

Role of the Science Centers and Innovative Technologies in Influential Education

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- ▶ Education in the early childhood.
- ▶ Suggestions for increasing the standards of education and the education management system.
- ▶ Contribution of Science Centers to the education system.
- ▶ Innovative ideas convenient for the Science Centers:
 - ▶ NeuroSky
 - ▶ Augmented Reality

Early childhood education ?

- ▶ Studies carried out has shown that, for the child education, influential and innovative methods should be used in order to attain a better quality of learning.
- ▶ Better to: **'Cast them roles in the information'**

Effective Learning Methods

After 2 Weeks We tend to remember			Nature of Involvement
%90	Acting	Action	Active
	Simulating a real Experience		
	Making dramatized presentation		
%70	Making Lecture	Action	Active
	Taking part in a discussion		
%50	Watching something that is happening	Observation	Passive
	Observing a demonstration		
	Watching movie		
%30	Looking at pictures	Explanation	Passive
%20	Listening		
%10	Reading		

Training Techniques

- ▶ Action Plans
- ▶ Demonstrations
- ▶ Simulation
- ▶ Working groups
- ▶ Role play
- ▶ Case study
- ▶ Exercises
- ▶ Discussion
- ▶ Brainstorming
- ▶ Lecture

SIMULATION

▶ SPECIFICATIONS

- ▶ Clear goals – clear instructions
- ▶ Specific work observation
- ▶ Specified duration
- ▶ Sufficient time for comments – conclusions and for connection with the initial goals of observation

▶ ADVANTAGES

- ▶ Development of critical thinking
- ▶ Reconsideration of assumptions – experiential practice
- ▶ Communicative learning

DEMONSTRATION

▶ **SPECIFICATIONS**

- ▶ Activation of all trainees
- ▶ Adequate supportive material
- ▶ Suitable space and time for trainees' practice

▶ **ADVANTAGES**

- ▶ Activation of trainees
- ▶ Practice

CASE STUDY

▶ **SPECIFICATIONS**

- ▶ Real scenario that serves the training goals
- ▶ Difficulty level
- ▶ Variety of solutions – further processing

▶ **ADVANTAGES**

- ▶ Effective communication
- ▶ Development of critical ability
- ▶ Practice in finding solutions
- ▶ Real scenarios – practice
- ▶ Expert knowledge on the subject

TRAINING FACILITIES

- ▶ Sounds
- ▶ Multimedia objects
- ▶ Photos
- ▶ Diagrams
- ▶ Exercises
- ▶ E-learning tools
- ▶ Videos
- ▶ Simulation models
- ▶ And Innovative technological alternatives

