

ACTION RESEARCH IN NON-FORMAL EDUCATION, OUTREACH PROJECTS WITH NETWORKS OF TEACHERS IN MICHOACÁN, MEXICO

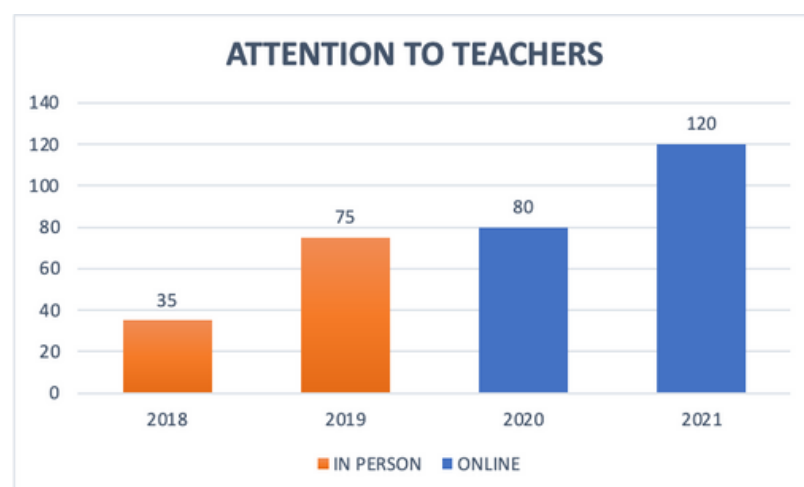
PROBLEM STATEMENT

The objective of this work is to analyze the optimal tools for the offer of non-formal education activities to groups of teachers of basic level in the state of Michoacán, Mexico.



Our goal is adapt the materials we have to the needs of the groups that are served for the outreach area of the IRyA UNAM.

From 2018 to 2021, the number of teachers attended by the outreach team of IRyA increased dramatically, from ~35 to more than a hundred. The 2020 pandemic forced us to migrate from an in person to an on-line modality to implement the courses.



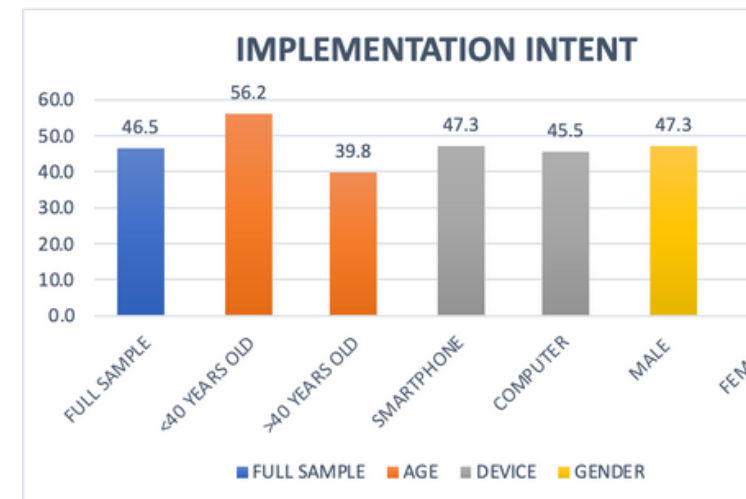
The working group presents a wide range of ages, extending from 28 to 65 (average of 45), mostly composed by women (78.6%).

Rafael Hernández León, Bernardo Cervantes Sodi

Institute for Radio Astronomy and Astrophysics (IRyA) of the National Autonomous University of Mexico (UNAM)

METHODOLOGY

We analyzed a sample of 27 teachers, who received a series of online workshops with the aim of improving astronomical knowledge and the further implementation of the workshops at the school's classrooms.



We analyze the intention of implementation that teachers have in relation to the 11 workshops that were offered online in the period March to October 2022, and the relation with the most significant variables analyzed in our study.

Differentiated trends were identified in the implementation intention workshops associated with age, connecting device and gender of the population analyzed.

By performing a test of joint dependence on age and connecting device, we find that the differences attributed to the connecting device are imposed by a bias with age, thus identifying the age as the relevant variable.

VARIABLES

- AGE
- GENDER
- CONNECTING DEVICE

RESULTS

Differences are found in the intention of implementation in the 3 variables analyzed. To quantify the relevance of these differences, a Bayesian analysis was implemented, where it turned out that the *gender* variable was not relevant and *age* and *device* were anecdotal with a tendency of greater implementation intention to call population under 40 years.

FUTURE WORK

The results obtained from the quantitative study will be used in order to carry out face-to-face sessions with the working group examined in the study with a research-action approach, where improvements to the workshops will be presented based on the results of this study. The purpose is to detect the suitability of the workshops once they have been modified according to the information obtained from the data analysed.

We will study the intention and actual implementation of the workshops in reference to the inclusion of the topics covered by the official study program in the state of Michoacán.

Using a sample an order of magnitude larger, we will analyze the underlying biases of our study, in order to evaluate our results and the viability of their extrapolation.