The world is changing rapidly, and linking educational opportunities through technological advancements to economic advancement is a highly discussed topic across fields. In the United States, the majority of schools do not teach computer science, even though a computer science graduate can earn a 40% higher salary than graduates from other majors. Palstart is meeting this critical need in the West Bank by providing a state-of-the-art computer science education center at no cost for students. Enhancing science, technology, engineering, and mathematics (STEM) education for Palestinians in the West Bank is extensively acknowledged as pivotal to Palestine’s long-term economic growth, security available and environmental sustainability in the region. In this work, we review and discuss current research on STEM education in the United States, Latin America, and Africa, drawing on research in sociology and related fields. The reviewed literature shows that different social factors affect the two significant components of STEM education attainment: (i) attainment of education in general, and (ii) attainment of STEM education relative to non-STEM education conditional on education achievement. Cognitive and social-psychological attributes matter for both components, as do structural influences at the family, neighborhood, school, broader cultural level, and ecology. However, whereas commonly used measures of socioeconomic statuses (SES) predict the attainment of general education, social-psychological factors are more important influences on participation and achievement in STEM versus non-STEM education. Domestically, disparities by family SES, race, gender and discrimination persist in STEM education; students in the Occupied Territories lag behind those in some countries with fewer economic resources. Explanations for group disparities within the West Bank and the available international ranking of student performance require more research, and this task is best accomplished through an interdisciplinary approach.
and major research universities is necessary to ensure a STEM-literate workforce and general population required to propel the nation forward into the twenty-first century and beyond. Teaching and learning STEM offers students in West Bank, Palestine, opportunities to make sense of the world they live in and prepare them for the future workforce. Work opportunities in STEM-related careers are some of the fastest growing in the 21st century. This presentation explores the necessities of the STEM curriculum and STEM programs which focuses on the engineering design processes, hands-on inquiry activities, rigorous math and science content, real-world problem solving, and productive teamwork that needs to be implemented in the West Bank education system from K-12 and in the collegiate field as well. This presentation investigates STEM base units that students in the West Bank can be involved in as a collaborative effort to encompass these important skills. The STEM curriculum can then incorporate community involvement and mentorship, as well as after school STEM oriented programs in the forms of extra-curricular clubs and teams. Convocations centered around science and inquiry can be incorporated throughout the year. As a result, many of the units can showcase competitive skills such as local and regional science fairs. Indeed, at the start of the 7th grade, students can be introduced to project-based lessons which continue to build in 8th grade. Students then have STEM pathways to choose from as they graduate into high school and enter into the universities. Palestinian high schools can offer biomedical course or engineering course pathways. For each collaborative STEM unit, the concept is introduced during a science class activity but is built upon in Mathematics, Technology, Social Studies, Language arts, and Unified Arts classes. Each unit focuses on engineering and/or mathematics but includes communication skills with technology. Being connected is part of the learning process. Palestinian middle schools and high schools can even utilize one-to-one technology. STEM inquiry curriculums can allow educators to use access to technology in connecting students with appropriate local and world communities that are rich sources of learning. The gathering will also present methodologies that will help to prepare elementary, secondary and junior college students for an ever-changing global workforce, as well as address the growing mismatch between skills learned in the classroom and its application in the workforce as found in OECD countries like Israel.