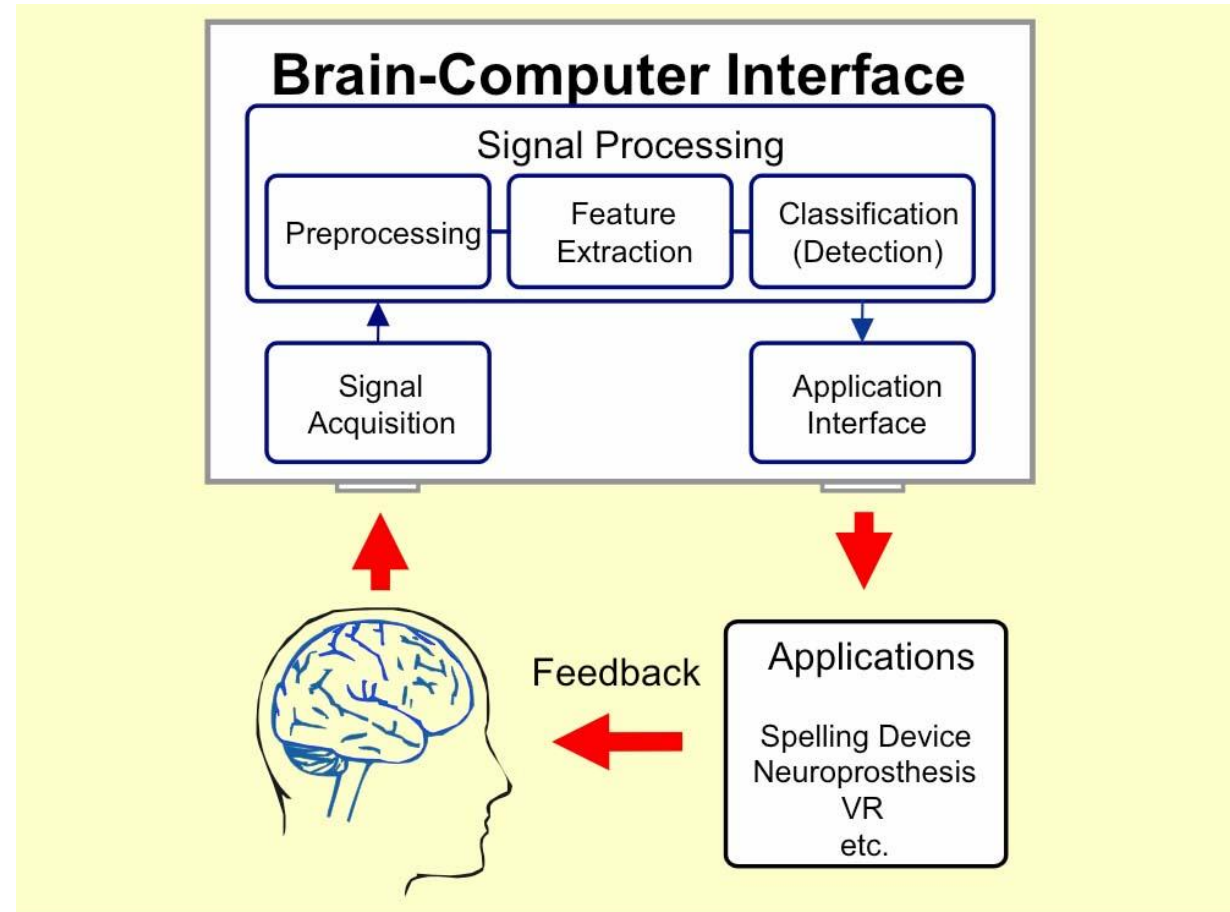
Innovative & Effective Training Solutions for Science Centers

Controlling things with Brain Waves

BRAIN-COMPUTER INTERFACE (BCI) IS A KIND OF A COMMUNICATION SYSTEM.

IN THIS SYSTEM, MESSAGES AND COMMANDS OF THE INDIVIDUAL ARE NOT BEING TRANSMITTED BY THE NERVES AND MUSCLES AS USUAL; RATHER, THE ACTIVITY OF THE BRAIN IS SENSED AND INTERPRETED BY THE BCI.

Brain waves create low-level electric signals which can be measured through the cranium.



Brain Waves

- ▶ **Delta (δ) Waves**
- ▶ **Tetha (θ) Waves**
- ▶ **Alpha (α) Waves**
- ▶ **Beta (β) Waves**

- ▶ Some systems follow the spectrums of brain signals.
- ▶ They create attention and meditation information through these spectrums

