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Mixed methodologies

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Symposium title

Simposio de Metodologías Mixtas

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Abstract

Las metodologías mixtas combinan enfoques cualitativos y cuantitativos en la investigación, permitiendo una comprensión más completa y profunda de los fenómenos estudiados. Esta estrategia metodológica es fundamental para abordar problemas complejos, ya que aprovecha las fortalezas de ambos enfoques: la profundidad y riqueza del análisis cualitativo junto con la precisión y generalizabilidad de los datos cuantitativos.

La aplicación de las metodologías mixtas es especialmente útil en disciplinas como las ciencias sociales, la educación y la salud, donde los fenómenos a estudiar requieren tanto mediciones numéricas como interpretaciones contextuales. Por ejemplo, en estudios sobre la satisfacción del paciente en hospitales, se pueden emplear encuestas estructuradas para obtener datos cuantitativos y entrevistas en profundidad para comprender mejor las experiencias personales.

En definitiva, el uso de metodologías mixtas en la investigación permite una visión más holística y precisa, facilitando la toma de decisiones fundamentadas y el diseño de estrategias más efectivas en diversos campos del conocimiento.

Keywords

Metodologías mixtas, Investigación, cualitativo, cuantitativo

Number of communicatios

6

Communication 1

Analysis of the relationship between self-esteem level and interest, importance and learning achievements in highly able students through mixed method design

Authors

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Abstract

The scientific literature supports the relationship between self-esteem and interest or motivation, academic achievements, learning processes and academic performance of students in general, and also in highly able students. Thus, the objective of this study is to analyse how the different levels of self-esteem are related to interest, importance and learning achievements in highly able students in Primary and Secondary Education levels. The sample consisted of 25 students (8 girls and 17 boys), aged 10-13 years, from the province of Gipuzkoa. The Rosenberg Self-Esteem Scale (EAR) was applied and open questions were asked about the importance and usefulness of the subject content, and about the achievements and effort made. The results show that a majority (60%) has high self-esteem, while the rest has average (28%) and low (12%) self-esteem. It has been found that, as the level of self-esteem increases, the number and type of forms or words related to interest/importance and achievement in learning increases. Finally, the descending hierarchical analysis reveals the importance of those forms related to the need to study more and in a more active way, which have been significantly related to a low self-esteem. In conclusion, self-esteem is important when it comes to promoting academic performance through the interest and achievement in learning of highly able students.

Keywords

Communication 2

Influence of Intelligence and Gender on Mathematics Anxiety: Verbalized Strategies to Overcome Difficulties

Authors

Adalberto Gonzales Martín, Jesús del Pino Relwani Moreno, Juan Francisco Flores Bravo, África Borges del Rosal

Abstract

Introduction:
Mathematics anxiety negatively impacts performance, achievement, and career choices. This study investigates how intelligence and gender influence this anxiety and explores the coping strategies used by those who dislike math. Existing research shows that lower intelligence and being female often correlate with higher math anxiety, but how these factors interact with coping mechanisms is less understood. This research employs a mixed-methods approach to analyze these relationships, aiming to answer how intelligence and gender affect anxiety levels, what strategies are used to manage this anxiety, and if these strategies vary based on intelligence and gender. By examining these questions, this study will contribute to a deeper understanding of mathematics anxiety and inform the development of tailored interventions to support learners, ultimately fostering a more positive and inclusive mathematics learning environment.

Objective:
To investigate the influence of intelligence and gender on mathematics-related anxiety and to analyze the verbalized strategies employed by individuals who dislike mathematics to

overcome their difficulties.
Method:
A mixed-methods research methodology (MMR) was used, with the quantitative part employing a cross-sectional survey design and the qualitative part using content analysis. The sample consisted of 1552 students, of whom 1012 were women.
Results:
Significant differences were found based on both intelligence and gender. Women and individuals with lower cognitive abilities reported higher levels of anxiety related to mathematics.
The verbalized strategies were grouped into four clusters: cluster 1 (26.6%), relying on external support, such as peers, teachers, and online resources, to seek help and guidance; cluster 2 (23.7%), using extra learning aids like video tutorials and procedural explanations, with a focus on practical exercises; cluster 3 (24.4%), simplifying and understanding basic concepts through individual effort and perseverance; cluster 4 (25.3%), developing study habits, including problem-solving, note-taking, and concentration-focused strategies.
Conclusions:
The findings highlight how gender and cognitive abilities influence mathematics-related anxiety and coping mechanisms. Women and higher math anxiety tend to rely on external support and tend to seek alternative learning strategies, while men and lower math anxiety

prefer individual effort and perseverance . These insights underline the importance of tailoring support strategies to the specific needs of learners who dislike mathematics.

