

AI and Broker Architecture for an international educational collaboration, a Case Study:
Colaiste Nano Nagle School in Limerick, Ireland, and Irshad High School in Kabul, Afghanistan

Dr. Saay Salim

University of Limerick, Department of Computer Science and Information System.

LERO-The Irish Software Research Center

Email: Salim.Saay@ul.ie

Abstract. Cross-national school collaboration required a secure system, adhering to regulations like the General Data Protection Regulation (GDPR) and similar rules and procedures. However, variations in laws and rules pose challenges for students seeking to access study content from foreign schools. This research focuses on the case study of Afghan schoolgirls desiring online education from an Irish girls' school. Using a case study research method, we analysed collaboration requirements between Irshad High School in Afghanistan and Colaiste Nano Nagle in Limerick, Ireland. We also developed a prototype system architecture for a secure collaboration platform. This platform can be implemented in education systems globally, fostering education globalization and flexibility. It utilizes the internet, mobile, and educational platforms, along with a secure broker interface, facilitating resource sharing, experience exchange, and worldwide education access. To fully implement the system, we use artificial Intelligence(AI) technology to read rules and react based on domestic laws and procedures. This research uses action design research to explore how to incorporate Artificial Intelligence (AI) into the broker architecture. A new architecture with details components and a prototype is the outcome of this research.

Keywords: Artificial Intelligence (AI), School, Collaboration, Broker Architecture, Afghanistan, Limerick