

INTUICIONES DE INVESTIGACIÓN

¿Por qué es tan difícil comunicar la ciencia?

- ❖ Porque cambia todo el tiempo
- ❖ Porque es intrínsecamente difícil
- ❖ Porque tiene que ser falsable
- ❖ Porque la ciencia se ha base de historias, no de noticias
- ❖ Porque no se relaciona con nuestra vida cotidiana

Porque cambia todo el tiempo

60 MIL ARTÍCULOS EN LA ACTUALIDAD

2 MIL CADA AÑO

Porque es intrínsecamente difícil

Now unfortunately, we cannot assume that

$$\begin{aligned}\tan^{-1}(\theta^5) &= \theta^9 \vee \mathfrak{c}(\xi_\epsilon, -i) \pm \xi(\tilde{\mathcal{J}}, \dots, 0) \\ &\in \left\{ -\mathfrak{z} : 2^3 = \frac{h^{-1}(\theta^{-2})}{-\hat{\mathcal{R}}} \right\} \\ &= \bigcup_{K^{(\epsilon)} = \infty}^i \mathcal{D}(-|\alpha_J|, \dots, 2 \cap -1) - \chi(-1^{-5}, \dots, 2^{-2}).\end{aligned}$$

Porque tiene que ser falsable



Porque tiene que ser falsable



Porque la ciencia se ha de historias, no de noticias



Achievement evaluation within a non-conventional framework: some experiences in physics and humour

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Abstract

An achievement evaluation of a non-conventional physics course for liberal arts students is presented. The theoretical ground for this course focuses on the use of humour as a teaching tool. Preliminary evidence shows that a learning process is accomplished.

Introduction

Traditional approaches to the teaching/learning process in experimental sciences usually follow a formal or conventional route. The usual portfolio consists of books, experiments, simulations and web resources that are arranged and delivered by a teacher, the success of which is measured against the class objectives with standard testing.

A survey of recent physics instruction progress—especially learning by doing—may be found in the recent McDermott *et al* papers (McDermott 2001, McDermott *et al* 2006) and references therein. Also, a useful reference is the book written by Viennot (2003). The approach just described could be called the 'classical' way, although it includes a multiplicity of different didactical methods, i.e., multiple-choice testing, problem solving, answering questionnaires, etc.

It is not the purpose of this article to dismiss the value of the current approach and the corresponding research in physics instruction. Instead, we will show some alternative experiences that may enrich the set of tools a teacher may possess. Different in method and attitude, there are various alternative approaches. If we restrict

ourselves to the field of science teaching we note that open TV programmes as a teaching tool have been described in a recent paper (Perales-Palacios and Vitechez-González 2005). Recently the use of movies has been suggested by Hallipap (2008) in his comment on the book of Wetner (2007). Although it is not the purpose of this article to cover the wide field of non-conventional teaching approaches we can mention methodologies that use toys (Taylor *et al* 1995) and science museums (Tran 2007).

Cartoons in physics teaching have been described by Perales-Palacios and Vitechez-González (2005). In their work they analyse the use of TV cartoons in order to achieve a better understanding of the teaching content for high-school students. Furthermore, citing an early reference by Matthews (1991) on humorous cartoons, García-Molina (2003) suggests including these in ordinary classes. In this way—the argues—the dry reputation physics classes have may be mitigated. The same perspective is used by Kher *et al* (1999) who suggested the use of humour in 'dressed courses'. In a similar 'attitudinal learning' mode, Fishch and Saunders (2000) discuss the effectiveness of

Porque no se relaciona con nuestra vida cotidiana



Motivaciones de Publicar artículos

- Nuevas publicaciones
- Nuevos eventos
- Invitación a seminarios, jornadas académicas
- Trabajos
- Contactos

Estudios de Doctorado

- Profundizar un tema en específico con el fin de encontrar o establecer una novedad académica
- Se basa en la lectura estructurada de publicaciones relacionadas en los últimos años
- El proceso es flexible si se cumplen los tiempos establecidos
- Los estudios adquiridos facultan para un doctorado
- La información se encuentra disponible en todo momento
- Posibilidad de viajar y estancias de investigación
- Forma adecuadamente nuestro pensamiento de investigación
- Establece pautas de docencia actuales



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