

Factors affecting practical knowledge acquisition of pre-service computer science teachers during the practicum: a multiple regression analysis

ABSTRACT

This study aimed to examine and analyze the relationship between five factors in the practicum setting and six components of practical knowledge acquisition among pre-service computer science teachers. A total of 219 Chinese pre-service computer science teachers were invited to attend this study. The method of data analysis was using multiple regression analysis. The results can be summed as follows: (a) The factor of knowledge preparation, which has strong practicality in practicum, significantly predicted the five components of practical knowledge acquisition; (b) Teaching reflection factor as a meta-cognitive and a characteristic of higher-order thinking significantly predicted the three components of practical knowledge acquisition; (c) Instructional design factor as a process of systematic reflection significantly predicted the three components of practical knowledge acquisition; (d) Both teaching practice and teamwork factor significantly predicted the two components of practical knowledge acquisition. We also suggested that teacher educators should focus on the integration of theoretical knowledge and practical knowledge by considering the effects of the five factors.

Keyword: Pre-service computer science teachers; Practical knowledge; Teachers practicum