Communication 3

MMR Approach in the Study of Physical Activity, Intelligence, and Gender in Adolescents

Abstract

Introduction: One of the myths surrounding high intellectual abilities is the belief that individuals with higher intelligence are not interested in physical activity, implying a relationship between intelligence and exercise.
Objective:To analyze the relationships between intelligence and physical activity, as well as gender differences in interest in physical activity, while also studying perceptions about physical activity.
Methodology: The sample consisted of 297 secondary school students aged 13 to 16. The instruments used included an intelligence test (Herranz's G factor), a physical activity questionnaire (PAQ-A), and two open-ended questions: "Do you like engaging in physical activity?" and "Why?" Quantitative analysis included Pearson's correlation to examine the relationship between intelligence and physical activity and Student's t-test to study gender differences in interest in physical activity. Qualitative data were analyzed using the IRAMUTEQ software.
Results:No relationship was found between intelligence and physical activity, and boys showed greater interest in exercise. Qualitative analysis revealed three main themes: engaging in sports, enjoyment, and mental benefits. The significance of the independent variables used was also analyzed.
Discussion: Further research is needed to explore the relationship between intelligence and physical activity to confirm the independence of these variables. It is also important to examine the reasons behind gender differences, which show a greater interest in exercise among boys. The qualitative analysis offers three perspectives on understanding physical activity: the act of exercising itself, its recreational aspects, and the mental health benefits it provides.

Communication 4

Motives for Lying in Mexican Adolescents

Authors

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Abstract

Introduction: Several studies have indicated that the tendency to lie is more prevalent in adolescents compared to children and adults (Buta et al., 2020; DePaulo et al., 1996; Levine et al., 2013). Studying the motivations behind this behaviour can be essential to gaining a deeper understanding of this phenomenon.

Objective: Study the different reasons for lying among the adolescent population.

Method: The methodology used was Mixed Methods Research (MMR). The sample consisted of a total of 433 adolescents (M=12.77; SD=.97) from the general population of the State of Jalisco, Mexico (42.60% women). For data collection, the CEMA-A questionnaire (Armas-Vargas, 2023) and an open-ended question about the main reasons for lying were used. For quantitative data analysis, the SPSS program, v.26, was used, and for qualitative analysis, the lexical analysis software IRAMUTEQ 0.8a7 was employed.

Results: The MANOVA was significant for the interaction of gender and age variables. The analysis of qualitative responses allowed the extraction of two classes: "avoiding harm or punishment" (34%) and "hiding information" (66%). Significant relationships were observed between this two classes and the study's different quantitative variables.

Conclusion: This research contributes to the existing literature by providing novel data on the motives that drive the lying behaviour in adolescents. We highlighted the importance of using MMR and suggest continuing this line of study with a sample of older participants.

Keywords

Communication 5

Multipotentiality in university students and its relationship with gender, high abilities and entrance score

Authors

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Abstract

Introduction Multipotentiality, defined as the ability to excel in diverse areas of interest (Cordero, 2019), has been explored through individual differences and educational factors that favor its development. Previous studies highlight that factors such as gender and high abilities play crucial roles in how individuals explore and manage multiple talents (Kerr Huffman, 2018). For example, Jung (2019) notes that students with high abilities often have a wide variety of interests and abilities, which can lead them to face the challenge of having numerous options, but having difficulty choosing just one. Objective To analyze how multipotentiality in college students is associated with variables such as gender, high ability, and college entrance score. Method MMR was used with a transforming concurrent design. The sample consisted of 1,446 (997 women) university students from various degrees in the area of Health Sciences, who were given a questionnaire that included, among others, an open- ended question on the areas or disciplines in which they perceive themselves to have a high level of competence. Quantitative analysis was performed by means of Student39;s t test using SPSS v.27, while the open-ended responses were classified using the ALCESTE program. Results The qualitative

analyses of the verbalizations refer to two classes "Personalization of competencies"(47.57%), which reveals that multipotentiality is significantly related to being male, having high abilities, and obtaining a high score in the university entrance exam, especially in careers related to Sports and Nutrition. In contrast, the class "General competencies"(52.43%) reflects that women without high abilities and with average entrance scores tend to identify less with multipotentiality, especially in the Psychology career. At the quantitative level, no significant differences were observed with respect to gender, intelligence and university entrance score. Conclusions The findings suggest that high ability and entry score are significant predictors of multipotentiality in college students. These results may guide future educational policies and support programs to foster the development of multiple competencies in diverse student populations.

Keywords

Multipotentiality, college students, gender

Communication 6

Subjective perception of Fear of Public Speaking. A mixed-methods research

Authors

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Abstract

Introduction. Fear of Public Speaking (FoPS) or Public Speaking Anxiety (PSA), considered a specific subtype of Social Anxiety Disorder, profoundly affects the personal, academic, and professional spheres. This phenomenon is characterized by cognitive, emotional, and physical manifestations that limit the performance and social interactions of those who experience it. Objectives. The relationship between Fear of Public Speaking and its associated manifestations is explored through a mixed research approach. Methodology. A sample of 436 university students (26% male, 74% female; mean age = 21.1 ± 3.46 years) was obtained through convenience sampling. Participants were classified into different anxiety levels using the Social Anxiety Questionnaire for Adults (SAQ-A30). Quantitative analyses were performed with SPSS v.29 software, while qualitative data, derived from open-ended responses on thoughts, emotions, and physical symptomatology, were processed with ALCESTE software. Results. Preliminary findings revealed significant differences by gender and anxiety level, both quantitatively and qualitatively. Textual analysis identified three distinct thematic classes, revealing differentiated patterns in participants39; perceptions and the strategies they employed. Discussion. The adoption of mixed methods research is emphasized as essential for gaining a deeper understanding of complex phenomena within the field of Behavioral Sciences.

Keywords

Fear of Public Speaking; Gender

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