the articles and books I read, I got a vast insight of it.
- During my field work, some faculty members were reluctant to share information due to which I faced difficulties in finishing the work on time.

### 5. RECOMMENDATIONS

- Such training program would be more helpful if performed in corporate organizations because the use of computers in such organizations is more prominent.
- Along with the research and a one-to-one training program, a seminar about computer ergonomics should be conducted so that a greater number of people are aware and informed about it.

### 6. CONCLUSION

I was privileged to work at one of the most reputed private universities of Bangladesh. It was a completely new environment for me and thoroughly enjoyed my experience. I got the opportunity to learn about research and computer ergonomics. If given a chance, I would like to work on research based programs again. I would like to mention that while conducting my field work, I observed that BRAC University had an ergonomically aware environment. I would like to conclude that ergonomics are important plays a large role in our overall comfort and health wherever we are, and like it is said "Prevention is better than cure".

### **REFERENCES**

- 1. http://www.ewubd.edu/
- 2. https://www.surfnetkids.com/tech/1283/why-computer-ergonomics-are-important/
- 3. https://www.thedailystar.net/lifestyle/spotlight/blame-the-chair-not-the-person-being-pain-the-neck-1520242
- 4. https://www.caymancompass.com/2007/01/18/the-importance-of-computer-ergonomics/
- 5. http://www.ergonomics-info.com/why-is-ergonomics-important.html
- 6. Work Safe, Travail Securitaire, January 2010. Office Ergonomics. Guidelines for preventing Musculoskeletal Injuries.

### **APPENDIX**

### **Survey Questionnaire**

### COMPUTER USE AND GENERAL WORK ENVIRONMENT ASSESSMENT

Pe	rson name: Organization name	:				
	partment: Job Title					
	mail id: Mobile No			Ph. No.		
	ngth of time on present job:Yrs.			e on job:		
	b Shift: $\square$ Fulltime $\square$ Parttime	Len	gui oi um	e on job	113.	
	by you work anywhere else? $\square$ No $\square$ Yes $\rightarrow$ Hours worked	d nor wool		Lleo		
		u per week				
	te of Birth					
	ucation: (last degree) Institution	name:				
	ours worked per week:Hrs					
	ours worked per day behind the computerHrs					
	e Computer desktop in office hours per day					
Us	e Laptop in office hours per day					
	structions			_		
	ease read the statements below and tick the box that best correspondence				ement. Th	nank
yo	u for your willingness to complete the questionnaire and participate	ate in the r	esearch st	udy.		
A	WORK STATION	Always	Often	Sometimes	Seldom	Never
1	I Like working with computers					
2	My desk (table) at work has suitable height being comfortable.					
3	When I use the mouse device, my arm is supported by the					
	table.		78.00		~~~	
4	The chair I use during work supports my lower back.					
5	My keyboard is placed directly in front of me.					
5	The screen is placed directly in front of me.					
7	I have enough space to work at my office.					
3	There are some changes required in my workstation or activities	s to perfor	m my 🗆	Yes → Speci	fy	□ No
	work.	•	_			
9	There have been changes made to my job, workstation or activi	ties to perf	form 🗆	Yes → Speci	fy	□ No
	my work.					
В	BODY POSTURE	Always	Often	Sometimes	Seldom	Never
1	At work I sit for long hours in one position.					
2	For more than two hours per day I sit with lifted shoulders.					
3	During my work I sit in awkward posture.					
4	In work I perform repetitive tasks.					
5	I find my job physically exhausting.					
5	When I key my hand is placed in a straight line with my lower					
_	arm.					
7_	When I work my head is bended.					
3	Head is twisted towards the left or right.					
9	Trunk is twisted towards the left or right.					
~	TOP GOVERNO	4.	0.0	G	G 11	**
C_	JOB CONTROL	Always	Often	Sometimes	Seldom	Never
1_		-				
	I decide how to perform my job task.					
2	I decide how to perform my job task. I participate with others in decision taking.					
	I decide how to perform my job task.  I participate with others in decision taking.  I decide my own task changes.					
2 3 4	I decide how to perform my job task. I participate with others in decision taking. I decide my own task changes. I determine the time & speed of the job tasks.					
4 5	I decide how to perform my job task. I participate with others in decision taking. I decide my own task changes. I determine the time & speed of the job tasks. I solve work problems by myself.					
4 5 5	I decide how to perform my job task.  I participate with others in decision taking.  I decide my own task changes.  I determine the time & speed of the job tasks.  I solve work problems by myself.  My work develops my abilities.					
4 5 5 7	I decide how to perform my job task. I participate with others in decision taking. I decide my own task changes. I determine the time & speed of the job tasks. I solve work problems by myself. My work develops my abilities. In my work I learn new things.					
4 5 5	I decide how to perform my job task.  I participate with others in decision taking.  I decide my own task changes.  I determine the time & speed of the job tasks.  I solve work problems by myself.  My work develops my abilities.  In my work I learn new things.  I have to be creative in my work.					
1 5 5 7	I decide how to perform my job task. I participate with others in decision taking. I decide my own task changes. I determine the time & speed of the job tasks. I solve work problems by myself. My work develops my abilities. In my work I learn new things.					

