

# Perception of learning environment and learning needs as a foundation for developing an integrated self-determined learning strategy in microlearning

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## Abstract

Learning needs are increasingly acknowledged as critical indicators of academic motivation and student engagement in higher education. Grounded in Self-Determination Theory (SDT) and heutagogical principles, this study explores how students' perceptions of their learning environment influence the development of their learning needs, with autonomy-supportive teaching serving as the conceptual framework. Employing a non-experimental cross-sectional survey design, data were gathered from 337 students and 64 lecturers across various academic programs in Indonesia. Validated Likert-scale instruments were used to assess lecturers' autonomy support, students' perceptions of the learning environment, and students' learning needs. Descriptive statistics, Pearson correlation, and simple linear regression were used for data analysis. The results demonstrated high student perceptions of both the learning environment ( $M = 3.20$ ) and learning needs ( $M = 3.22$ ). A very strong positive correlation emerged between learning environment and learning needs ( $r = 0.793$ ,  $p < 0.001$ ). Regression analysis further revealed that the learning environment accounted for 62.9% of the variance in learning needs ( $B = 0.812$ ,  $R^2 = 0.629$ ). Although individual lecturer and student data were not directly matched, high scores of autonomy support from lecturers ( $M = 3.32$ ) provided conceptual support for the study's framework. These findings underscore the significance of autonomy-supportive learning environments in fostering meaningful learning needs. They highlight the value of aligning curriculum design with student-centered approaches that promote autonomy, competence, and relatedness. Practical implications point toward the strategic development of educational practices and policies that enhance student engagement through supportive learning contexts.