

SCHOOL READINESS TESTING

Rationale
Problems
Strengths, Weaknesses of Tests

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1. Introduction

The question of school readiness is a recurrent one. As early as the sixteenth century, the question was raised as to "what age children should be sent to school, for they should neither be delayed too long, so that time is not lost, nor hastened too soon, at the risk of their health"(Friesen, 1984). ✓

The question was addressed by Arnold Gesell of the Gesell Institute of Human Development. He believed that age was unrelated to behavioral maturity and an instrument could assess developmental level and readiness for school. Testing the proposition in 1957, a correlation of .74 was found between results of three instruments and actual school placement six years later(Ilg & Bates, 1972). Subsequently the Institute recommended a programme for developmental placement to determine when children were ready for school.

Gesell argued that students who entered school too early for their development would experience possible failure and lowered self-esteem(Solem, 1981). Senior (1986) has also suggested that placement of a developmentally young child with peers leads to behaviour problems, reading difficulties and short attention spans. Conversely, learning occurs when the child has reached a psychological and physical readiness to learn. Readiness arrives at different ages for different children. This state of readiness cannot be predicted by chronological age. Most of the effort invested in learning before the stage of readiness is reached may be lost and may be detrimental to later learning. ✓

The educational implications are believed by some to be serious. Advocates feel that classrooms are unnecessarily filled with students who vary in mental ages, social and emotional maturity and experiential backgrounds. Those who lag are thought to have learning problems. Ideally, these proponents of readiness testing believe that a readiness testing programme would discover when children were ready to begin. They recommend that parents should keep their children at home until they are ready or utilise developmental kindergartens or first grades. Academic pressures for early schooling should be reduced. ✓

The reality of readiness testing is different from the auspicious picture painted by the readiness advocates. The validity of the tests are suspect. Janet Black (quoted in Fitzgerald, 1984) has written, "while inappro- ✓

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appropriate use of standardised can occur at all levels of the educational ladder, it would appear that the greatest potential for harm exists during the early childhood years." Researchers such as Black question the Gesell assumptions that readiness is based on immutable stages of development which cannot be altered by establishing a favourable learning environment. They are concerned over the validity of the concept that developmental level can be measured through prescribed stages and provides an indication of school readiness. Opponents of readiness testing believe that teachers' judgments are superior to one time tests.

Furthermore, school readiness tests and developmental screening tests are often confused. Meisels (1985) defines readiness tests as measuring current skill levels considered to be entry criteria into a programme. Poor performance points to a lack of knowledge or experience rather than potential. Screening refers to the ability to acquire skills and possible handicaps which may limit achievement. Screening tests should be followed by further assessment, evaluation and intervention. Both kinds of information are important.

This paper examines the rationale and problems associated with readiness testing. There are numerous instruments which claim to ascertain readiness but they vary in reliability, validity and practicability. Specific instruments are reviewed and their strengths and weaknesses are described.

2. Effects of Over - Underplacement in Developmental Theory

Traditional assumptions concerning readiness conclude that overplacement often leads to failure in school. Gredler (197) in a study of children in ten schools found that children certified as 'ready' in reading varied considerably in the classroom. He recommended that all children begin simultaneously and that individual programmes be developed to meet needs.

May and Welch (1984) agreed and concluded that overplacement did not harm the child while waiting a year did not help. Their study was based on 223 New York elementary school children tested with the Gesell School Readiness Screening Test, and followed up using indicators such as referrals to remedial services, handicapped classifications, retainment after grade two, and level of sixth grade reading placement.

A comprehensive study by DiPasquale et al (1980) of 552 Toronto school children found that younger chil-

dren quickly caught up to their peers, that the effect of birth date was limited to boys and disappeared after the primary grades. They criticised earlier research for inadequate control groups, use of subjective teacher assigned grades and standardised tests unrepresentative of daily performance.

Hebbler (1981) found too small a relationship between birth date and skill level to warrant using birth month alone to determine school entry.

Wood, Powell and Knight (1984) found that correct developmental placement of children using the Gesell School Readiness Test would exclude a third to a half of eligible children from kindergarten. They concluded that the chronological age between 4 to 6 was unrelated to eventual success or failure, while the Gesell test was effective in its predictions. Friesen (1984) also found that factors such as sex, physical, social, emotional and intellectual factors were more important for ascertaining school entry than birth date alone.

