La Investigación Científica

UNIDAD I: INTRODUCCIÓN A LA INVESTIGACIÓN

Objetivos de la clase

• Recordar qué es el método científico y cuáles son sus pasos

- Repasar las distintas categorías en que puede clasificarse una investigación
 - Experimental o no experimental
 - Documental o de campo
 - Cuantitativa, cualitativa o mixta
 - Básica o aplicada

Método vs Metodología

La **metodología** es el estudio de las condiciones, posibilidades y validez de los **métodos** que se siguen para lograr el desarrollo de conocimiento.

Métodos

• Inductivo: partir de hechos particulares para llegar a conclusiones generales (experiencia).

• **Deductivo**: partir de proposiciones generales o universales para llegar a una afirmación particular (razón).

• **Histórico**: hechos del pasado. Síntesis explicativa, hipótesis, consulta de fuentes.

El método científico

• El método científico es un **proceso** que tiene por objetivo **sistematizar la construcción del conocimiento**, permitiendo desentrañar las leyes y principios que rigen el funcionamiento del mundo.

Características del conocimiento científico

• Es autónomo y completamente imparcial

• Presupone falseabilidad y busca promover la replicabilidad



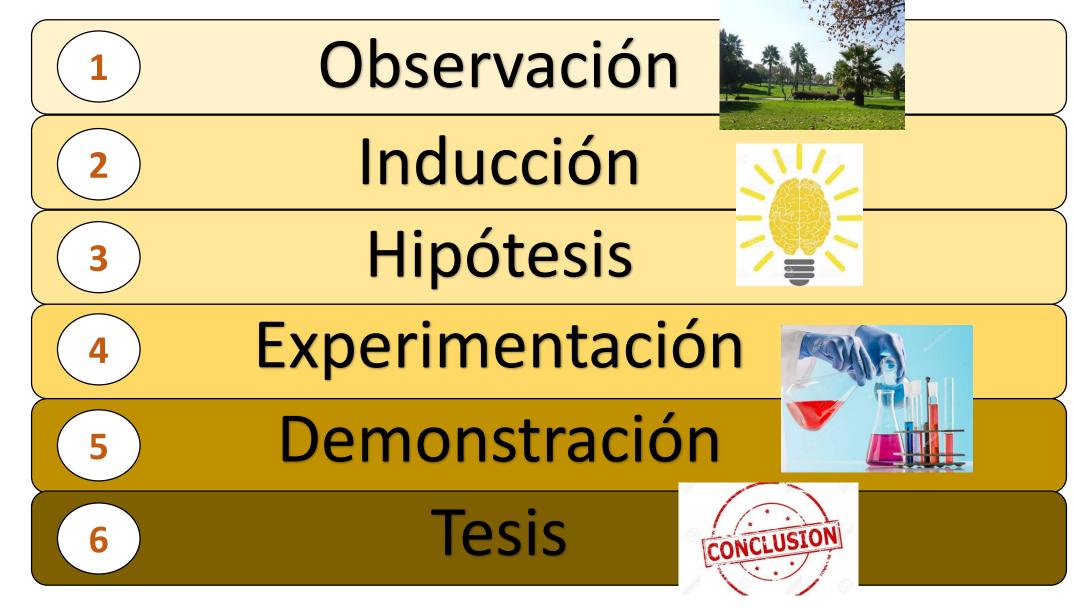
1 Observación
2 Inducción

Observación
Inducción
Hipótesis

Observación Inducción Hipótesis Experimentación

Observación Inducción Hipótesis Experimentación Demonstración

Observación Inducción Hipótesis Experimentación Demonstración **Tesis**





Tipos de investigación de acuerdo con su finalidad

¿En qué contribuye mi investigación al mundo en general?

- Investigación Básica "Para saber más"
 - La investigación básica permite ampliar nuestro conocimiento sobre los procesos, mecanismos, relaciones, causas y efectos relacionados con un fenómeno particular.

- Investigación Aplicada "Para vivir mejor"
 - La investigación aplicada está orientada a resolver problemas "de la vida real". Por ejemplo, proponer una nueva intervención, mejoras en tecnología de uso cotidiano, o proponer una solución para un problema social.

Agricultural green and blue water consumption and its influence on the global water system

Stefanie Rost, Dieter Gerten, Alberte Bondeau, Wolfgang Lucht, Janine Rohwer, and Sibyll Schaphoff

Received 9 July 2007; revised 27 May 2008; accepted 12 June 2008; published 4 September 2008.

[1] This study quantifies, spatially explicitly and in a consistent modeling framework (Lund-Potsdam-Jena managed Land), the global consumption of both "blue" water (withdrawn for irrigation from rivers, lakes and aquifers) and "green" water (precipitation) by rainfed and irrigated agriculture and by nonagricultural terrestrial ecosystems. In addition, the individual effects of human-induced land cover change and irrigation were quantified to assess the overall hydrological impact of global agriculture in the past century. The contributions to irrigation of nonrenewable (fossil groundwater) and nonlocal blue water (e.g., from diverted rivers) were derived from the difference between a simulation in which these resources were implicitly considered (IPOT) and a simulation in which they were neglected (ILIM). We found that global cropland consumed >7200 km³ year⁻¹ of green water in 1971–2000, representing 92% (ILIM) and 85% (IPOT), respectively, of total crop water consumption. Even on irrigated cropland, 35% (ILIM) and 20% (IPOT) of water consumption consisted of green water. An additional 8155 km³ year⁻¹ of green water was consumed on grazing land; a further ~44,700 km³ year⁻¹ sustained the ecosystems. Blue water consumption predominated only in intensively irrigated regions and was estimated at 636 km³ year⁻¹ (ILIM) and 1364 km³ year⁻¹ (IPOT) globally, suggesting that presently almost half of the irrigation water stemmed from nonrenewable and nonlocal sources. Land cover conversion reduced global evapotranspiration by 2.8% and increased discharge by 5.0% (1764 km³ year⁻¹), whereas irrigation increased evapotranspiration by up to 1.9% and decreased discharge by 0.5% at least (IPOT, 1971-2000). The diverse water fluxes displayed considerable interannual and interdecadal variability due to climatic variations and the progressive increase of the global area under cultivation and irrigation.

Investigación Aplicada

Investigación Básica

Citation: Rost, S., D. Gerten, A. Bondeau, W. Luncht, J. Rohwer, and S. Schaphoff (2008), Agricultural green and blue water consumption and its influence on the global water system, *Water Resour. Res.*, 44, W09405, doi:10.1029/2007WR006331.

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Tipos de investigación de acuerdo con la fuente de información

¿De dónde voy a obtener la evidencia o información necesaria para responder mi pregunta de investigación?

Investigación documental

• Se revisan todos los medios impresos que puedan aportar información **válida** y **confiable** acerca del fenómeno que me interesa estudiar.

• Investigación de campo

• Se propone recolectar datos para responder la pregunta de investigación, ya sea mediante la observación pasiva del fenómeno, la aplicación de encuestas o la realización de un experimento.

The measurement of experienced burnout*

Investigación Documental

CHRISTINA MASLACH

University of California, Berkeley

and

SUSAN E. JACKSON

University of California, Berkeley

Investigación de Campo

SUMMARY

A scale designed to assess various aspects of the burnout syndrome was administered to a wide range of human services professionals. Three subscales emerged from the data analysis: emotional exhaustion, depersonalization, and personal accomplishment. Various psychometric analyses showed that the scale has both high reliability and validity as a measure of burnout.

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Tipos de investigación **de acuerdo con su diseño**

 ¿La realización de mi proyecto de investigación requiere que yo haga alguna manipulación?

Investigación experimental:

 Responder mi pregunta de investigación requiere que realice un experimento, donde replique una parte del fenómeno que me interesa estudiar para evaluar el impacto de una o más variables para poder explicarlo mejor.

Investigación no experimental

• Me interesa describir el fenómeno, tal y como ocurre en el mundo, sin necesidad de probar ninguna manipulación artificial.

Sex, race, age, and beauty as factors in recognition of faces*

JOHN F. CROSS,† JANE CROSS, and JAMES DALY Saint Louis University, St. Louis, Missouri 63103

Three hundred Ss, black and white, male and female, at four age levels were tested for their recognition of 12 photographed faces: black, white, male, female, child, adolescent, and adult. Females recognized female faces more frequently than the male faces, while male Ss recognized the male and female faces with equal facility. Whites recognized the white faces more frequently than the black faces, while black Ss recognized the black and white faces with equal facility. Incorrect identifications of 24 faces not actually seen before were treated separately. Male faces and black faces were misidentified more than white faces and female faces. The number of false identifications of faces decreased as Ss increased in age. Perceived beauty in a face facilitated recognition. There was evidence of large differences in memorability among individual faces.

Experimental

No experimental

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Experimental

No experimental

Tipos de investigación de acuerdo con la su enfoque

¿Cómo voy a evaluar la evidencia recopilada?

Investigación Cualitativa

• Se evalúan las **cualidades** de la información recopilada. Implica una revisión de contenido.

