Assistive technologies

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Overview

- Introduction – baby boomers
- Facts about dementia
- Neuropsychology in 2 minutes flat !?
- Cognitive prosthetics
Introduction – baby boomers
Aging Workforce: Asset, Liability or Succession Opportunity?
July 12, 2007

Manpower suggests that using specialized retention and recruiting strategies will allow you to target the single largest available workforce segment—those over age 50. If you are looking for people to staff your business and you are ignoring the 50+-worker you could be in for a tough ride.

Training programs—Mature workers are lifelong learners, and programs that build skills and increase employment opportunities will positively impact employee engagement.

Flexible scheduling options—Studies confirm that non-traditional schedules are one of the top priorities for older workers. Policies that offer part-time, flexible, job sharing, project work or generous time-off plans allow those in their retirement years to have ample time for work and personal pursuits.

Job redesigns—While mature employees want to work, many would elect to bring value to an organization in a different capacity. Whether it’s less travel, fewer responsibilities or a decrease in physical demands, consider job accommodations in order to retain the institutional knowledge and skills of the most experienced employees.

Targeted recruiting strategies—As with any hiring plan, employers should consider how to reach people in the demographics that meet their needs, and older workers are no exception. Look to professional organizations, company-sponsored alumni groups and online communities for possible candidates. Via Aging Workforce

I would want to see what I could do to take advantage of this large labor pool before their Business Dreams and Retirement Collide.

What do you think? Are you now or will you use any of these strategies?


Baby Boomer Retirement Trend - Entrepreneur 2.0?
July 5, 2007

If you are 50+ and born between 1945-1964 and an active entrepreneur you are being called an Entre-Boomer and in a piece titled Going Your Own Way Entre-Boomers are discovering the world of entrepreneurship just as they are about to enter their retirement years.
Who is going to look after us all?

- Year 2000 Ratio of nice young person:older person 4:1

- 2050 Ratio of nice young person:older person 1.5:1
What people want (want they really, really want) (i) the economist

Cost of care at home

Cost of care at institution
What people want (want they really, really want) (ii) the older person

Cost of care at home
Quality of life at home

Cost of care at institution
Quality of life at institution

Assistive technology has a role to play...
Unobtrusive

Easily installed

Cheap

Continuous

Few false alarms

Secure

Easy to use

Configurable by carer

Easy to maintain

Private

Controllable

The ideal technological solution……
700,000 people with dementia in the UK
There will be over a million people with dementia by 2025
The proportion doubles for every 5 year age group. One third of people over 95 have dementia
£60,000 / person / year directly attributable to dementia (delaying the onset by 5 years → reduce by £30,000 a year)
Facts about dementia

- The financial cost of dementia to the UK is over £17 billion a year.
- Family carers of people with dementia save the UK over £6 billion a year.
- Two thirds of people with dementia live in the community while one third live in a care home.
- 5 million people US have Alzheimer’s disease.
Six essential “cognitive” capabilities

- Language
- Memory
- Spatial awareness
- Execute movement
- Planning and problem solving
- Behaviour and judgement

......if healthy then the person is not dementing
Six essential “cognitive” capabilities

- Language “Mum can rarely finish a sentence”
- Memory
- Spatial awareness
- Execute movement
- Planning and problem solving
- Behaviour and judgement
Six essential “cognitive” capabilities

- Language
- Memory “Billy repeats himself dozens of times”
- Spatial awareness
- Execute movement
- Planning and problem solving
- Behaviour and judgement
Six essential “cognitive” capabilities

- Language
- Memory
- Spatial awareness “Whenever she goes to set the table she just stares at the placemat”
- Execute movement
- Planning and problem solving
- Behaviour and judgement
Six essential “cognitive” capabilities

- Language
- Memory
- Spatial awareness
- Execute movement “Dad doesn’t seem to be able to do up his buttons”
- Planning and problem solving
- Behaviour and judgement
Six essential “cognitive” capabilities

- Language
- Memory
- Spatial awareness
- Execute movement
- Planning and problem solving
  “Any little distraction at work, and he is completely thrown”
- Behaviour and judgement
Six essential “cognitive” capabilities

- Language
- Memory
- Spatial awareness
- Execute movement
- Planning and problem solving
- Behaviour and judgement

“Mum’s safety behind the wheel is a worry”
The ideal technological solution......
Cognitive Prosthetics ~ a form of assistive technology

_Cognition_ - The mental process of knowing, thinking, learning and judging

_Prosthesis_ – An artificial substitute for a missing body part, such as an arm or leg, eye or tooth, used for functional or cosmetic reasons or both
Case Study 1

- Cell (mobile) phone video streaming in Alzheimer’s disease
- 2006-2010
- Support memory, maintain independence
Proposed technology

e.g. video prompt to take tablets or video messages such as: “Lunch in the microwave hit <start> twice”, “Collect Joe from school”.

Development of functionality via creation of web based arrays and phone modification.

Approximately 6-12 key target activities Will be identified from interview with Patient and carer and from initial Enrolment scales.

ABA experimental design
Carer-Patient Workflow

Carer
- Login
  - Main Menu
    - Record video
    - Main Menu
      - Schedule a reminder
  - Main Menu
- Compliance details
  - Display compliance information

CSD / CMD
- Forward login details
  - Login details authenticated
  - Upload newly recorded video
    - Acknowledge receipt of video
  - Upload schedule details
    - Acknowledge receipt of schedule

Server
- Query server for new video
  - Return video files
  - Query server for new schedule
  - Return Schedule

PMD
- Display Reminder
  - Acknowledge reminder
  - Ignore reminder
- Forward Patient Replay

Patient
- Request compliance information
  - Provide compliance information
Cell (mobile) phone video streaming in Alzheimer’s disease - Login
Cell (mobile) phone video streaming in Alzheimer’s disease – Create reminder
Please get ready to set the time at which the Video Reminder should be sent.
Cell (mobile) phone video streaming in Alzheimer’s disease – Schedule reminder

Please choose the day on which the reminder should be sent

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STEP 4 OF 8

MAIN MENU
Choose which hour of the day should the reminder be sent?

1 O'CLOCK  2 O'CLOCK  3 O'CLOCK  4 O'CLOCK  5 O'CLOCK  6 O'CLOCK
7 O'CLOCK  8 O'CLOCK  9 O'CLOCK  10 O'CLOCK  11 O'CLOCK  12 O'CLOCK

STEP 5 OF 8
Choose which minute of the hour?

0  15  30  45

TIME: 11:??

STEP 6 OF 8
Cell (mobile) phone video streaming in Alzheimer’s disease – Confirm reminder

REMINDER PLANNED FOR TUESDAY AT 10:30 PM

CONFIRM  CHANGE
Cell (mobile) phone video streaming in Alzheimer’s disease – Mobile device
Thank you for your attention!