Senior (1986) favoured readiness testing, but recommended developmental kindergartens and first grade as alternatives to retention, or special education classes. Cansfield (1986) reporting on a developmental kindergarten in Michigan found that students graduating from regular kindergarten after a year of developmental kindergarten performed as well or better than regular kindergarten children then entering grade 2.

In contrast, Sheppard (quoted in Durkin, 1987) opposed unnecessary delay stating "despite the promises, providing an extra year before first grade does not solve the problems it is intended to solve." She added that "children ... show virtually no academic advantage over equally at-risk children who did not have the extra year. Furthermore, there is often an emotional cost...."

3. School Readiness Tests: Reliability and Validity

Educators still seem uncertain as to the skills required for school entry. Tests generally include broad developmental areas including language, intellectual and perceptual functioning, and motor coordination. Some tests include socio-emotional areas. Because the areas are broad and school curricula are localised the validity of the tests vary.

Furthermore young children must be sampled for situations with which they are familiar. If children have difficulty responding, they may not be tested adequately(Hills, 1987). Consequently the validity of tests are sensitive to cultural and socioeconomic contexts.

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The Measurements Handbook (Mitchell, 1985) has reviewed the following readiness tests. The Cambridge lacks norms and reliability and validity coefficients. Butler (1985) notes that the test has 111 items but covers some areas with one or two items only. He suggested that this test was suitable for use by speech pathologists only and with caution. The Lollipop has a predictive validity of .86 with the Metropolitan Readiness Test (MRT) and a .58 correlation with teacher rating scales. Chew and Morris (1984) found a .76 correlation with the MRT, noted the reduced time required to administer this test and its attractiveness for children.

The Gesell School Readiness Tests is time consuming and requires clinical expertise. Its norms are dated and validity and reliability data is lacking in Mitchell(1985). The test is administered individually and includes an interview, paper and pencil exercises, copy forms, drawing an incomplete man, identify right and left, a visual test, naming animals and preferences(Grave, 1988). Kaufman and Kaufman (1972) found the test to be an excellent predictor of first grade achievement but cautioned against its use for school placement purposes. Wood et al (1984) found the test to have high predictive validity with 84 kindergarten aged children concerning their success or failure. They found that chronological age between four to six was unrelated with success or failure. Sterner and McCallum (1988) found the Bracken Basic Concept Survey a better predictor of achievement than the Gesell. Bear and Modlin (1987) reported that the Gesell failed to discriminate between thirty retained and fifty eight promoted kindergartners in the areas of mathematics and reading achievement. Meisels (1987) challenged the test's validity based on its current use for developmental screening.

Meisels (1985) reviews the Denver Developmental Screening Test which under refers. The Early Screening Inventory has a .91 concurrent validity with the McCarthy Scales of Children's Abilities and a .82 predictive validity with first grade performance. The McCarthy (McCarthy, 1972) has a .54 predictive validity

with the Peabody Individual Achievement Test and is suitable for children from two and a half years to eight years of age. Umansky (1981) found that screening results from this test should be used with caution and with data from teacher observations and judgments. In contrast, Kaufman (1972) praises its norms and interest for young children. However, the eighteen subtests are given individually and require an hour and a half of testing time. Subscales include verbal, perceptual, quantitative, memory and motor skills. Children are rated for a cognitive scale index similar to an IQ, on a percentile and grade level score.

The Minneapolis Preschool Screening Test has a .71 concurrent validity with the Stanford-Binet and .70 with the Metropolitan Readiness Test. It is a good predictor for one year.

The Screening Test of Academic Readiness (STAR) did not correlate with the MRT or with teachers' rankings. It was judged unsuitable for judging children with high IQs (Tsushima et al, 1983). Nichta et al (1982) did find the test useful for predicting third grade achievement.

4. Readiness Tests as Predictors of Academic Success

Readiness tests are used not only to determine suitability for school entry but also are used to predict future academic success. Schmidt (1985) used the Vane Kindergarten Test, the Vane Test of Language, Otis-Lennon School Ability Test, and the Metropolitan Reading and Maths Test on 378 kindergarten students. The battery predicted seventy-seven percent of the low achievers and seventy-three percent of the high achievers. Although young children were unable to participate in tests compared with older children, these results suggested the need for special programmes. Kaplan (1985) has also shown a strong correlation between the Vane Kindergarten Test and the Wechsler Preschool and Primary Scale of Intelligence.

