



# הרשות למחקר ולהערכה והמרכז לקידום ההוראה



## המרחב הפיזי והמקוון בחינוך

יושבת ראש המושב: ד"ר שירלי מידז'נסקי, מכללת אורנים

הרצאה ראשונה

**תפיסות מורים לגבי הערכה לשם למידה בפלטפורמת הקנבס וביטויי ויסות עצמי בקרב תלמידיהם**

### **Teachers' Perspectives on Assessment for Learning via Using the Canvas Platform and Their Students' Self-Regulation Expressions**

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מכללת אורנים

In the 21st century, digital tools hold promise for advancing active learning and refining assessment processes. Learning Management Systems (LMS), exemplified by platforms like Canvas, have become integral to educational technology for their adeptness in collecting and analyzing assessment data. This case study delves into science and mathematics teachers' perspectives on utilizing the Canvas LMS for Assessment for Learning (AfL) and examines students' Self-Regulated Learning (SRL). Integrating AfL components into the LMS platform could foster SRL because the information provided to students in real-time formative feedback allows them to be cognitively, metacognitively, and motivationally involved in learning. As a result, students activate relevant monitoring and regulating strategies. Data collection encompassed semi-structured interviews with 18 teachers and the scrutiny of documents illustrating assessment processes and students' SRL expressions via Canvas LMS. These documents included assignments, quizzes, video assessments, student-teacher email correspondences, surveys, responses, reports, etc. Data analysis was based on a thematic analysis approach and theoretical literature. The findings reveal a consensus among teachers regarding assessment as a dynamic, multidimensional process that provides continuous snapshots of student understanding. The observed approach reflects a hybrid assessment, amalgamating summative and formative elements and offering diverse avenues for student success. Teachers employed various assessment components, including games, project-based learning, laboratory reports, and technology-mediated tasks such as video-embedded

assessments. Auto-graded assessments, providing immediate feedback, gained widespread usage. Regarding students' self-regulated learning (SRL), evidence indicates the prevalent use of monitoring tools such as to-do lists and Canvas email. While self-assessment and Canvas assignments promote reflective and planning activities, tools dedicated for these purposes are less commonly utilized. Limited evidence exists for explicit time management practices, but some educators estimate that a significant majority of students meet task deadlines proficiently. This study contributes to AfL and SRL literature, providing valuable insights into the interplay of AfL, LMS, and SRL for educators and administrators aiming to enhance student self-regulation during AfL.

**Keywords:** self-regulated learning; learning management systems; assessment for learning; Canvas LMS; information and communication technologies

הרצאה שנייה

**שימוש בווידאורבוט מבוסס בינה מלאכותית לקידום מיומנויות ויסות עצמי בלמידה בקרב סטודנטים בתחומי המדע והטכנולוגיה**

## **Using AI-powered Virtual-Human Training Intervention to Support STEM-Major Students' Self-Regulated Learning**

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Students who intend to discontinue their science, technology, engineering, and math (STEM) majors in the first year, acknowledge that they lack skills needed to perform tasks critical to undergraduate courses such as planning, goal setting, self-monitoring and reflection. Several training interventions have been designed to address this perceived skill gap; yet, they mostly achieve small to medium effects on learning behaviors and performance. However, these programs require large investment of students' and instructors' time and effort. This limits the programs' applicability to large lecture course formats, commonly employed in early undergraduate STEM coursework.

The current study examines whether AI-powered virtual-human training can support STEM-majors' self-regulated learning (SRL) strategy practice and use. One hundred and fifty first-year STEM-major students participated in the study. Using a two-group quasi-experimental design, 100 treatment-group students were given access to virtual-human SRL training. The control group (N=50) was given access to a digital SRL training booklet. Students completed SRL virtual-human training at a time and pace of their choosing. Behavioral variables representing SRL activity (planning, goal setting, self-monitoring and reflection) were followed in the study weeks. Traces of SRL learning behaviors were extracted from the course LMS. Multivariate

analysis of covariance was conducted to examine main effects of virtual-human training on SRL behaviors.