D	JOB DEMAND	Always	Often	Sometimes	Seldom	Never
1	I work under extensive work pressure.					
2	I find it difficult to finish my tasks on time.					
3	I take extra hours to finish my job tasks.					
4	I don't have enough time to finish my job task.					
5	At work I speed to finish my tasks on time.					
6	I find my work tasks difficult.					
7	I have too many job tasks.					

E	BREAK TIME	Always	Often	Sometimes	Seldom	Never
1	I can plan my work breaks.					
2	I can divide my work time.					
3	I can decide when to take a break.					
4	I alternate my body posture in between tasks.					
5	I alternate in my job task.					
6	I perform job task without computer.					
7	After two hours I take a break for 10 minutes.					
8	I find my work breaks sufficient.					

F	WORK ENVIRONMENT	Always	Often	Sometimes	Seldom	Never
1	I find my work environment good.					
2	The air inside the office is too hot.					
3	The air inside the office is too cold.					
4	There is available fresh air in my work.					
5	My work environment is noisy.					
6	My work place is too bright.					
7	I gaze at the computer screen.					
8	The computer screen reflects the office lights.					

G	SOCIAL SUPPORT	Always	Often	Sometimes	Seldom	Never
1	The work flow goes smoothly.					
2	I can ask and enquire in my work.					
3	My work tasks depend on other colleagues.					
4	My work atmosphere is comfortable.					
5	My colleagues are friendly.					
6	If I made a mistake in my work task I find support from my					
	Supervisors/ Seniors.					
7	If I made a mistake in my work task I find support from my					
	colleagues.					

H	CARRYING					
1	I use my laptop in the workplace.	☐ Always ☐ Often	□ Sometimes	□ Seldom	□ Never	
2	I carry my laptop to the work place.	☐ Yes (If yes, then respon	nd to the	□ No		
		other statements in this section)				
3	I use a laptop bag to carry my laptop.	☐ One sided bag		□ Two side	d bag	
4	I hold/carry my laptop bag.	☐ One sided way ☐ Two sided way				

I would like to	o provide addition	ar miormation.		

### DISCOMFORT SURVEY

A. During the past y regions	ear I had p	ain or complaints f	or at least one we	ek in one	or more of	the following body
Neck	□ No	□ Yes				
Shoulder(s)	□ No	$\square$ Yes $\rightarrow$	If Yes,	□ Left	□ Right	□ Both
Upper Arm	□ No	$\square$ Yes $\rightarrow$	If Yes,	□ Left	□ Right	□ Both
Elbow (s)	□ No	$\square$ Yes $\rightarrow$	If Yes,	□ Left	□ Right	□ Both
Lower Arm	□ No	$\square$ Yes $\rightarrow$	If Yes,	□ Left	□ Right	□ Both
Wrists	□ No	$\square$ Yes $\rightarrow$	If Yes,	□ Left	□ Right	□ Both
Hand	□ No	$\square$ Yes $\rightarrow$	If Yes,	□ Left	□ Right	□ Both
Back	□ No	□ Yes				
Knee	□ No	$\square$ Yes $\rightarrow$	If Yes,	□ Left	□ Right	□ Both
Legs	□ No	$\square$ Yes $\rightarrow$	If Yes,	□ Left	□ Right	□ Both

