Investigating Problem-Solving Behavior in Different Ethnic Students

Chen, Bing-Hong (School: Concordia Middle School)

Since Taiwan Education Bureau passed the “Three Types of Experimental Education Act”, many Indigenous Experimental schools have sprung up. Seeing the advocacy of "Culturally Responsive Curriculum & Teaching" has been operating positively in America, Canada, New Zealand and many other countries, this study will hence first take the "Arithmetic Progression & Arithmetic Series" as the core concept to design the "Mathematical Contexts with Tous People Culture Connotation" and "Mathematical Contexts with Han People Cultural Connotation" separately. Second, exploring four groups of students’ different mathematics problem-solving strategies through "Eye Tracking Technology." In this study, each group of students is required to read through and complete the problems of two different well-designed "Mathematical Context with Cultural Connotation" tests. It is expectable to attain to an effective analyze through three aspects --- studying peers’ the mathematics problem-solving performance and exanimating their "overall eye movement index" and "the eye movement index of the course analysis" at the same time. Hopefully, the result can anticipate the right route for further education direction and benefit our aboriginal education policy in the future.

Awards Won: