ANALYTIC SUMMARY


The objective of this study is to describe design, validity process and reliability of a rubric assessment to evaluate didactic infographics quality. Participants were fifteen judges who participate in different moments of elaboration rubric process; it was made in three process phases: design, settings and reliability determination. Content validity was obtained by percentage agreement between 3 judges by component of the rubric; likewise a Krippendorff’s alpha were applied ($\alpha = .710$) in pilot assessment with 5 infographics in order to set possible writings contradictions between components and criteria of performance. The intern consistence was determined by Cronbach’s alpha ($\alpha = .806$) in 22 infographics gradation. An Intraclass correlation coefficient ICC ($\alpha = .909$) was applied to 6 judges qualifications also a Krippendorff’s alpha ($\alpha = .538$) both of them in ordinal levels. The rubric is composed by 9 components, 3 performance levels, definitions of each component and assignments how to use the rubric. Results suggest the rubric is valid and reliable to grade quality of didactic infographic.

Key words: infographic; rubric; evaluation; teaching with infographics.

CAMPA ÁLVAREZ, R. Á.; VALENZUELA, B. A. and GUILLÉN LÚGIGO, M. Harmonization between teaching skills and students in secondary and higher education.

This study aims to assess the learners skills of students of the Division of Social Sciences of the University of Sonora, Mexico and while harmonization between teaching skills; through previous training received in basic level education and upper secondary education, in order to determine a model with the core elements of the learners skills level of higher education. A quantitative methodology descriptive correlational was employed, the questionnaire-scale AMECESU «Teacher training for the harmonization of models of teaching and learning and skills development in secondary and university education», a sample of 298 students applied the Division.
of Social Sciences of the University of Sonora, Mexico. The data obtained were analyzed in the statistical program SPSS version 21 and EQS 6.1 (Bentler), where data reliability, descriptive, correlation and structural equation model were obtained. The results indicate that the proposed model predicts a whole 34% of learners responsibilities at higher education. It can be concluded therefore that training in skills at a basic level (secondary) and upper secondary (high school) has a highly significant relationship and harmonizes with currently receiving training students in higher education; it is teachers of both levels of education a key element in the process of teaching and learning for the transmission and acquisition of skills of learners coming professionals in the field of social sciences.

**Key words**: teaching skills; learners skills; basic education; secondary education and higher education.

MARCHENA CRUZ, P.; LÓPEZ FERNÁNDEZ, V. and EZQUERRO CORDÓN, A. Exploratory study of the relationship between the musical, visuospatial, bodily-kinesthetic intelligence and drive creativity in the process of learning.

Currently, the Spanish educational system focuses its attention on the development of priority subjects such as language and mathematics versus other secondary such as music (Palacios, 2006), without considering numerous neuropsychological research that provides new theories of mind and learning that can positively influence the transformation of current educational models (Martin-Lobo, 2015). This research aims to determine the relation between musical intelligence, bodily-kinesthetic intelligence, intelligence visuospatial and motor creativity in a sample among 5 years old students from the last year of Early Childhood Education. The instrument used to assess the three intelligences, based on Gardner’s theory, was the Multiple Intelligences questionnaire for children of pre-school age (Prieto and Ballester, 2003); for the evaluation of motor creativity was used Test of Creative Thinking in Action and Movement (Torrance, Reisman and Floyd, 1981). A descriptive and correlational statistical analysis (using the Pearson correlation index) applying the Microsoft Excel program along with the supplement known as Ezanalyze. The results indicated no significant relationship between musical intelligence and motor creativity (p = 0.988); the visuospatial intelligence and motor creativity (p = 0.992); and the bodily-kinesthetic intelligence and motor creativity (p = 0.636). Although there was significant relation between the musical and visuospatial intelligence (p = 0.000); the musical and bodily-kinesthetic intelligence (p = 0.000); and the bodily-kinesthetic and visuospatial intelligence (p = 0.025).

**Key words**: Musical intelligence; visuospatial intelligence; bodily-kinesthetic intelligence; creativity; motor creativity.
FERREIRA, R. M. F.; CUBO DELGADO, S. y CARIOCA, V. J. J. Motivations, needs and importance attributed to continuous training in the development of professional skills of teaching staff in nursing education.

This study, of descriptive nature, had as its main purpose to investigate the importance that nursing education professors, in public higher education institutions, in Portugal, assign to continuous training on the development of professional skills, taking into account the professors main motivations to participate in training activities and/or continued development and their needs of further continuous training.

157 randomly selected professors, who completed a questionnaire, participated on it. In its assessment by judges/experts, a 0,94 content validation index was achieved. Regarding the reliability of the measuring tool in the «Motivations for engagement in training actions and/or continuous professional development» category, there was a Cronbach’s Alpha of 0,811, in the «Continuous training present needs» category, a Cronbach’s Alpha of 0,876 was presented and finally, in the dimension «Emphasis placed on the continuous training in the development of higher education professor skills» a Cronbach’s Alpha of 0,978 was shown, compliant with a high internal consistency.

The achieved results allow us to imply that these professors give credit to the continuous training on the development of professional skills, with emphasis on the skills of «Preparing the content of the curriculum units», «Assure tutorial orientation», «Communicate with the students», «Evaluate», «Use of information and communication technologies» and «Planning the teaching-learning process». The «Practical Reasons» and the «Emancipatory Reasons», stand out in the motivations that move professors to participate in training and/or continuous development actions and, with regard to the current needs of continuous training, the ones related to investigating, use of information and communication technologies and evaluation stand out.

Key words: Continuous training; Motivations; Skills; Higher Education and Nursing.

DÍAZ DÍAZ, M. A. and ORTEGA SÁNCHEZ, I. Learning styles differences among engineering students of daytime and evening classes programs.