B.	From here (musculoskeletal extremity) would be used to repr	resei	nt (	neck, should	ler, hand, wrist, arm, elbow,
	and back )	_			
	ing the past year I had pain/complaint/disability in my	W 2 8 8			(If yes, then respond to the
mus	culoskeletal extremity	othe	er s	tatements in	this section)
The	longest period of complaint (in the past year) whereby I could			_Days	
not j	perform my daily activity was			weeks	
Dur	ing the past year I was referred to the physician due to my				s→ The physician. Diagnosis
musculoskeletal extremity pain?				complaint wa	ıs?
Wha	at kind of treatment did you receive (during the past year)	□ F	hy	siotherapy	□ Medication
		<b>□</b> (	Ope	ration	Other
Beca	ause of my extremity complaints (during the past year) I was		No	□ Yes	
abse	ent from work				
Due	to musculoskeletal extremity complaints in the past year my				
activ	vities were hindered				
	- in my work		No	□ Yes	
	- in my leisure time		No	□ Yes	
My	complaints are due to a previous accident.		No	□ Yes	

C. The next questions are related to pain complaints in the neck, shoulder, hand, wrist, elbow and back in the past year								
I feel pain in my musculoskeletal extremity as soon as I finish □ No □ Yes → This pain disappears after □								
work a short rest								
I feel fatigue and exhaustion in my musculoskeletal extremity	□ No □ Yes →	This compla	int disappea	rs 🗆 No				
after a short rest								
I feel stiffness in my finger □ No □ Yes → This stiffness disappears								
after a short rest								
I feel numbness in my fingers $\square$ No $\square$ Yes $\rightarrow$ This numbness continues				s 🗆 No				
after a short rest								
I feel tingling in my fingers	$\square$ No $\square$ Yes $\rightarrow$	res → This tingling continue						
700 SMA HAD DANKE		after work		□ Yes				
I feel weakness in my musculoskeletal extremity	$\square$ No $\square$ Yes $\rightarrow$	This weakne	ess continue	□ No				
		after work		□ Yes				
I suffer from swelling in my hands	$\square$ No $\square$ Yes $\rightarrow$	This swellin	g continue	□ No				
00000		after work	-	□ Yes				
I feel swelling/ stiffness in my musculoskeletal extremity			□ No	□ Yes				
I feel continuous pain in my musculoskeletal extremity			□ No	□ Yes				
I feel a change in the colour, temperature, sweating in my musc	uloskeletal extremi	ty	□ No	□ Yes				
I use mouse pad, file holder, foot supporter to reduce musculos	keletal extremity p	ain	□ No	□ Yes				
I use neck collar or belts or others to reduce musculoskeletal ex	tremity pain		□ No	□ Yes				

D. Medical Support								v
I have previous medical condition for related p	ain.					$\Box$ N	No	□ Yes
I have been diagnosed by a medical doctor wit			muscu	loskeleta	ıl disorders		Vo	□ Yes
(herniated disk, carpal tunnel syndrome, tendo	nitis, etc	.)						
If no, a medical doctor has told me that I am in risk of work-related musculoskeletal disorders								□ Yes
E. Training						500		0.
I am aware of the term computer ergonomics							No	□ Yes
I am interested to receive a training related to p	proper pos	ture	of com	puter use	e (computer	□ N	No	□ Yes
ergonomics).								
Previously, I have received a training related to proper posture of computer use (computer								□ Yes
ergonomics).								
If yes, I have received the training from:								
If yes, the training program has benefitted me.						□ N	No	□ Yes
I think a training program related to proper cor	nputer use	cou	ld be be	eneficial		$\Box$ N	No	□ Yes
F. Exercise	Alway	S	Of	ften	Sometimes	Selo	dom	Never
I perform exercise regularly								
I perform short exercise in between my work.								
I am involved with sport activities	□ No	□ <b>\</b>	Yes →		ng □Football □			
				□Joggii	ng □Volleyball	□Ten	nis ⊐C	Other, please
				specify				
I would like to provide additional informat	ion.							