Investigación Cuantitativa

• Se evalúan cantidades. Se cuantifica la evidencia encontrada para poder realizar comparaciones mediante métodos estadísticos

Enfoque mixto

Student teachers' perceptions about inclusive classroom teaching in Northern Ireland prior to teaching practice experience

Jackie Lambe* and Robert Bones

University of Ulster, Northern Ireland

This paper seeks to obtain the views of student teachers in Northern Ireland as to the benefits and challenges of inclusive education and the key issues that may need to be addressed to ensure they become effective teachers in an inclusive classroom. Because of the system of academic selection that has prevailed in Northern Ireland, issues relating to inclusion have been difficult to resolve mainly because principles of inclusion are at odds with existing structures. By 2008, however, academic selection is to be set aside and it would seem reasonable to believe that more inclusive practices will be adopted by all schools. Positive attitudes towards inclusion by practitioners will be essential in ensuring successful implementation. The majority of students entering Initial Teacher Education (ITE) programmes in Northern Ireland have been traditionally drawn from the academic grammar school sector where classroom contact with pupils who have diverse special educational needs may have been minimal. The results of this study show that while many student teachers claim to support inclusive policies, they believe that lack of appropriate preparation, concerns about class size, resources, managing other adults and coping with increasing numbers of pupils with diverse special educational needs are the key issues to be addressed within ITE in advance of the radical changes planned. Despite claiming to support inclusion, substantial numbers did not believe the removal of academic selection was the best way to ensure equality of provision for all pupils.

Cuantitativo

Cualitativo

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Cuantitativo

Cualitativo

Tipos de investigación de acuerdo con su alcance

- ¿Qué tanto permite entender mi investigación acerca del fenómeno que estoy estudiando?
- Investigación Exploratoria
 - Estamos **explorando** un fenómeno sobre el cual no se ha investigado demasiado
- Investigación Descriptiva
 - Se describe el fenómeno y las características que este tiene en el mundo.
- Investigación Correlacional
 - Se busca evaluar la **correlación** entre una o más variables
- Investigación Explicativa
 - Se busca explicar las causas que permean en la ocurrencia de un fenómeno particular.

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Exploratoria

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Actividad

- Se presentarán 6 resúmenes correspondientes a distintos trabajos de investigación publicados en revistas especializadas internacionales. La actividad consiste en clasificar cada uno de estos trabajos de investigación de acuerdo a como se solicite.
- Las respuestas deberán entregarse en parejas al final de la clase.
- Valor de la actividad: 1 punto de la calificación bimestral
- La pareja que tenga más respuestas correctas, gana .5 décimas extras sobre el primer periodo.

Trastornos Alimenticios:

La anorexia en el Centro Educativo Jean Piaget

Resumen:

La anorexia es un trastorno alimenticio, que se caracteriza por una percepción distorsionada del cuerpo de quien lo padece y temor a aumentar de peso, de tal forma que la persona se ve gorda, incluso estando debajo de lo recomendado (Secretaría de Salud, 2017).

En este trabajo se pretende definir los factores de riesgo y las consecuencias de la anorexia, así como determinar cuántos estudiantes del Centro Educativo Jean Piaget concuerdan con estos factores de riesgo para generar conciencia sobre este trastorno y poder tomar cartas en el asunto.

1. ¿De qué tipo de investigación se trata de acuerdo con su alcance?

Investigación Exploratoria Investigación Descriptiva

Investigación Correlacional

Investigación Explicativa

La aceptación de la perspectiva de género y su relación con los niveles de estudio

1 Resumen/ Abstract

Una proporción importante de la sociedad mexicana ha estipulado su posición en contra o a favor de la idea de una perspectiva de género. El objetivo de esta investigación es corroborar si existe una relación entre el nivel de estudio de la persona y su posición en relación a la perspectiva de género. Para esto se utilizó a 80 sujetos de una gama de distintos estratos sociales y se les preguntó acerca de detalles clave a través de una encuesta. La cual fue analizada estadísticamente. Los resultados comprobaron nuestra hipótesis y nos afirman que sí existe esta relación, lo cual implica un impacto en la comunidad que afirma que las nuevas generaciones y la educación cambian y fomentan un pensamiento inclusivo.

2. ¿De qué tipo de investigación se trata de acuerdo con su alcance?

Investigación Exploratoria Investigación Descriptiva

Investigación Correlacional

Investigación Explicativa

Neural mechanisms of empathy in humans: A relay from neural systems for imitation to limbic areas

Laurie Carr[†], Marco Iacoboni^{†‡§¶}, Marie-Charlotte Dubeau[†], John C. Mazziotta^{†§∥}**^{††}, and Gian Luigi Lenzi^{‡‡}

How do we empathize with others? A mechanism according to which action representation modulates emotional activity may provide an essential functional architecture for empathy. The superior temporal and inferior frontal cortices are critical areas for action representation and are connected to the limbic system via the insula. Thus, the insula may be a critical relay from action representation to emotion. We used functional MRI while subjects were either imitating or simply observing emotional facial expressions. Imitation and observation of emotions activated a largely similar network of brain areas. Within this network, there was greater activity during imitation, compared with observation of emotions, in premotor areas including the inferior frontal cortex, as well as in the superior temporal cortex, insula, and amygdala. We understand what others feel by a mechanism of action representation that allows empathy and modulates our emotional content. The insula plays a fundamental role in this mechanism.

