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Kindergarten oral language skill: A key variable in the intergenerational transmission of socioeconomic status

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Abstract

In this paper we test whether oral language development during the preschool years helps explain the positive relationship between family socioeconomic status (SES) and children's elementary school performance. In particular, we test for the portion of the SES effect on 2nd to 4th grade reading, 3rd to 4th grade mathematics, and overall teacher-rated performance that is explained by oral language ability measured when kindergarten begins. We analyze a unique data set containing unusually comprehensive measures of kindergarten oral language ability. The data are for white Midwestern children and their families. Estimation via structural equation modeling shows that oral language skill at kindergarten entry explains most of the effect of SES on elementary school performance. Since other studies have shown that elementary school performance strongly determines later educational attainment, much of the intergenerational transmission of socioeconomic status occurs when the child is very young.

Keywords: Kindergarten oral language ability; Socioeconomic status; Educational achievement; Socialization

Educational performance during K-12 strongly predicts stratification outcomes throughout the life course (Entwisle, Alexander, & Olson, 1997; Sewell, Hauser, & Featherman, 1976), and as longitudinal studies of educational achievement accumulate, we continue to find that early educational performance is the best predictor of later educational performance. In recent research, this inference has been extended back down the grade progression to show that performance in early elementary school is strongly predictive of high school performance and later educational attainment (Alexander, Entwisle, & Horsey, 1997; Duncan, Yeung, Brooks-Gunn, & Smith, 1998; Ensminger & Slusarcik, 1992; Entwisle, Alexander, & Olson, 2005; McLeod & Kaiser, 2004), and that pre-kindergarten school readiness is strongly related to elementary school performance (Lonigan, Burgess, & Anthony, 2000; Neuman & Dickinson, 2002; Rouse, Brooks-Gunn, & McLanahan, 2005).

As a consequence, evidence is accumulating that the preschool period (the first 5 years of life) is crucial for

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the transmission of socioeconomic status (SES) from parent to child (Duncan, Brooks-Gunn, & Klebanov, 1994; Farkas & Hibel, 2008; Guo, 1998; Hart & Risley, 1995; Lee & Burkham, 2002; Mayer, 1997). But what are the primary mechanisms by which this transmission occurs? "Parenting practices" is one answer. Thus, Guo and Harris (2000) find that in the NLSY79 data, home observation for measurement of the environment (HOME) score measures of the cognitive and emotional support provided by parents, as well as the physical condition of the home, fully explain the lower cognitive performance of children from low-income families (for similar analyses and conclusions see Bradley, Caldwell, & Rock, 1988; Bradley, Corwyn, McAdoo, & Garcia-Coll, 2001; Duncan et al., 1994; Mayer, 1997). In these data, "cognitive support" is measured by the number of children's books in the home, parental help with learning letters, numbers, and shapes, and the frequency of attending performances or visiting museums. That is, the focus is on organized educational activities that parents undertake with their child. Thus, more highly educated parents involve their children in a greater number of educational activities, spend more time instructing and helping with schoolwork, and hold higher educational expectations for them.

Closely related to this view is research emphasizing the sense of autonomy and entitlement fostered in children raised in higher-SES households, versus one of obedience and constraint fostered in lower-SES households. Bowles and Gintis (1976) and Kohn, Schooler, Miller, Miller, and Schoenberg (1983) saw these childrearing differences as following from the differential occupational demands and cultures experienced by higher- and lower-SES parents. Lareau's (2003) ethnographic study reports similar patterns, which she also attributes to the differential life experiences of parents from different social strata. (Here we view social strata as defined by the usual three components of SES—parental education, occupational status, and income. In the present study we have measures of two of these—education and income. By keeping these separate, we follow the suggestion of Kingston (2000), that these dimensions be disaggregated, and the effects of their elements measured separately.)

Complementing these perspectives is a body of literature that focuses on SES differences in the oral language skills that children learn from their parents. Bernstein (1975) and Heath (1983) found that SES is a strong determinant of the ways in which parents verbally interact with their children, and that much of this linguistic socialization occurs via unstructured family conversations and activities. As documented by Hart and Risley (1995), better-educated parents speak far more words to their children, using a much larger vocabulary, during the period from birth to 36 months of age, than do less-well educated parents. As a result, by as early as 36 months of age, large SES differences have already emerged in the vocabularies used by these children themselves. Farkas and Beron (2004) found that this SES-based vocabulary gap continues to grow during ages four and five, so that when children enter first grade around age six, the oral language basis for school readiness contains a very large SES gap. This results from the dramatically varying cultures of child-raising across SES levels. A consequence is that higher-SES children possess oral language skills and culture that are particularly conducive to early academic success. It is *this* possibility that we test for here. If it can be shown that early oral language skill accounts for the differential academic success of higher-SES children, it will support the emerging view that SES transmission occurs very early, and is strongly affected by parenting practices during the preschool ages.

Our data contain unusually comprehensive measures of children's oral language skill measured during kindergarten. We will thus be able to estimate a model in which kindergarten oral language skill mediates the effects of parental SES, as indicated by measures of mother's education and family income, in predicting elementary school outcomes in reading and mathematics. Our research thus makes two primary contributions. First, we test the extent to which oral language skills acquired during the preschool ages mediate the effect of children's SES background on elementary school performance. Second, we demonstrate this relationship with the most complete measure of child language skill available, the Test of Oral Language Development (TOLD-2), which is a more comprehensive assessment than traditionally used measures of language, e.g., the Peabody Picture Vocabulary Test (PPVT). In addition to picture vocabulary, the TOLD-2 assesses abilities in oral vocabulary, sentence imitation, grammatical understanding, and grammatical completion; thus, we have a highly robust measure of oral language skill at the beginning of children's formal schooling.

A limitation of our study is that the data were collected as part of a study targeting language impairment. They were collected from white Midwestern children and their parents. Thus, our results do not generalize beyond this group. Further, because our data lack twins or even siblings, we cannot rule out a genetic explanation for the effects we observe. However, we will be able to control a measure of the child's non-verbal intelligence