

of Earth. The stick (gnomon) should stay in vertical position in the leveled ground. Since 2010, the project received hundreds of Brazilian schools with different experiments that were constructed with autonomy, because our site doesn't show some itinerary pre-ready to elaborate the experiments. To collect data for our research, we will use interviews via Skype with the teachers. These data are useful to researches about Science Education area and the Teaching Formation. Teaching professional practice could change and we see modifications in the teachers work, what depends of their realities and context. This project intends to respect the docent autonomy. This autonomy to responsible modifications during continued formation is called "activist formative model" according Langhi & Nardi (Educação em Astronomia: repensando a formação de professores. São Paulo: Escrituras Editora, 2012). This project discusses about researches in Astronomy Education - still extreme rare in Brazil, when we compare with other areas in Science Education. We believe that actions like this could motivate the students to learn more Astronomy. Furthermore, this national action can be a rich source of data to investigations about teaching formation and scientific divulgation.

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INTERACTIVE MATERIALS IN THE TEACHING OF ASTRONOMY

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This study presents results of a survey conducted at the Federal Institution of Education, Science and Technology in the North of Minas Gerais (IFNMG), and aimed to investigate the potentialities of the use of interactive materials in the teaching of astronomy. An advanced training course with involved learning activities about basic concepts of astronomy was offered to thirty-two Licenciante students in Physics, Mathematics and Biological Science. The following steps were to be taken: i) analysis of the pedagogical projects (PPC) of the licenciates at the IFNMG, research locus of its Campus Januária; ii) analysis of students' preconceptions about astronomy and digital technologies, identified by the application of an initial questionnaire; iii) preparation of the

course taking into account the students' previous knowledge; iv) application of the education proposal developed under part-time presence modality, using various interactive tools; v) application and analysis of the final questionnaire. The test was conducted with the qualitative and quantitative methodology, combined with a content analysis. The results indicated that in the IFNMG only the licenciante-course in physics includes astronomy content diluted in various subjects of the curriculum; the rates of students prior knowledge in relation to astronomy was low; an evidence of meaningful learning of the concepts related to astronomy, and of viability of resource use involving digital technologies in the Teaching of astronomy, which may contribute to the broadening of methodological options of future teachers and meet their training needs.

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ELEMENTARY SCHOOL TEACHERS' CONCEPTIONS ABOUT THE APPARENT MOVEMENT OF THE SUN AND THE SHADOWS OF THE OBJECTS

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A research about the astronomical conceptions of 65 elementary school teachers, developed at the last module of a continuing education course, in 2012, is described. The module addressed the apparent movement of the Sun in the sky and its relation with the shadows of the objects. Two types of sundials were built and tested. A concrete model was used to simulate the phenomena. A test with five open questions was applied to the participants before and after the activities. Initially, the participants already had notions about the themes treated, because almost all recognized: the existence of variations in the position of the Sun in the sky both throughout the day as well as during the year; the existence of relations between such apparent movements and changes in the shadows of the objects; the possibility of using the shadows of the objects to measure time. However, 53.8% of the participants expressed, at first, the misconception that the Sun passes daily by zenith. And, in general, the responses had incomplete explanations. After the activities, some development

in the explanations of the phenomena was observed. For example, there was an increase in the percentage of responses: indicating that the length of the shadows varies throughout the day (from 18.4% to 41.6%) and during the year (from 6.1% to 29.2%), depending on the position of the Sun; considering sundials as devices that permits the reading of the hours on the basis of the behavior of the shadows (from 3.1% to 29.3%); with the opinion that the sun is not daily by zenith (from 36.9% to 95.4%).

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OEI, GTTP AND ADVENTURERS OF THE UNIVERSE: TRAINING TEACHERS AND DISSEMINATING SCIENCE IN THE SOUTH OF BRAZIL

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Itinerant Educative Observatory (OEI) is a permanent program of our Department of Astronomy since 1999. It aims to lecture Astronomy to teachers of fundamental and middle levels, using attractive resources such as telescopic observations, audiovisuals, and multimedia. The training courses are requested by different cities of Rio Grande do Sul and nearby states and are organized by a local committee of the requesting city. In 2014, with federal funds, we are uniting efforts with other extension project: the Galileo Teacher Training Program (GTTP). This is an international program developed to train teachers in the effective use of astronomy education tools and resources in their science classes. The program, that is a legacy of IYA2009, aims to create a worldwide network of Galileo Ambassadors the promoters of the training workshops and Galileo Teachers the teachers who bring the learned methodologies into classroom. To supplement these activities, we initiated a new program in 2012 called Adventurers of the Universe. University professors, undergraduates students and teachers of high-school and elementary school of social vulnerable communities develop transdisciplinary didactic sequences where Astronomy is the central focus to motivate different processes of teaching and learning, considering different learning levels, designed for direct use in the classroom. The objective of the program is to contribute to the didactic transposition through the discussion about how to relate astronomy with other

science and non-science disciplines. In 2012 we collaborated with 20 teachers of one school, and 900 students. In 2013, the collaborations were expanded to include teachers and students of 3 other schools.

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RECA: A NETWORK BY STUDENTS, FOR STUDENTS

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RECA (Red de Estudiantes Colombianos de Astronomía) is a national network created by Colombian students that needed to be connected by their love for astronomy and astrophysics. It compiles most of the university groups and individuals that are willing to make part of a bigger community that gives benefits such as outreach activities, student links, and resources. This work is divided in 3 main parts. The first one is a quick review of the history of RECA since it was proposed in the III Colombian Astronomy Congress until today. After that, we review all the achievements and activities that the network has made and the people that collaborated to make it possible. Finally, we emphasize the vision that RECA has for the next years and what it can give to the development of astronomy in Latin America regarding to students flux, training and research.

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BRAZILIAN PARTICIPATIONS IN THE INTERNATIONAL ASTRONOMICAL SEARCH COLLABORATION

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International Astronomical Search Collaboration (IASC) is an international educational project between universities, schools, observatories and research institutions. Its main objective is to enroll high school and college students in the monitoring and discovery of asteroids and Near Earth Objects (NEOs), especially Potentially Hazardous Asteroids. The methodology consists in the analysis of