Ergonomic Workplaces for Persons with Disabilities

Lecture: Marek Szajczyk
Structure

1. Work Places
2. Description of Process
3. Facilities
4. Influences on Work Efficiency
   4.1 Stress Influence
   4.2 Noise Influence
5. Adaptation
Work Places

Bakery
Work Places

Cafeteria
Work Places

Supermarket
Work Places

Hotel
Work Places

Call Center
Description of Processes
Description of Process

- desk
- sit down
- boot up the computer
- put on the headset
- incoming call
- greeting
- reason for calling
- give information
- farewell
Facilities
Facilities

Ergo Work
Facilities

• keyboard
• headset
• chair
• desk
• telephone
• computer
Influences on Work

• Efficiency depends on many factors

(e.g. attitude, interpersonal relationships, working tools, workplace, external circumstances)
Stress Influence

- 0 – 40%: unfitting lighting
- 40 – 70%: high workload, bad teamwork, overtime, disharmony, business meetings, noises of all kinds
- 70 – 100%: overtaxing, mental underload, rivalry between colleagues

Ergo Work
Noise Influence

talks from the colleagues, uncontrolled tics of colleagues
walks of the others, unpleasant noises of colleagues, distracting noises
incoming calls from the others
telephone rings
PC sounds
Adaptation
Adaptation

*Person*: blind, one handed

*En route to desk - inclusive design*

- tactile carpet
- automatic doors
- Braille signs for orientation attached on the handrails
- tactile buttons and level announcement
Adaptation

*working tools for a blinds and one-handed persons*

- reading device for blind signs
- additional functions, e.g. speech-functions
- Braille printer with dual function
- Braille keyboard
Adaptation

*Working tools for a blind, one-handed person*

- headset (voice-operated)
- reading device for blind signs
- reading program
- voice-operated command and control system
- ergonomic chairs, different sizes
- regulate the high of a table
- regulating the monitor
# Adaptation

## Environmental factors and improvements

<table>
<thead>
<tr>
<th>noise:</th>
<th>temperature:</th>
</tr>
</thead>
<tbody>
<tr>
<td>dividing wall, small rooms with less chairs</td>
<td>air conditioning system</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>stress:</th>
<th>physical stressors:</th>
</tr>
</thead>
<tbody>
<tr>
<td>regularly breaks, group gymnastics, flexible work time</td>
<td>e.g. headache -&gt; regularly change between the telephone and the headset</td>
</tr>
</tbody>
</table>
„Improvement Example“

“At this time, we’d like to remind you to eat and drink at regular intervals. Thank you for continuing to hold.”
Sources

• http://www.rezentdienstleistungen.de/images/2012/11/regalservice-supermarkt-handel.jpg
• http://img.webme.com/pic/s/stolmich/hpim0810.jpg, 04.05.2015
• http://www.planet-wissen.de/bilder/mediendb/planetwissen/bilder/alltag_gesundheit/behinderung/blinde/portraet_blinde_markt.jpg, 04.05.2015
• http://www.absv.de/sites/default/files/downloads/fotos/Handlauf_DBSV-Friese.JPG, 04.05.2015
• http://www.headsets.com/images/hds2/products/vxi/800/891.jpg, 06.05.2015
• http://epaper.timesofindia.com/Repository/getimage.dll?path=MMIR/2007/05/15/6/Img/Pc0060400.jpg, 05.05.2015
• http://www.google.de/url?source=imglanding&ct=img&q=http://agiltools.com/Applications/Call-Center.jpg&sa=X&ei=chRKVa3PI8O2wF9gNAMK&ved=0CAkQ8wc4EA&usg=AFQiCNHXI0ea1gBxH_AftMrTfULZ8j-9Zg, 06.05.2015
• http://www.hygienetechniker.eu/images/ingohand1.jpg
• http://www.absv.de/sites/default/files/downloads/fotos/Handlauf_DBSV-Friese.JPG, 04.05.2015
• http://hawato.de/bilder/produkte/gross/Topfhandschuh-beschichtet-2-Stk.jpg
• http://www.gastrotrend.sk/images/vyrobky/teple-vitriny/sampult_DSCF0012_velky.jpg
• http://i.ebayimg.com/00/s/MTAyNFgxMDI0/z/lxUAAOSw34FVcsea/$_20.JPG
• http://aktuell.ruhr-uni-bochum.de/mam/images/2012/fittosize_440_0_dad7b91c27d8eb531a686690ce9435f2_mensa-0049.jpg
• http://www.essideen.net/images/grosskueche-1.jpg
• http://www.kueche-co.de/pic/141F6010D76_620x388.jpg

Ergo Work
Thank you for your attention!

"Not everyone who loses sight loses vision to become a productive and employable member of society."