3. ¿De qué tipo de investigación se trata de acuerdo con su finalidad?

Investigación Básica Investigación Aplicada

Investigación Exploratoria Investigación Descriptiva

Investigación Correlacional

Citation

Goldman, L. S. (1999). Medical illness in patients with schizophrenia. The Journal of Clinical Psychiatry, 60(Suppl 21), 10-15.

Abstract

Research into the relationship between physical illness and schizophrenia has revealed that patients with schizophrenia may be at decreased risk for certain disorders, such as rheumatoid arthritis and allergies, but at increased risk for others, including substance abuse and polydipsia. Although such knowledge may ultimately help determine the underlying causes of schizophrenia, the principal concern of practicing clinicians should be to diagnose and treat medical comorbidity in individual patients. Nearly 50% of patients with schizophrenia have a comorbid medical condition, but many of these illnesses are misdiagnosed or undiagnosed. A fragmented health care system, lack of access to care, patient inability to clearly appreciate or describe a medical problem, and patient reluctance to discuss such problems all contribute to the lack of attention to medical problems in patients with schizophrenia. Psychiatrists and primary care practitioners who treat patients with schizophrenia should make an effort to uncover medical illnesses by using a structured interview or routine physical examination whenever a patient is seen for care. (PsycINFO Database Record (c) 2016 APA, all rights reserved)

Investigación Básica Investigación Aplicada

Investigación Exploratoria Investigación Descriptiva

Investigación Correlacional

The Blame Game: The Effect of Responsibility and Social Stigma on Empathy for Pain

Jean Decety, Stephanie Echols, and Joshua Correll

Abstract

■ This investigation combined behavioral and functional neuroimaging measures to explore whether perception of pain is modulated by the target's stigmatized status and whether the target bore responsibility for that stigma. During fMRI scanning, participants were exposed to a series of short video clips featuring age-matched individuals experiencing pain who were (a) similar to the participant (healthy), (b) stigmatized but not responsible for their stigmatized condition (infected with AIDS as a result of an infected blood transfusion), or (c) stigmatized and responsible for their stigmatized condition (infected with AIDS as a result of intravenous drug use). Explicit pain and empathy ratings for the targets were obtained outside of the MRI environment, along with a variety of implicit and explicit measures of AIDS bias. Results showed that participants were significantly more sensitive to the pain of AIDS transfusion targets as compared with

healthy and AIDS drug targets, as evidenced by significantly higher pain and empathy ratings during video evaluation and significantly greater hemodynamic activity in areas associated with pain processing (i.e., right anterior insula, anterior midcingulate cortex, periaqueductal gray). In contrast, significantly less activity was observed in the anterior mideingulate cortex for AIDS drug targets as compared with healthy controls. Further, behavioral differences between healthy and AIDS drug targets were moderated by the extent to which participants blamed AIDS drug individuals for their condition. Controlling for both explicit and implicit AIDS bias, the more participants blamed these targets, the less pain they attributed to them as compared with healthy controls. The present study reveals that empathic resonance is moderated early in information processing by a priori attitudes toward the target group.

Investigación Experimental Investigación No experimental

Investigación Cuantitativa Investigación Cualitativa

Investigación Mixta

Investigación Exploratoria Investigación Descriptiva

Investigación Correlacional

A META-ANALYSIS OF THE INTERNATIONAL GENDER WAGE GAP

Doris Weichselbaumer

University of Linz and Universitat Pompeu Fabra

Rudolf Winter-Ebmer

University of Linz and Institute for Advanced Studies, Vienna

Abstract. Since the early 1970s, a number of authors have calculated gender wage differentials between women and men of equal productivity. This meta-study provides a new quantitative review of this vast amount of empirical literature on gender wage differentials as it concerns not only differences in methodology, data, and time periods, but also different countries. We place particular emphasis on a proper consideration of the quality of the underlying study which is done by a weighting with quality indicators. The results show that data restrictions - i.e. the limitation of the analysis to new entrants, never-marrieds, or one narrow occupation only – have the biggest impact on the resulting gender wage gap. Moreover, we are able to show what effect a misspecification of the underlying wage equation – like the frequent use of potential experience – has on the calculated gender wage gap. Over time, raw wage differentials worldwide have fallen substantially; however, most of this decrease is due to better labor market endowments of females.

10. ¿De qué tipo de investigación se trata de acuerdo con su fuente de datos?

Investigación Documental

Investigación de campo

Investigación Exploratoria

Investigación Descriptiva

Investigación Correlacional

Tarea

• Entregar la actividad del día de hoy.

- Valor total de la actividad: 1 punto
 - Entrega <u>antes del 1 de septiembre</u> <u>1 punto</u>
 - Entrega <u>después del 1 de septiembre</u> .5