Lessler and Bridges (1973) using the Metropolitan Readiness Test, the Lee-Clark Reading Readiness Test and the California Test of Reading Maturity predicted first grade success eighty-six percent of the time and second grade success seventy-three percent of the time.

Abrahamson and Bell (1979) found the School Readiness Section of the Early Detection Inventory to predict reading achievement effectively in 508 kindergarten students.

5. Are Readiness Tests Needed?

Reliance on quick tests is often criticised for providing an inadequate view of a child's abilities. Use of testing instruments raises the spectre of error, mislabelling children as ready when they are not, causing escalating problems in class, or inappropriately holding back children who are ready to learn. Many writers prefer to rely on judgments by teachers who know their students.

Gallenani (1982) by comparing several screening tests with kindergarten teacher ratings found the correct classification ranging from 45.6% to 75.9%. With such low reliability he concludes that readiness tests must represent only the first step in a comprehensive process of assessment. */// Agree!*

Stoner (1985) compared teachers' ratings of children with the Daberon Readiness Test and found a high correlation. She concluded that use of checklists by teachers was adequate for determining readiness. Stennett (1982) in Ontario also found early teacher identification a powerful predictor of future success. Ninety five percent of those rated highly were in fourth year while fifty-four percent of those judged not ready had repeated a year or entered special education. Scourfield (1982) also found a .76 correlation between teacher ratings and the MRT and concluded that checklists were adequate for decision making.

Cadman et al (1984) concur with the value inherent in teachers' judgments and warn of the cost and harm done by false results in standardised testing. Specifically, they found low sensitivity, (correctly identifying those at risk), high specificity (correctly excluding others from further assessment) and moderate predictions for the Denver Developmental Screening Test.

In contrast to the above studies, Bolig (1973) found the Metropolitan Readiness Test proved to be a better predictor of first grade success than teachers ratings, which favoured girls.

6. Conclusion

Although the majority of children are ready for schooling at the age of five, a minority are unready. These children possess a developmental age which lags behind their chronological age. Research is mixed concerning the effects of age on school readiness. The Gesell Institute supported use of developmental age for placing children in school. Children who are unready should delay their entry into school or grade promotion. Senior (1986) and Frieson (1984) have both pointed to negative effects from commencing school too early.

Other researchers (DiPasquale, 1980; Hebbler, 1981; May, 1984) have all found a minimal connection between age and school readiness. They called for increased research in placement theory. Gredler (1978) noted that the quality of instruction may be the varying factor rather than readiness. He called for more emphasis on matching curriculum to individual needs.

The use of screening tests is on the increase. Inadequate instruments may cause mislabelling of children. They may be given unnecessary remediation or put into regular programmes when they need extra assistance. Tests may also be used to segregate children without modification of the curriculum. Researchers (Meisels, 1985) warn that school readiness tests are only the first step and must be accompanied by other information from multiple sources including parents prior to decision making. Checklists and ranking scales used by teachers to determine school readiness seem to be strongly supported (Stoner, 1985; Stennett, 1982; Scourfield, 1982). These should be used by the teacher and the children's parents.

Readiness testing with a test selected for its validity may be employed by the kindergarten teacher for students judged as unready at the end of kindergarten. Results could be used in discussion with parents and to provide the teacher with confidence. The grade one teacher must be expected to adapt the curriculum and use support services to suit some students who are unready.

Determination that a child is unready for school requires an alternative curriculum to prepare the child. Cansfield (1986) has indicated the success of a developmental kindergarten concept. Other ideas have included a junior first grade (Solem, 1981). Parents must be made aware of the option of keeping their

child at home an extra year. ✓

There is clearly need for additional research into school readiness. Extensive validation studies are required for many testing instruments. Additional data from readiness testing needs to be collected. Until this is done, caution must be exercised by guidance officers when determining readiness. In the meantime, teachers must be sensitive to children's abilities and needs and teach accordingly. ✓

Don, I think you've given an excellent picture of how the literature presents the issue of readiness and readiness testing.

A very thorough job.

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