

Proposing a Novel Hybrid Short-Term Exchange Program in Biomedical and Health Informatics Education

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Abstract. International student exchange is a valuable opportunity for Biomedical and Health Informatics students to gain new perspectives and experiences. In the past, such exchanges have been made possible through international partnerships between universities. Unfortunately, numerous obstacles such as housing, financial concerns, and environmental implications related to travel, have made it difficult to continue international exchange. Experiences with hybrid and online education during covid-19 paved the way for a new approach that allows for short international exchange with a hybrid online-offline supervision model. This will be initiated with an exploration project between two international universities, each related to their respective institute's research focus.

Keywords. Medical Informatics, Education, International Exchange, IPHIE

1. Introduction

International exchange provides students with experiences that propel their future career. Six university programs in Biomedical and Health Informatics (BMHI) education from various international institutes across Europe, Asia, and the United States have been cooperating for several decades. This cooperation known as the International Partnership in Health Informatics Education, or IPHIE, goes back to 1998 [1]. It aims to prepare faculty and students in BMHI for top international positions in medical information and communication technology with an overarching objective to establish an international network for training and education in this field where they can learn from each other. IPHIE organizes bi-annual masterclasses, shares curricula, and supports faculty and student exchanges for a longer period of time in line with IMIA educational objectives for BMHI [2]. However, student housing and the availability of finances and other

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resources for such travel-intensive activities all present difficulties. Also, new challenges arise related to the environment and sustainable solutions for these travel-intensive activities. These challenges ask for novel, perhaps experimental, ways to support international student exchanges that include less travel-activities and resources, but still provide a valuable international experience for BMHI students. In this paper, we propose a new initiative for a short-term international exchange between two universities, based on our experiences with hybrid and online teaching during the COVID-19 pandemic. This initiative aims to enhance international collaboration, support BMHI research and share best-practices between international universities.

2. Proposed Exchange Program

The proposed exchange program initially involves two universities involved in IPHIE, Heidelberg University hospital (UKHD) in Germany and the Amsterdam UMC (location University of Amsterdam) in the Netherlands. Both institutes are conducting research in the context of mobile Health and are experiencing similar challenges. The Amsterdam UMC performs research on developing inclusive patient satisfaction questionnaires of digital health tools and UKHD is developing a tablet computer based system for digital anamnesis. In both institutions it was found that patients can experience problems understanding the questions because they do not comply with the average language levels of B1. This topic was introduced in assignments during courses on eHealth literacy in both universities' Medical Informatics program. Afterwards, a proposal for a joint four month internship was distributed among students at each site. Supervision for these internships will be provided jointly by both institutions. The students will visit the other university for two to four weeks to have the opportunity to learn from faculty and other students and experience international exchange. Challenges related to housing and finances for international exchange are attenuated with this shorter exchange. After the exchange, a systematic evaluation will be conducted by interviewing the student(s) to assess their experiences and satisfaction with the program, as well as their perceived academic and personal benefits.

This paper proposed a new initiative for short-term international research projects between two universities to facilitate student exchange and medical informatics research. The exchange program will encourage collaboration between the two or more universities, allow the sharing of best practices and research methods between both sites, and ease the opportunities for students to participate in an international research project. We believe that this exchange program will offer an unique opportunity for students to gain experience in medical informatics research and learn from one another from a societal, cultural, and professional perspective. If the evaluation of this approach is positive, we aim to expand this with other institutes involved in IPHIE and encourage other universities to implement this approach as well.

References

- [1] Jaspers MW, Gardner RM, et al. IPHIE: An International partnership in health informatics education. In *Medical Infobahn for Europe 2000* (pp. 549-553). IOS Press.
- [2] Bichel-Findlay J, Koch S, et al. Recommendations of the International Medical Informatics Association (IMIA) on Education in Biomedical and Health Informatics: Second Revision. *International Journal of Medical Informatics*. 2023 Feb 1;170:104908.