INTERNALISASI BUDAYA JAWA DALAM MENGEMBANGKAN KECERDASAN *LOGICAL MATHEMATICS* DAN *INTER-INTRAPERSONAL* CALON GURU KIMIA PADA PERKULIAHAN ELEKTROMETRI BERBASIS AKTIVITAS INKUIRI LABORATORIUM

Abstrak

Tujuan Penelitian ini adalah untuk menghasilkan model perkuliahan elektrometri berbasis aktivitas inkuiri laboratorium (PEBAIL) yang dapat meningkatkan kecerdasan *Logical mathematics,* kecerdasan *inter-intrapersonal*, dan penguasaan konsep mahasiswa calon guru kimia dalam internalisasi budaya Jawa. Penelitian dirancang menggunakan disain *mixed method* dengan model *Embedded Experimental*. Model diimplementasikan pada mahasiswa Prodi Pendidikan Kimia LPTK Negeri di Semarang, dengan melibatkan 29 mahasiswa pada kelas eksperimen dan 35 mahasiswa kelas kontrol. Mahasiswa di kelas eksperimen mengikuti model PEBAIL, sedangkan mahasiswa di kelas kontrol bekerja di laboratorium dengan prosedur praktikum seperti biasa. Data penelitian dikumpulkan berupa tes bentuk uraian untuk mengukur kecerdasan *Logical mathematics* dan penguasaan konsep. Lembar observasi digunakan untuk mengukur kinerja, kecerdasan *inter-intrapersonal,* dan budaya jawa. Analisis data menggunakan prinsip *Quan-(qual).* Analisis kuantitatif untuk mengukur penguasaan konsep dan *Logical mathematics* sebelum dan sesudah implementasi model (N-gain). Analisis kualitatif digunakan untuk mengolah data observasi, angket, dan tugas. Hasil temuan penelitian ini menunjukkan bahwa model PEBAIL dapat meningkatkan penguasaan konsep, kecerdasan *Logical mathematics*, dan keterampilan praktikum. Selain itu, model yang diimplementasikan bersinergi dengan internalisasi budaya Jawa dapat mengembangkan kecerdasan *inter-intrapersonal,* sehingga apabila diimplementasikan berkelanjutan dapat membangun *habits of mind*. Hasil penelitian yang lebih terinci menunjukkan bahwa kecerdasan *Logical mathematics* mahasiswa kelas eksperimen diperoleh pada kategori sedang (%N-gain= 61,37) lebih baik dibandingkan mahasiswa kelas kontrol (% N-gain = 42,99). Peningkatan penguasaan konsep mahasiswa kelas eksperimen termasuk kategori sedang (%N-gain = 60) lebih baik dibandingkan kelas kontrol (% N-gain = 42). Peningkatan kecerdasan *intrapersonal* pada kelas eksperimen terjadi dengan rerata capaian 84,4%, lebih baik dari kelas kontrol dengan rerata 73,6%. Peningkatan kecerdasan *interpersonal* pada kelas eksperimen dengan rerata capaian 84,6 lebih baik dari kelas kontrol dengan rerata capaian 71,2%. Budaya jawa menunjukkan korelasi positip dengan kecerdasan *interpersonal* (r= 0,778) dan *intrapersonal* (r= 0,813). Budaya Jawa berpengaruh positip terhadap kinerja PEBAIL(r= 0,934). Mahasiswa memberikan tanggapan yang positif terhadap implementasi perkuliahan dengan model PEBAIL dalam budaya jawa.

JAVANESE CULTURAL INTERNALIZATION INTO DEVELOPING LOGICAL MATHEMATICS AND INTER INTRA-PERSONAL INTELLIGENCE ON THE CHEMISTRY PROSPECTIVE TEACHERS IN THE ELECTROMETRY BASED ON INQUIRY LABORATORY ACTIVITIES

Abstract

This study aims to produce a model of learning electrometric based on laboratory activities inquiry (PEBAIL). This model was designed to improve logical mathematics intelligence, inter-intrapersonal intelligence, and conceptual understanding of prospective chemistry teachers in the internalization of Javanese culture. Conducted with the mixed methods and embedded experimental design, the model was then implemented on using student of prospective chemistry teacher of LPTK in Central Java (29 students). It was also used a control class consisting of 35 students studying the course with the same material and laboratory activities. The test was carried out to measure Logical mathematics intelligence and mastery of concepts (non-objective test). The Observation sheets were used to measure performance, inter-intrapersonal intelligence, and Javanese culture. Data analysis used the principle of Quan-(qual). Quantitative analysis was used to measure mastery of concepts and logical mathematics intelligence before and after the implementation of the model (N-gain). Qualitative analysis was used to process the data observations, questionnaires, and tasks. The Research shows that the PEBAIL model improved mastery of concepts, mathematics Logical intelligence as well as inquiry laboratory skills. In addition, the model implemented together with the internalization of Javanese culture increased the inter-intrapersonal skills and Javanese culture as well as habits of mind. The more detailed results indicates that the Logical intelligence mathematics of experimental class students obtained in the medium category (% N-gain = 61.37), better than the control class students (% N-gain = 42.99). The increase of student mastery of the concept of experimental classes was moderate in category (% N-gain = 60), better than the control class (% N-gain = 42). The increase of intrapersonal intelligence in the experimental class was 84.4% in average, better than the control class as much as 73.6%. The improving of interpersonal intelligence in the experimental class is 84.6 in average, better than control classes with the average 71.2%. It was also showed the positive correlation between Javanese culture with interpersonal intelligence (R = 0.778) and intrapersonal (r = 0.813). More over, it reveals that Javanese culture shows positive correlation with the performance of PEBAIL (r = 0.934). Students responded positively to the implementation of the model PEBAIL lectures in Javanese culture.