



# **IAEA International Conference on Human Resource Development for Introducing and Expanding Nuclear Power Programmes**

## **Knowledge Transfer Methods: A Research Result at the Argentinean National Atomic Energy Commission (CNEA)**

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# Argentinean Nuclear Sector



Argentina



Abu Dhabi, 14-18 March 2010



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# Argentinean Nuclear Sector

**Clarín**

**Enciclopedia Universal Clarín**

Cada vez la gente toma más vitaminas y ya hay polémica.

A todo o nada, por la final de la Copa Sudamericana, River enfrenta al Cienciano en Perú.

Lo ahorré fue...

**LA NACION**

Buscan aumentar el uso de la energía nuclear en el país

El Gobierno invertirá de \$ 1800 millones para concluir las obras de la central Atucha II, que lleva 25 años en obra; iniciará además los estudios para la construcción de una cuarta usina atómica

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**ECONOMIA: EL PLAN DE REACTIVACION INCLUYE LA PRODUCCION DE URANIO ENRIQUECIDO**

Néstor Kirchner y los ministros Jorge Taiana y Nilda Garré, entre otros, intercambian saludos al finalizar la presentación.

**DEBATE**

Argentina quedo primera en su grupo

**PSICOLOGIA**

Escritor: Federico Pavlovsky y Hector Loberola

As a consequence of the Nuclear Plan launched in 2006, the Argentinean Nuclear Area is facing the challenge of meeting manpower demand to maintain their nuclear capabilities as well as the growing number of staff required for the operation of the projected nuclear facilities in the coming years

