Identification of Children with Learning Disabilities of Math in Korea: With Special Regard to Early Numeracy

Kijyung Lee  
University of South Carolina  
Dong-il Kim  
Seoul National University

Abstract

The present study is a literature review that emphasizes the necessity of developing measure for child’s early numeracy skills. First of all, the present study searched for evidences of effects of early identification and intervention through the literature review. Even though early identification of child with learning disabilities brings about very complex issues, we stress the need of early identification for at-risk children in mathematical learning. Since mathematical skills are generally developed hierarchically, deficits in informal math knowledge may cause problems in formal math knowledge in school. Thus, for early identification of at-risk children in mathematics, informal knowledge, such as number sense, need to be examined, and investigate normal development pattern. This work is to be the foundation for admitting the importance of early identification in early numeracy, and to be the step forward in developing a standard measure for children with difficulties in mathematical areas.

Key words: early identification, learning disabilities with mathematics, number sense

I. Introduction

The importance of early identification of children who are likely
to experience later academic difficulties in school has been emphasized in the field of special education. Early identification refers to the practice of screening infants and preschool children in an attempt to discover those likely to be at-risk of experiencing school problems at a later time (Mercer et al., 1996). The purpose of early identification is to determine which children have developmental problems that may be obstacles to learning or that place children at-risk (National Joint Committee on learning Disabilities, 2006). The importance in the practice is the assumption that problems in school can be decreased if intervention is initiated prior to schooling.

Early identification in academic problems has been emphasized for couple of reasons (Lago, 2007). First, children are most receptive to positive changes during early developmental periods (Tramontana, Hooper, & Selzer, 1988). Second, research in early intervention has demonstrated that early identification and remediation could reduce the risk of later academic difficulties in preschool children (White, 1986). In addition, early identification has implications for families of exceptional children. When problems are identified early, family acceptance can quickly begin to provide additional support for intervention and service efforts for preventing serious condition (Hayden, 1974).

The purpose of this review paper is to stress the importance of early identification in mathematics and to suggest how this may be carried out. In this paper, effects of early identification and intervention are reviewed at first. Early identification of child with learning disabilities brings about very complex issues. However, results of related studies reported that efforts of early identification diminished the risks of future problems in school. Therefore, identification via confirmed system and measurement should be attempted. For these trials, system and measurement will be reviewed in the last section.