The purpose of this exploratory research was to identify if there were any differences in the student’s learning styles of three engineering academic programs from daytime and evening classes. The motivation aroused from the observation that the academic performance of these two populations, in response to equally demanding academic programs, was equivalent, despite having far less demanding requirements for the acceptance in the evening class program. The results of this research showed no relevant differences in the learning styles of the students.
of the two programs, giving rise to more questions than answers, mainly regarding the motivations of the evening class students and the academic requirements for the acceptance in a tertiary institution.

**Key words**: learning styles; motivations; engineering students; daytime and evening academic programs; academic performance.

Martínez Díaz, A; García Rodríguez, M. S. and Suárez Menéndez, J. J. Analysis of the Chemistry activities in 1st level of Spanish Bachelor Physics and Chemistry textbooks from a «Chemistry in context» approach.

In the last few years there are two worrying phenomenon happening in the science teaching environment, on one hand there are fewer students who choose science subjects at the time they're optional and on the other hand the decreasing number of university students enrolled in science careers, if we add those two facts the results of the latest PISA tests, which show that students who choose these materials do not get satisfactory results, we have a hopeless outlook. One way of analysing the situation is exploring what happens in the classroom and in this context we find that the textbook is a resource used extensively in the teaching of Chemistry; one essential element for learning are planned activities in the classroom, so it seems essential to make a full review of them. The objectives in this study are: Analysing and classifying the activities contextualized of chemistry textbooks currently used in eleventh grade and comparing books from different educational laws based on their contextualized activities. For the review and classification of activities it uses a methodology of analysis for qualitative content. The results demonstrate the anecdotic presence of this kind of activities in textbooks; 8308 activities were reviewed of which only 6.46% corresponded to contextualized activities. In addition when comparing the different books, whether they are currently used or the ones from previous educational laws, we see that there is not a turnaround in what refers to the contextualized activities, as a significant variation is not observed in the percentages and therefore do not adapt well to curriculum changes.

**Key words**: didactics of chemistry; secondary education; textbook; educational method; contextualized activities.

Rosales López, C. Cultural capital and personal adventure in the construction of gender identity.

This paper highlights how the construction of gender identity is a personal task that develops throughout life and in various scenarios in which it takes place. The influence of traditional cultural heritage in these scenarios (family, school,
community…) is intense and manifest environmental way and through direct intentional interventions. The influence is polarized between the ends of the male female with a clearly differentiating and discriminatory toward the feminine genre. They forget or underestimate the feeling and difficulties of each person and their life trajectories.

For the realization of this work we reflect on recent research in the field of equality in relation to the traditional line of research on the influence of cultural capital on the formation of personality. The paper concludes by considering that innovation in the construction of gender role involves breaking with such limiting pressure and bet on the progress toward freedom and equality between human beings.

Key words: gender identity; social culture; family; school; work orientation; personal initiative.

AGUÑADE GÓMEZ, M. C.; ARACAMA SALAS, Mª T. and MACÍAS HERMOSO, A. Prenatal pedagogy in the studies of Teaching Degree of Infant Education in the University of Huelva: study of the analysis of didactic guides and the perspective of the students.

This study intends to offer a different vision of the concept of prenatal pedagogy, deeply linked to children’s sanitary need. We will try to find out its importance in the university scope through students’ opinions and the analysis of the didactic program of Early Childhood Education Degree.

In order to achieve this, we have set ourselves the general objective of gathering information from university students of the Early Education Degree about the importance of training in prenatal education for their future work as teachers, considering that they are the most involved in the education of children in their early stages. Furthermore, we intend to reckon the relevance given to this content by the University of Huelva, one of the educational institutions responsible for teacher training.

The data were collected through questionnaires applied to a sample of 58 3rd-4th level students of Early Childhood Education at the University of Huelva. This instrument was selected for the suitability of its application collectively. Moreover, an analysis of the didactic programs of the courses of this degree was carried out to verify the existence of contents of prenatal pedagogy within them.

From this research it is derived that certain notions of prenatal pedagogy are essential to become future nursery teachers, thus providing a greater amount of resources when facing our students’ learning process.

In conclusion, we checked that the university students surveyed believe that it is necessary to have notions of prenatal pedagogy so as to become efficient teachers. The lack of this notion in the didactic programs represents a formative gap that will have negative repercussions on their initial formation and, consequently, on
their educational practice. Therefore, the educational institutions in charge of the preparation of new teachers should consider including prenatal pedagogy within their didactic programs.

Key words: prenatal pedagogy; prenatal education; early childhood education; university education; early childhood degree; didactic programs.

HERVÁS HERMIDA, L. Prenatal education through art therapy. A possible way for positive parenting.

Recent research in the field of positive parenting advocates the importance of promoting family support, through parental education programs. On the other hand, the importance of the prenatal period for human development is well known, but attention to this stage has traditionally been done from the biomedical point of view, without paying attention to the other educational, emotional, social and gender aspects.

In this sense, the aim of this article is to propose a possible way to support positive parenting, which will provide an useful contribution to prenatal pedagogy as an emerging science, through art therapy. By the qualitative analysis of two case studies of two women participants from two different workshops, the possibilities offered by group art therapy as a way of prenatal education, for the exploration of the creative dimension of motherhood are shown, and the deepening of the attachment with both the baby, the couple and the environment. Likewise, the development of parental competences is favored, focusing on awareness and personal development, and on the creation of a group support, in which shared learning takes place. Finally, the conclusions deal with aspects of the methodology that foster an improvement in the well-being and the development of an empowered and resilient attitude, benefiting both mother and child, as well as the whole family and social environment.

Key words: prenatal education; positive parenting; art therapy; maternity; attachment; awareness.