NeuroSky

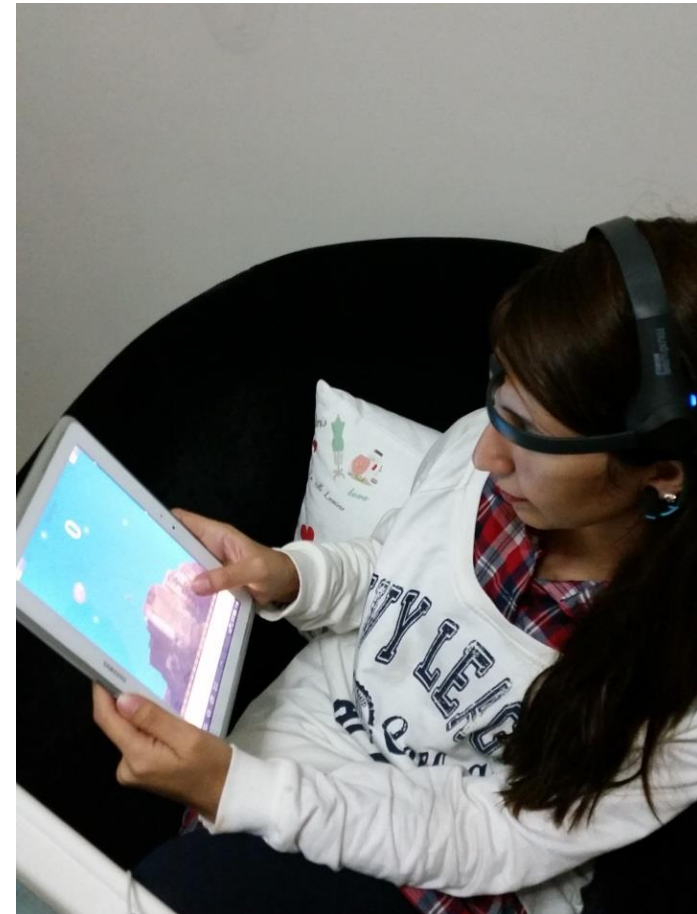
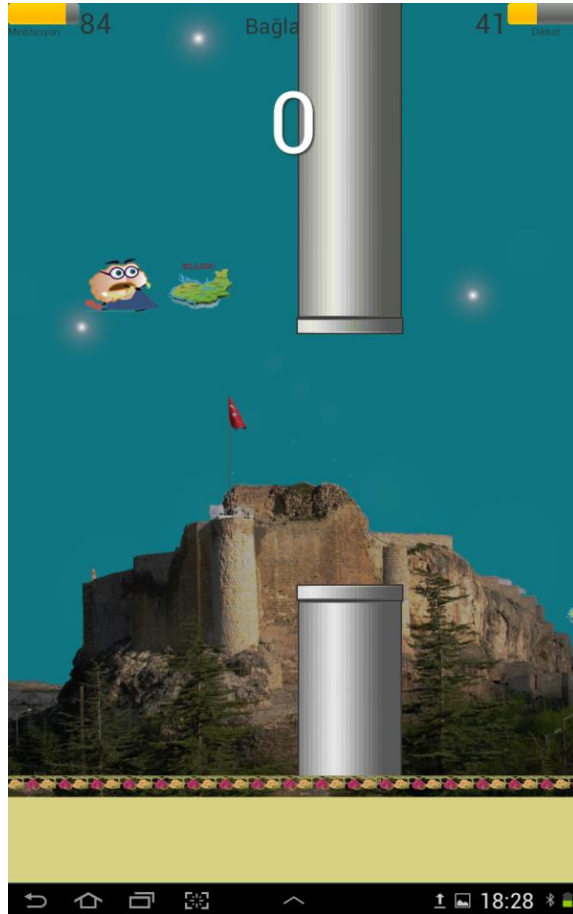
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- ▶ **Creates condensing information based on attention and meditation.
Catches the motion of eye-blinking.**

Practical Session

- ▶ Up-cake Application controlled by NeuroSky.

My Mind is in Harput



Just Imagine !
Physical objects, just
controlled by Brain waves





Augmented Reality Applications

AUGMENTED REALITY IS A TECHNOLOGY WHICH IS QUITE POPULAR IN THE RECENT YEARS.

Augmented Reality Applications

- ▶ The best definition would be, “putting a virtual display on a real image”
- ▶ Augmented reality is basically a snapshot of the real environment with virtual environment applications that are brought together.
- ▶ Basically it can be operated on every device which has a camera display and operation system.

Where can we use AR projects?

- ▶ Education
- ▶ Security
- ▶ Health
- ▶ Social Media

Boosting the Learning Efficiency with Augmented Reality

Interactive Walls

Universe
in your hands

The Spider (Spy-Dee)

Augmented Reality in the books

Dino Application

Dancing Buddy

A Chinese Proverb

- ▶ Tell me and I forget.
- ▶ Show me and I remember.
- ▶ Involve me and I'll understand.
- ▶ Step back and I will act.

Thank you Questions?

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