

Understanding challenges to Students' self-regulated learning (SRL) in higher education under the circumstances of COVID-19 pandemic: A large scale online survey in Sweden

The Centre for Empirical Research on Information Systems (CERIS) of the Informatics Department has recently initiated a new research theme called “**ICT for Crisis Management (ICT4CM)**“. Under this theme, the researchers aim at conducting, as well as supporting research related to ‘crisis’ issues that could significantly disrupt the harmony of our daily lives due to a sudden or unplanned ‘harsh environment or event(s)’ at individual/societal, organizational and national levels. Some examples of such issues include epidemics and pandemics (e.g. COVID-19), war and conflicts, displacement, natural disasters (e.g. floods, storms, earthquakes), scarcity of resources, pollution, cyberbullying etc. The research under the ICT4CM is multidisciplinary and aim to undertake a range of research problems, applying significant theoretical and practical perspectives in the contexts of both developed and developing countries. In regard to ‘crisis management’, researchers are particularly interested in investigating what impactful roles ICTs play in forecasting, tracking/identifying, managing and disseminating information which are crucial for neutralizing (to prevent and/or cope with) a specific crisis in a given context. It has been evident that an uncontrollable and/or mismanaged crisis can have a devastating impact on lives (e.g. health, nutrition), and basic services (e.g. education, work). The 2030 Agenda for ‘Sustainable Development’ envisions 25 targets related to fragility and disaster risk reduction in 10 of the 17 SDGs which indicate disaster and crisis management reduction as a core development strategy. On the other hand, ICTs are recognized as the backbone of today’s digital economy and one of the main enablers of accelerating the achievement of all 17 goals of the Sustainable Development agenda.

As part of materializing the agenda for ICT4CM, the lead researchers at the Informatics Department collaborated with researchers at the Faculty of Psychology of the University of Vienna aiming at investigating challenges for students’ self-regulated learning (SRL) in higher education given the ongoing Covid-19 pandemic situation. Self-regulation and the competence of SRL are considered important determinants of learning outcomes, well-being, and ultimately health. However, many studies show that learners often do not apply SRL in their everyday life and find corresponding strategies tedious and unnecessary. Accordingly, the theoretically assumed positive effects of SRL are not consistently proven. In the wake of the COVID-19

pandemic, however, millions of students worldwide now face a fundamentally altered situation after universities made an unprepared switch to home learning, thus self-regulated learning and studying have become a necessity. Therefore, a longitudinal study under this pan-European initiative, that includes many other universities in Europe, examines how students in higher education are affected psychologically and manage to adapt and respond to the current pandemic situation. Like in many other parts of the world, on March 17, 2020, all Swedish universities were closed by the government in an attempt to slow down the spread of SARS-CoV-2. In order to facilitate the pan-European research initiative, the researchers at the Informatics Department conducted a large scale online survey in the context of Sweden. This survey (<https://bit.ly/covid19-oru>) was distributed among all the universities and university colleges in Sweden and made available for all enrolled students during the period between May 19th, 2020 and June 10th, 2020. Participation in this survey was voluntary and compliance with all GDPR standards. The survey took on an average 15-20 minutes to complete 90 questionnaires on 10 thematic areas related to SRL, including the use of technologies in remote learning. Overwhelmingly, we have received responses from 1782 respondents (of which, 18% from Örebro University) during the 23 days of survey period.

As evident in the preliminary results, overall there has been a positive outcome in remote learning. According to the survey, overall students (85%) felt good and confident in such learning arrangements. While 93% students worked from their homes, 33% reported that they have technical limitations while learning online e.g. slow internet, lack of appropriate devices for work etc. On another question, 88% informed that they were able to work well with the forms of digital teaching and learning being used in the current situation. Nearly 80% of the participating students somewhat agreed on the statement that most of their instructors are familiar with digital teaching and they felt supportive by their course instructors. In regard to the university study administration, 72% felt that they were well-supportive. Notably, 87% participants responded that the university IT support services were efficient and effective in responding to various issues related to the use of remote learning tools in the current situation. Despite having some challenges due to the sudden undesirable pandemic crisis, almost 95% students expressed optimism that even though there were some difficulties everything will turn out all right over time.

Two similar kinds of surveys have also been conducted in Wuhan, China and Bangladesh in order to get comparative insights. This project expects to publish papers and arrange dissemination seminars and workshops jointly with collaborating European researchers.

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