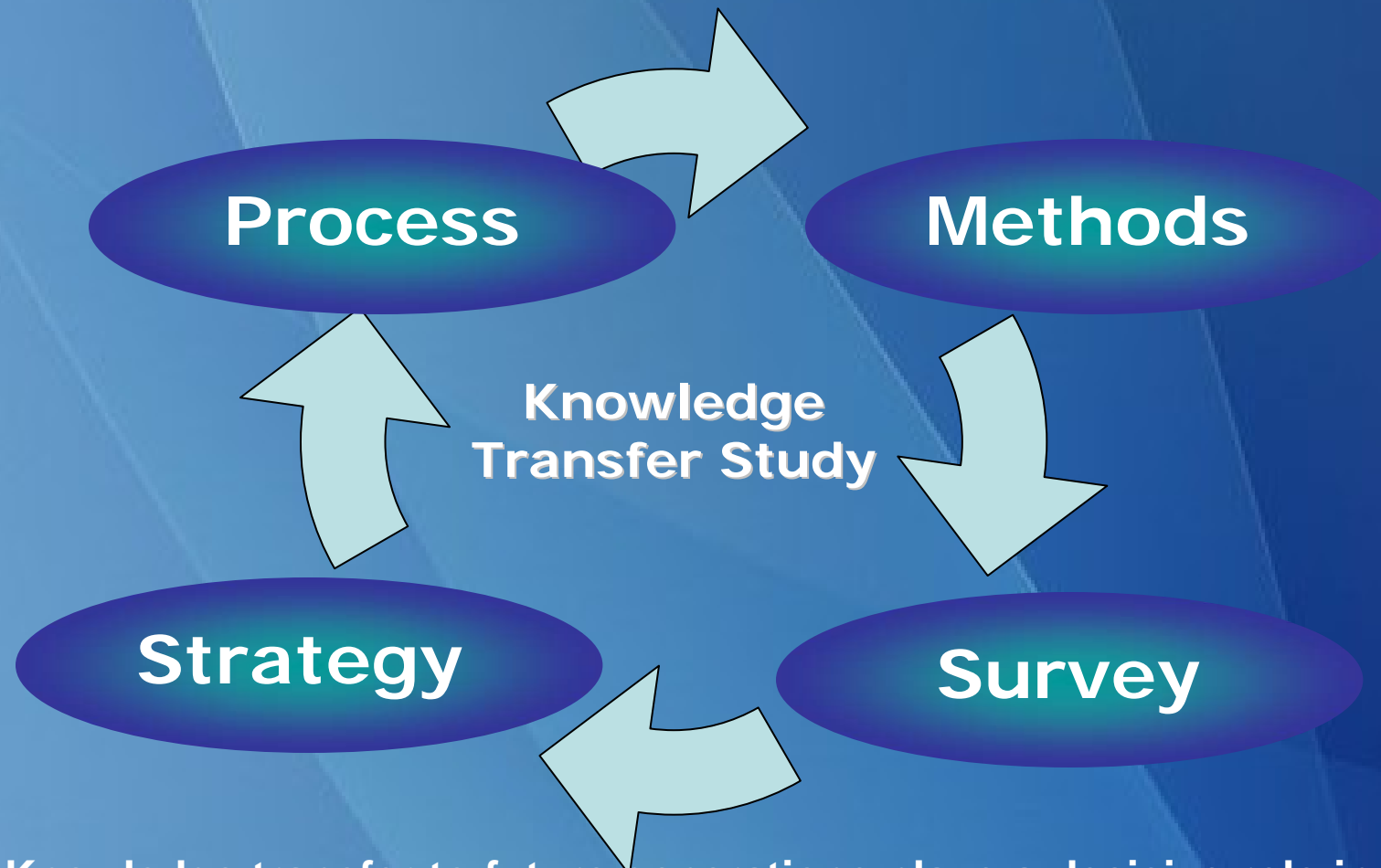
Argentina



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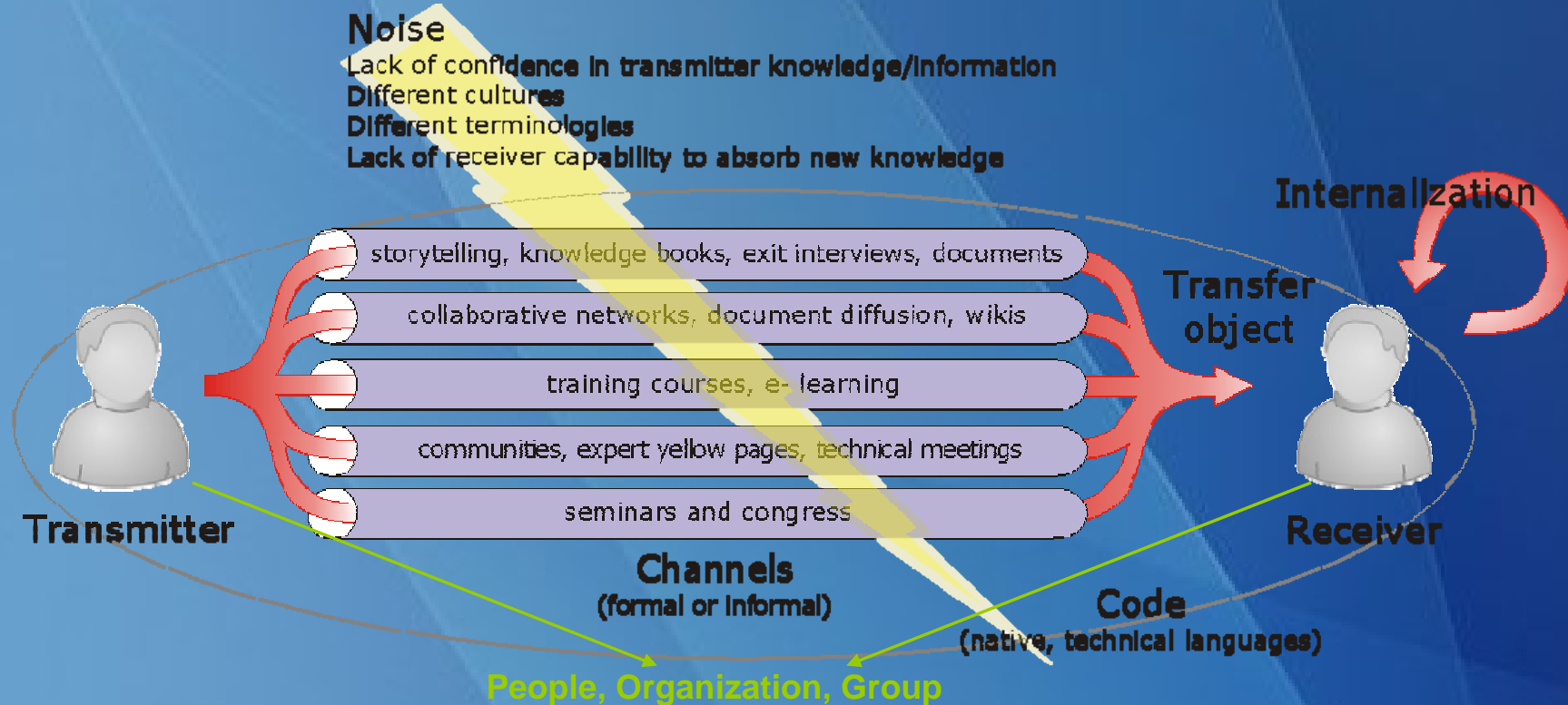


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Knowledge transfer to future generations plays a decisive role in nuclear knowledge development and maintenance, CNEA through its Nuclear Knowledge Group has carried out a study on knowledge transfer methods with the aim of set strategies and methodologies that ensure an effective transfer.

