

## ABSTRAK

### ANALISIS *GENERALIZED ESTIMATING EQUATION* (GEE) BERBASIS SKOR FAKTOR: STUDI KASUS *GOAL-SETTING* MAHASISWA

Oleh

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*Generalized Estimating Equation* (GEE) merupakan pendekatan statistik yang digunakan untuk menganalisis data longitudinal dengan mempertimbangkan korelasi antar waktu pada subjek yang sama. Pada penelitian ini, analisis dilakukan dengan mengintegrasikan skor faktor hasil analisis *Confirmatory Factor Analysis* (CFA) ke pendekatan GEE. Dengan menggunakan pendekatan GEE berbasis skor faktor, tujuan penelitian ini adalah untuk mendapatkan model pengaruh *self-observation*, *self-judgment*, *self-efficacy*, dan *self-regulated* terhadap *goal-setting* mahasiswa serta menghasilkan rumusan intervensi pendidikan berdasar pada data dan teori psikologi sosial-kognitif. Data penelitian dikumpulkan dari mahasiswa Fakultas Keguruan dan Ilmu Pendidikan (FKIP) PTMA semester tiga selama tiga periode waktu. Teknik sampling yang digunakan adalah *cluster random sampling*. Hasil analisis menunjukkan bahwa (1) hasil CFA menunjukkan bahwa struktur faktor variabel *self-observation*, *self-judgment*, *self-efficacy*, *self-regulated*, dan *goal-setting* terkonfirmasi dengan baik dan sesuai dengan model teoretis; 2) hasil GEE klasik, GEE klasik tanpa *outlier*, dan GEE *robust* menunjukkan bahwa keempat konstruk *self-observation*, *self-judgment*, *self-efficacy*, dan *self-regulated* berpengaruh positif dan signifikan terhadap *goal-setting*; (3) model matriks korelasi kerja *unstructured* sebagai representasi longitudinal yang layak digunakan untuk merepresentasikan pengaruh *self-observation*, *self-judgment*, *self-efficacy*, dan *self-regulated* terhadap *goal-setting*; serta (4) bentuk intervensi pendidikan yang dapat direkomendasikan yaitu pelaksanaan pembelajaran yang fleksibel dan reflektif seperti *learning journals*, *peer mentoring*, dan *self-assessment student* yang mendukung mahasiswa mengenali potensi, mengelola sumber daya, serta menavigasi tantangan akademik dan profesional secara efektif.

**Kata kunci:** *generalized estimating equation*; *confirmatory factor analysis*; skor faktor; gamma; *goal-setting*.

## **ABSTRACT**

### **ANALYSIS OF GENERALIZED ESTIMATING EQUATION (GEE) BASED ON FACTOR SCORE: A CASE STUDY OF GOAL-SETTING STUDENTS**

**By**

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Generalized Estimating Equation (GEE) is a statistical approach used to analyze longitudinal data by considering correlations across time on the same subject. In this study, the analysis was conducted by integrating the factor scores from Confirmatory Factor Analysis (CFA) into the GEE approach. By using the factor score-based GEE approach, the purpose of this study was to obtain a model of the influence of self-observation, self-judgment, self-efficacy, and self-regulated on student goal-setting and to produce an educational intervention formulation based on the data and theory of social-cognitive psychology. The research data were collected from third-semester students of the Faculty of Teacher Training and Education (FKIP) PTMA over three time periods. The sampling technique used was cluster random sampling. The results of the analysis showed that (1) the CFA results showed that the factor structure of the variables self-observation, self-judgment, self-efficacy, self-regulation, and goal-setting was well confirmed and in accordance with the theoretical model; 2) the results of the classic GEE, classic GEE without outliers, and GEE robust show that the four constructs of self-observation, self-judgment, self-efficacy, and self-regulated have a positive and significant effect on goal-setting; (3) the unstructured working correlation matrix model as a longitudinal representation that is suitable for representing the influence of self-observation, self-judgment, self-efficacy, and self-regulated on goal-setting; and (4) the form of educational intervention that can be recommended is the implementation of flexible and reflective learning such as learning journals, peer mentoring, and student self-assessment that supports students in recognizing potential, managing resources, and navigating academic and professional challenges effectively.

**Keywords:** generalized estimating equation; confirmatory factor analysis; factor score; gamma; goal-setting