Results indicate that virtual-human training had a significant effect on students' SRL strategy practice and use. These findings suggest that a brief virtual-human training can increase desirable learning behaviors (planning, goal setting, self-monitoring and reflection) in a STEM project, with minimal cost to learners or instructors. Implications for future design of virtual-human interventions will be discussed. The session will conclude with a live demo of virtual-human training.

**Keywords:** AI, self-regulated learning, STEM, student success, video-bots

הרצאה שלישית

גננות, ילדים, טכנולוגיות ומה שביניהם: השוואת חקר מקרה בשלושה גנים

## **On inter-relationships between teachers, technologies, and children in makerspace environments: A comparative case study in preschools**

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Our study explores the integration of makerspaces in early childhood education, focusing on how three pioneering teachers established and utilized these spaces. Makerspaces are designated spaces that include workstations and a variety of materials and tools, which enable the design and construction of technological artifacts and prototypes. In the current research, we focus on the dynamics between teachers, technologies, and children, assessing the design and use of makerspaces, the role of advanced technologies, and of scaffolding methods.

Utilizing a comparative case study, we selected three preschools with diverse backgrounds to explore the implementation of makerspaces. Data collection included observations, interviews, photographs, and videos, following ethical approvals and consent from relevant parties. Results, regarding advanced technologies, indicate that robotics and 3D printing were available at all sites but required substantial teacher intervention, limiting children's independent use. As of makerspaces and activities, research points out that the design of makerspaces and relevant activities, as well as the teachers' roles, were designed in line with teachers' goals for these spaces. Five distinct forms of teacher scaffolding were identified; these provide limited support in the making process across the three sites.

This study presents new perspectives on integrating makerspaces in preschool settings, emphasizing the need for age-appropriate strategies and interventions. By examining the interplay between teachers, technologies, and young learners, we underline the potential of makerspaces to enhance creativity and self-efficacy, while emphasizing the necessity of tailored support to maximize their educational impact.

**Keywords:** comparative case study; early childhood education; makerspaces; teachers' perceptions; advanced technologies; scaffolding

הרצאה רביעית

**הבדלי מגדר בתפיסות הציבור כלפי מידת החומרה של הטרדות מיניות במרחב הפיזי ובמרחב המקוון**

**Gender differences in public perceptions of severity of sexual harassment in offline and online space**

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From the 1960s onwards, the evaluation of public perceptions about the seriousness of crimes has become a common research topic with implications for various criminal justice procedures (Adriaenssen et al., 2020). Despite broad academic interest in this topic, only few studies examined public perceptions of sexual harassment, both offline and online. Sexual harassment is defined as an unwanted sex-related behavior (verbal, visual, or physical), that the recipient appraises as offensive or threatening (Call, 2021). To fill this gap in the literature, the research's goal was to explore people's perceptions about the seriousness, harmfulness and wrongfulness of offline and online sexual harassment. Data were collected through an online survey conducted by a well-known commercial company that specializes in the creation and maintenance of a large, representative national panel of internet users in Israel. The survey was conducted in January 2023 among adult (18+) internet users (N=525). The sample included 52% females and 48% males; 29% were 18-29 years old, 36% were 30-44 years old; 27% were 45-59 years old; and 8% were 60 years old and over. The results show that sexual harassment is regarded as a less serious or harmful behavior, but one that is morally more wrong. The participants generally regarded online sexual harassment as less serious than offline sexual harassment. Finally, gender is a significant predictor of the perceived seriousness of both offline and online sexual harassment. Our results imply that even if significant progress has been made in the "social branding" of sexual harassment, it is necessary to continue to establish these illegal behaviors as harmful offenses. Research consistently shows that assessments of offenses as harmful can guarantee the legitimacy and moral credibility of criminal policy, and the extent to which individuals are inclined to obey the law (Dardis & Richards, 2022).

**Keywords:** public perception of the seriousness of crimes; online sexual harassment; face-to-face sexual harassment; gender