# Knowledge Transfer Process



The transmitter transfers the scientific or technological knowledge to the receiver. The channel involves the applied methodology and the tools that facilitate the process. The transfer code is shared by both agents in order to make knowledge transfer possible. The whole process can be affected by noise which is all the circumstances that turn knowledge transfer into a difficult process. The transfer ends with the internalization that takes place at the receiver where the knowledge is assimilated to be put into practice.

**TRANSFER = TRANSMISSION + INTERNALIZATION**

# Knowledge Transfer Methods



On-the-job training - which involves the concept of "learning by doing"- is definitely the best technique for transferring knowledge and training people.

# Knowledge Transfer Methods



Then it is possible to consider several methods to transfer knowledge which could be useful for training a large number of people. These methods may be formal or informal, direct or indirect and with some kind of IT component.

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# Survey

**ENCUESTA SOBRE TRANSFERENCIA DE CONOCIMIENTO**  
**Profesionales y Técnicos**

Por favor, antes de realizar la encuesta, complete los datos del siguiente cuadro.  
 Marque por su colaboración.

**109**

**CNEA**

**ENCUESTA SOBRE TRANSFERENCIA DE CONOCIMIENTO**  
**Estudiantes y Profesionales de Ingeniería**

Por favor, antes de realizar la encuesta, complete los datos del siguiente cuadro.  
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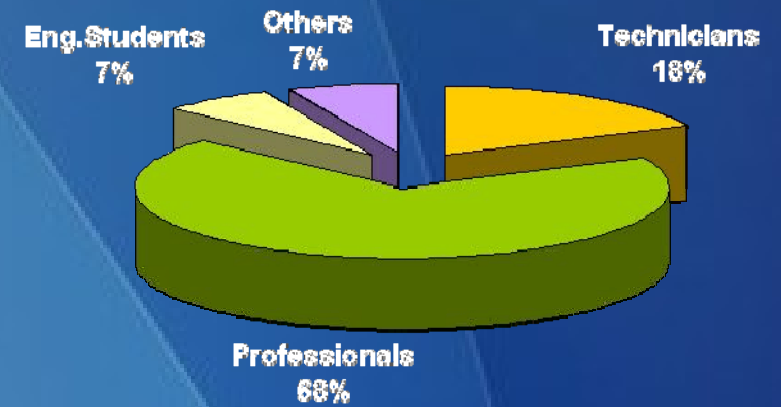
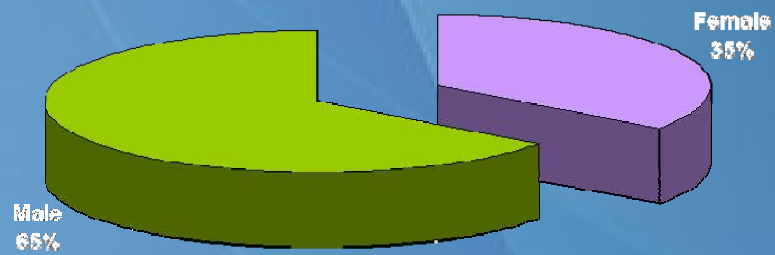
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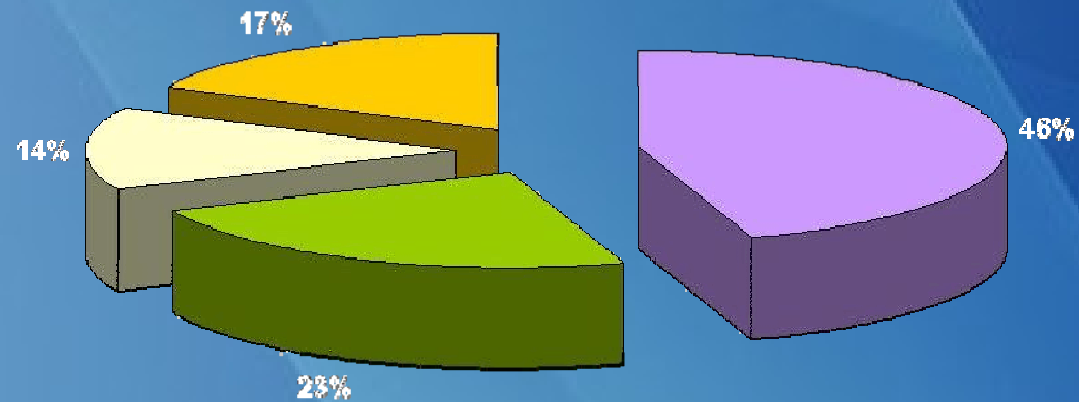
CNEA Nuclear Knowledge Group carried out a survey, on a population of professionals and technicians of various specialties working at CNEA , to investigate the preferences and experiences at the time of learning.