**ERGONOMIC ASSESSMENT CHECKLIST** (Computer and General Workstation Observation)

Evaluation completed by				Sl. No		
Person name: Organization	name	e:				
Department: Job Title:						
Sex:Male Female						
Is the employee left or right handed? Right handed Left h	nande	d				
Does the employee wear bi/trifocal glasses? Yes No						
Is this a multi-user workstation? Yes No						
is this a mutu-user workstation? res No						
Instructions						
Please check the box that best corresponds to the answer for each qu	estio	n/stat	ements	below. 'Y' represents Yes, 'N'		
represents NO and 'N/A' represents Not Applicable. The comments	box i	is for	writing	further inputs or observation,		
incase if there is any. Kindly respond to all the items.						
CDITEDION	Y	NT	NI/A	COMMENTS		
CRITERION A. WORK HEIGHT AND SURFACE:	Y	N	N/A	COMMENTS		
Is the task performed at the correct type of work station? (Sitting,						
standing or both.)						
Is the work surface						
Big enough to accommodate a monitor, keyboard and						
equipment necessary to perform all tasks.						
<ul> <li>Height can be adjusted according to the user.</li> </ul>						
Can be adapted for right or left-hand use.						
Are contact points from work surface corners and edges padded or minimized?						
Is leg clearance adequate for adopting different postures?						
Is there any frame, cable holder or other fixture encroaching on leg						
room?						
B. CHAIR	Y	N	N/A	Comments		
Is the chair						
<ul><li>Easily adjustable even from a seated position?</li><li>Suited for the tasks?</li></ul>						
Is the range of height adjustment adequate?						
Are other controls conveniently located and easy to use?						
When seated at the workstation with hands on the keyboard can the						
following posture be achieved?						
Shoulders relaxed and symmetrical, head in midline.						
Elbows in vertical alignment with shoulders, slightly away						
from the body and slightly higher than wrists.						
<ul> <li>Wrists in functional position (slightly extended - 10-20</li> </ul>						
degrees).						
Hips slightly higher than knees.						
Thighs not making contact with under-surface of desk.  The first of the first						
• Feet flat on the floor or footrest (not dangling).						
Does the chair have armrests? (If, Yes)  • Is it sufficiently padded?						
Can it move up and down?						
• Can it move side to side?						
Does seat pan width and depth	<del>-</del>	_				
Accommodate the user?						
Adjust horizontally and lock?						
• Can tilt?						
Is the tension of the backrest adjustable?						

