

Developing of the Measurement Model of Self-Directed Learning Characteristics

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Introduction

- **Self-directed learning is a trait important for education and in everyday life. Theorists disagree on the number of key traits involved in self-directed learning.**

Introduction

- **According to Knowles (1975) there are nine traits, according to Guglielmino (1977) there are eight traits, Skager (1978) claims there are seven traits, Isarawat (2000) suggests there are only three, and the Educational Research Division (2000) suggests eight traits. Accordingly, these traits both differ and overlap. The structures of the various factors are not consistent.**

Introduction

- **This research aims to develop a model of self-directed learning characteristics of technical college students by factor analysis and multidimensional item response analysis, and to validate the self-directed learning model.**

Methodology

- **Samples were two groups. The first sample was used to analysis the model factors (230 students) and the second sample, used to validate the model (1,563 students). The instruments were 44 items (four choices).**

Methodology

The research procedure was as follows.

- **First, relevant documents were collected. Additional studies on self-directed learning were conducted.**
- **Secondly, research instruments were developed according to factors and the learning sequence.**

Methodology

- **Third, the self-directed learning factors were developed and confirmatory factor, and multidimensional item response analysis, were performed. Fourth, validate of the self-directed learning model. Confirmatory analysis was conducted using the LISREL.**

Results

1. Model analysis to model development

- **Analysis of the self-directed learning model using confirmatory factor analysis, factor loading was found to be between -.14 and .61. chi-square test = 933.94 (df=865, p=.051), GFI=.84, AGFI=.82, RMR=.062, RMSEA=.019.**

Results

- **Analysis of the self-directed learning model using multidimensional item response analysis, the OUTFIT MNSQ for all the items was between .93 and 1.11, while the INFIT MNSQ statistics for all the items were between .94 and 1.10, the structure had deviance statistics (G^2)=26655.297, parameters=168, Akaike information criterion (AIC)=26991.297.**

Results

- **It can be seen that factor analysis and multidimensional item response analysis were congruent with the agreement rate. This congruence was .93.**

Results

2. Validation of the model

•Examining the structural of self-directed Learning from confirmatory factor analysis, The chi-square test statistic was 418.96 (df=376, p=.062) with no statistical significance. Other statistics were GFI= .98, AGFI= .98, RMR=.023, and=.008. The Index of the model showed congruence between the self-directed learning structure and empirical data.

Implications for policy/Practice

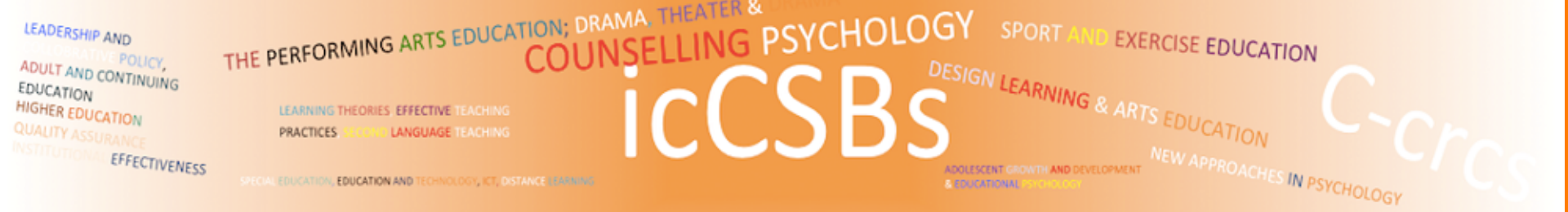
- **Regarding implementation, the self-directed learning model should be implemented among technical college students, in terms of examination and interpretation, in order to develop a reliable self-directed learning model suitable for their age groups and schools.**

Implications for policy/Practice

- **The self-directed learning model was consistent with experimental data. Future studies should aim to develop a self-directed learning system by way of self-assessment.**

Conclusion

- **The model developed from the Guglielmino's theory and the self-directed learning model was consistent with empirical data. The standard of the self-directed learning model was interpreted on four levels: awareness, interest, attempts at learning, and actual practice.**



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