The study was extended to students and young professionals graduated in engineering studies from non -nuclear universities, since those are the ones who constitute an important workforce to operate the NPP.

# Survey

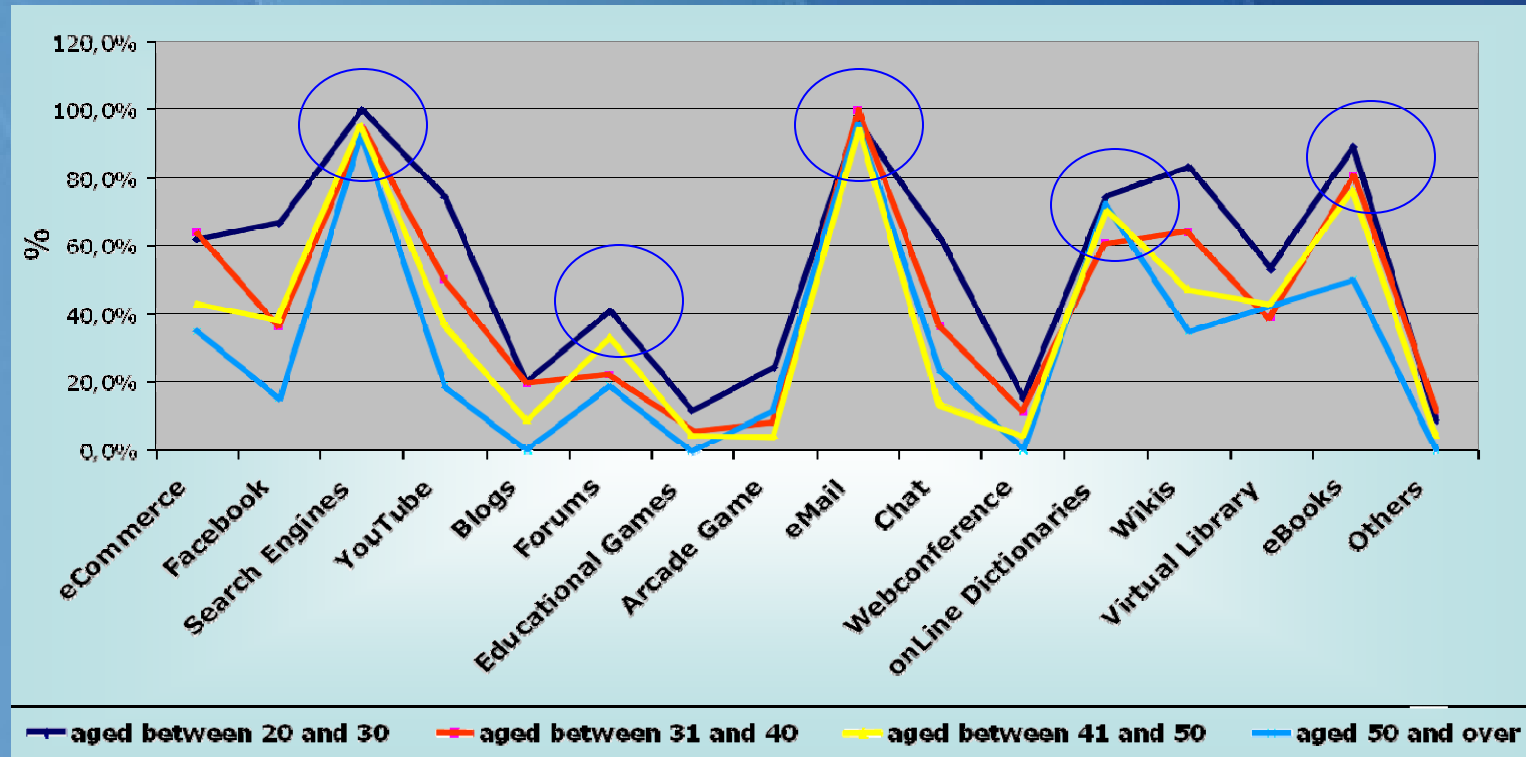


149  
Population



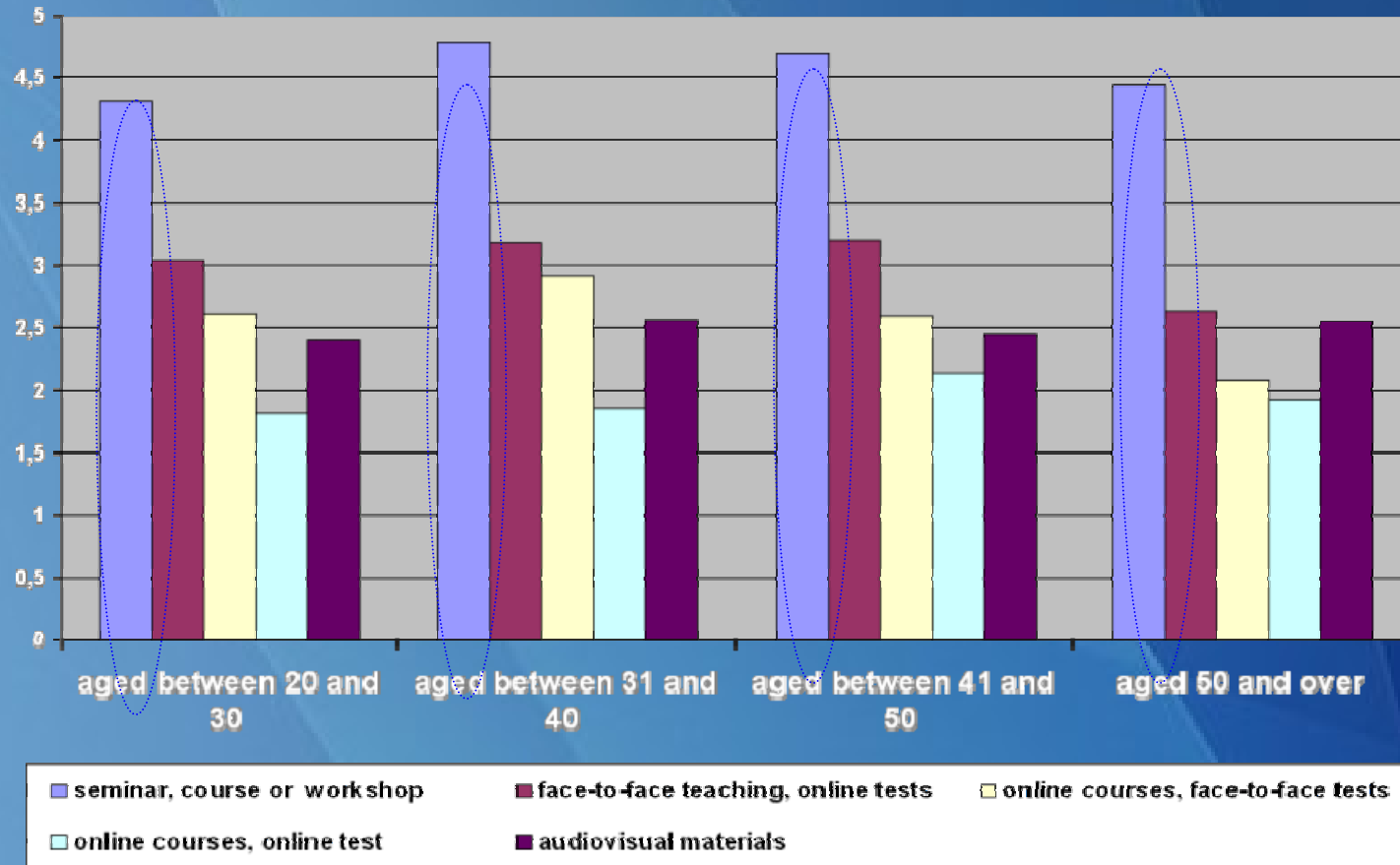
■ aged between 20 and 30 
 ■ aged between 31 and 40 
 ■ aged between 41 and 50 
 ■ aged 50 and over

# Survey



The findings related to the use of different ICT (Information and Communication Technology) elements , tools and applications are categorized according to the age groups. The results definitely show a massive use of search engines and emails, then, the wikis, the online dictionaries, the eBooks and the virtual library are the next favorite tools.

# Survey



People were asked to rank different training methods in order of preference. The methods considered are those with only face-to-face knowledge transfer to those with some digital component. Although only the 21 % of the total population has taken an e-learning course at least once before, they have obtained good results with this method.

# Survey

Certainly, the face to face transfer methods are the better ones. However, a good strategy could be complemented with ICT solutions (for example e-book, e-learning, simulators, Web communities, Web portals and experts capture material)

The effects of globalisation introduced by the ICT advent have as well resulted in homogeneous behaviours and characteristics of youth. Thus it is possible to devise common strategies regarding the application of knowledge transfer methods to generations born after 1970.

# Thank you very much for your attention

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