Does the chair have a padded seat with rounded front edge?				
Is the chair in good repair?				
C. KEYBOARD/ MOUSE	Y	N	N/A	Comments
Is the keyboard, mouse and input device located in front and close				
to the user?		12000	1252	
Is the height and tilt of the keyboard work surface adjustable?				
Do the wrists rest in a neutral position when keying and when using				
the mouse?				
Is the wrist support (if used)				
Kept in neutral posture?				
◆ Firm but cushioned?				
Is the mouse kept on the same surface, height and distance as the				
keyboard?				
When using mouse can the following posture be achieved?				
<ul> <li>Shoulder relaxed.</li> </ul>				
<ul> <li>Elbow close to side of body.</li> </ul>				
<ul> <li>Forearm supported on desktop.</li> </ul>				
<ul> <li>Wrist still-not moving from side to side.</li> </ul>				
Middle finger maintained in straight line with forearm.				
Circular, smooth, whole arm movements.				
Does keying require minimal force?				
P. MONTES				
D. MONITOR	Y	N	N/A	Comments
Is the monitor placed directly in front and approximately arms				
reach away?				
Is the top line of the screen kept slightly below eye level with head				
and neck upright?	_			
Can the monitor be adjusted in  • Angling backwards/forwards?			_	
<ul><li>Angling backwards/forwards?</li><li>Viewing distance?</li></ul>				
Brightness and contrast controls?				
Is the screen				
Clean and free of flickering?				
Free from glare or reflections from light sources?				
Is laptop stand and external keyboard/ mouse used when using a	_			
laptop computer for prolonged period of time?				
Can a user who wears bifocal or trifocal (progressive) lenses read				
the screen without bending the neck more than 20 degrees forward?				
Is the monitor large enough to read text easily?				
E. PHYSICAL ENVIRONMENT:	Y	N	N/A	Comments
Is there sufficient lighting without causing glare?				Comments
Does the user have control over lighting at workstation?			_	
Are noise levels conducive to concentration				
Is there visible dust/dirt on work surfaces, keyboards and monitor?				
Is the user comfortable with the room temperature and air flow?				
Is there any trip hazards e.g. cabling, mats, poor housekeeping?				
Is the electrical cabling loomed neatly around work area to avoid				
unwanted contact?	_	_		
Do you have any additional observation?				

### PRE-TRAINING SURVEY

There are few statements regarding the knowledge and practice of computer ergonomics. Please respond with a tick mark either in Yes or No category.

	Computer Workstation Awareness	I Know	I Practice
1	I am aware of the proper height adjustment of a computer workstation chair.	$\square$ No $\square$ Yes $\rightarrow$	□ Yes □No
2	I am aware of the proper back support of a computer workstation chair.	$\square$ No $\square$ Yes $\rightarrow$	$\square$ Yes $\square$ No
3	I am aware of the proper seat tilt, depth and with pan of a computer workstation chair.	$\square$ No $\square$ Yes $\rightarrow$	$\square$ Yes $\square$ No
4	I am aware of the proper arm rest position of a computer workstation chair.	$\square$ No $\square$ Yes $\rightarrow$	$\square$ Yes $\square$ No
5	I am aware of the proper position in which keyboard and mouse should be kept.	$\square$ No $\square$ Yes $\rightarrow$	$\square$ Yes $\square$ No
6	I am aware of the proper distance, height and location at which the monitor should be	$\square$ No $\square$ Yes $\rightarrow$	□ Yes □No
	kept.		
7	I am aware of the proper angle at which a monitor should be.	$\square$ No $\square$ Yes $\rightarrow$	□ Yes □No
	Others		
8	I am aware of when to take rest breaks while using computer.	$\square$ No $\square$ Yes $\rightarrow$	□ Yes □No
9.	I am aware of the stretches to perform while using computer.	$\square$ No $\square$ Yes $\rightarrow$	□ Yes □No

I would like to provide other additional information.	
<u> </u>	

### POST-TRAINING FEEDBACK

There are few statements regarding the computer ergonomics training given. Please respond with a tick mark either in one of the most suitable category for you.

		Excellent	Good	Average	Fair	Poor
1	How was the training program?					
2	How did the trainers explain about the proper body					
	postures?					
3	How did the trainers demonstrate the proper body postures?					
4	Did the trainers demonstrate and explained the stretches properly?					
5	How much would you rate the whole training process?					
6	How much would you rate the training materials given to					
	you?					
7	How much would you rate the trainer?					
8	How much would you rate the whole research?					
9	Would you like to recommend others for the training			□ No		
	program?					

Would you like to provide any other additional information?	

### **Posters**

### **Proper Postures**



### **Computer and Desk Stretches**

### **COMPUTER AND DESK STRETCHES**

(Approximately four minutes)

Sitting at a computer for long periods often causes neck and shoulder stiffness and, occasionally, lower back pain. Do these stretches every hour or so throughout the day, or whenever you feel stiff. Photocopy this and keep it in a drawer.

Also, be sure to get up and walk around the office whenever you think of it. You'll feel better!

