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## CONSIDERATIONS ON THE RESULTS EVALUATION OF THE GENETIC EPIDEMIOLOGY TRAINING OF APPGENEDU PROJECT

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**Abstract:** Researches in genetics and epidemiology of the last 20 years have been creating the premises for a different approach in the medical act, by taking into account the very specifics of the patient instead of considering the general terms of the disease. One of the limiting factors for development in this direction is, on the one hand, the difficulty to develop an integrated curriculum to educate new professionals and, on the other hand, the current lack of trained personnel in the cross-domain of Epidemiology, Genetics and Bioinformatics fields. The AppGenEdu project acts as an administrative framework for developing a training that brings a new perspective of learning of the integrated studies, by unifying the existing expertise in a single educational frame and giving a formal direction that may facilitate the boost of the precision-medicine approach in Romania, both from the research and medical practice perspective. The project develops and delivers an integrated curriculum bringing together the applied medical genetic disciplines, in order to provide students with the skills required to work in this field, or to introduce applied genetic methods in their professional activities. The intention is that the materials, tested in traditional and on-line classes, and the knowledge developed in this project, to remain available for Carol Davila University, as a basis for a potential optional training for their regular students.

This study aims to highlight some important aspects related to the in-person and on-line training formats that may be taken in consideration for increasing the experience's quality of the learners. Same aspects may be used by trainers for a better and more efficient organization of the learning process. We extract these observations from the training sessions we held within “Integrated Applied Genetics Training – AppGenEdu” Project.

In order to measure the experience of the attendees we use a questionnaire, filled in after the completion of trainings. Each student, disregarding the form of attending, had access to the survey via a dedicated polling system. Responding to this poll was not mandatory, all the feedback being voluntarily offered. In the same time, the experience of the trainers during the both type of sessions has been collected gradually, during the team meetings we ran along the project time frame.

The feedback from the attendees is analyzed in respect with the content provided, effort needed to complete the training, personal preferences for training, quality of the training and impact of the course in the professional life. From the training team perspective we analyze the feedback related with efforts and resources needed to build and deliver such training, together with the ethical aspects brought in by the on-line training.

In the modern days, the need for acquiring new knowledge is present for all of us, but is a paramount importance for the medical professionals. With research in genetics rapidly moving from labs to day-to-day practice, the request for integrated courses is larger than ever. Analyzing the quality of the training and the impact in the professional life for both, in-person and on-line trainings, result that a potential more efficient mode to deliver this kind of courses would be a hybrid approach that combines the individual on-line studies with stages of in-person meetings for clarifications and exercises, combining the pros and potentially eliminating the cons of the two precursor training models. From the trainers perspective a better understanding about the effort and resources necessary to organize such type of training is mandatory, for both in-person and on-line, with a special note for the mindset change needed to successfully deliver integrated courses.

**Keywords:** genetic epidemiology, bioinformatics, online training, in person training, data analysis, precision medicine, ethics in education.

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