

Joseph C. LaVoie
University of Nebraska at Omaha

School-Based Assessment Research in the People's Republic of China

Abstract

School-based assessment, as we know it, does not occur in the People's Republic of China. Assessment procedures, primarily achievement tests, are used for placement purposes in select schools. Some psychological testing is done with young children to detect learning disabilities. Several psychological tests are available, but they are not widely used. Research in the areas of intellectual, personality, clinical, and achievement assessment is reviewed in this paper. Given the lack of psychological services for schools, the role of teachers in the evaluation process is discussed with respect to educational philosophy in the People's Republic of China. The impact of recent events in China on the educational system is also discussed.

Résumé

L'évaluation en milieu scolaire telle que nous la connaissons, ne se pratique pas en République populaire de Chine. Les modalités d'évaluation, essentiellement les tests de niveau, servent à placer les élèves dans certaines écoles. Certains tests psychologiques sont administrés aux jeunes enfants pour dépister les troubles d'apprentissage. Plusieurs tests psychologiques existent, mais leur emploi est loin d'être généralisé. L'auteur du présent article analyse les recherches qui se font dans les domaines des tests d'intelligence, de personnalité, de niveau et domaines des tests d'intelligence, de personnalité, de niveau et des tests cliniques. Compte tenu de l'absence de services psychologiques dans les écoles, le rôle des enseignants dans le processus d'évaluation est analysé par rapport aux principes de l'éducation en République populaire de Chine. L'auteur aborde également l'impact des récents événements qui se sont produits en Chine sur le système éducatif.

Progress in school-based assessment in the People's Republic of China has been very slow. According to Catterall's (1982) review of international school psychology, reports from the People's Republic of China* indicated that there were no psychologists providing services to the schools, although psychology was a rapidly expanding field in the country at that time, and there was a focus on education of the developmentally disabled. The situation has not changed greatly, according to LaVoie (1989a, 1989b) who found that school psychology is not a recognized field, although some psychologists working in the field of education publish articles that pertain to school psychology, and certain ongoing activities reflect assessment concerns of school psychology. For example, educational psychologists have been involved in test development for the purposes of assessment and placement, and developmental psychologists have been interested in the child's cognitive development, while medical doctors have focused their assessment mostly on the first five years of life (LaVoie, 1989a, 1989b).

There are several reasons why school psychology has not emerged as a separate discipline. First, as LaVoie (1989a) noted, educational decisions are made by political, not educational, leaders. While the need for psychological services in the schools is recognized, such services are still a luxury in a country with so many other demands for psychologists, particularly in the clinical and other mental health settings where the needs are so urgent. According to Qicheng (1988), the primary focus in education is on the practical use of knowledge, such as children's use of cognitive strategies to solve problems in mathematics, determining the manner in which Chinese characters are formed by people so that a computer system that uses these characters can be developed, and the effect of the one-child family. Qicheng contends that it is necessary to be very selective in what is studied because the problems are so numerous. Psychological services in the schools have to compete with such other demanding areas in psychology as industrial, clinical, and health.

Not to be overlooked is the underlying educational philosophy in China that all children have the potential to learn the curriculum. Given this mindset, it follows that the potential for change has to lie within the child. Senkowski, Corser, and McLean (1989) found that the teacher's job is to reduce individual differences in the classroom by working with the entire class so that they all perform at the same basic level. Therefore, the purveyor

*Throughout the remainder of this paper the People's Republic of China will be referred to simply as China in order to facilitate smoother reading.

of psychological services in the schools is the teacher. LaVoie (1989b) noted that teachers serve some of the functions that would be delegated to school psychologists in the United States. If the services are already provided by teachers, it then becomes less critical to assign psychologists to the schools.

Given this overview of the Chinese educational philosophy, what is the current state of school-based assessment in China? To answer this question, one first needs to determine what school-based assessment consists of in the United States so that we have some basis for making a comparison. According to Sattler (1988), assessment usually involves an evaluation of the child's learning abilities, speech and language, visual-motor ability, and identification of behaviour problems. The child's developmental history and how the child interacts with others are also considered. Assessment in China focuses on the characteristics of individual children, which reflects the medical model. School psychology in the United States originally adopted this model, but has since changed (Reynolds, Gutkin, Elliott, & Witt, 1984). The primary use of assessment in China is for screening and placement, but mostly the latter. For the Chinese, the test score is important, because it indicates the child's level of intellectual functioning or determines the school that the child will attend. Factors other than test scores, such as developmental history or current life circumstances, are not considered in placement or screening decisions in China.

Before reviewing some of the representative research related to school-based assessment, it needs to be recognized that the Chinese were among the first people to use assessment procedures to evaluate performance. Bowman (1989), in her comments on testing in China, cited evidence to show that testing procedures for determining individual differences in mental ability were being used 2000 years ago. Speed of writing and speaking were used as measures of intelligence as early as 1 A.D., according to a review of assessment in China by LaVoie (1989b). He also noted that personality assessment was carried out in ancient China, and sensorimotor tests of infant development were used in the sixth century A.D.

According to Hawkins (1983), China's fascination with testing has spread throughout the educational system so that the curriculum at the primary and secondary levels is skewed to prepare students for the secondary school and university entrance exams. Therefore, the curriculum does not have the necessary breadth to educate both the college track student and those students who cannot gain entry to college. Further, teachers are evaluated on the basis of the number of students who pass the entrance exam for secondary schools and universities.

Intellectual assessment

The *Binet-Simon Scale* was first translated into Chinese in 1922, and adopted for use in assessment in 1924, at which time norms were established. The *Stanford-Binet Scale* was revised in 1981 and renamed the *China Binet Scale* (Wu, 1985). Western tests, such as the *Wechsler Intelligence Scale for Children – Revised* (WISC-R) and the *Peabody Picture Vocabulary Test* (PVT) are the instruments that have been most often used to assess intellectual performance. D. Li, Jin, Zhu, and Tang (1987) have validated and normed the Chinese translation of the WISC-R, and their reported subscale and full-scale means and standard deviations are similar to those in the American standardization group. However, as noted by LaVoie (1989b), D. Li *et al.* found performance differences between the Chinese and American standardization groups. The Chinese were five years ahead of their U.S. age-mates on math and digit span scores, four- to five-years advanced on block design, and two- to three-years ahead on coding, but they scored two- to three-years behind the U.S. comparison group on picture completion. Some of the subtests in the verbal subscale did not discriminate well, according to D. Li *et al.* After 10 years of age, the vocabulary and math items did not discriminate significantly among low and high IQ children, and the comprehension, block design, and maze subtests were less discriminative between low and high IQ children after 12 years of age. But the relationship between WISC-R IQ and student GPA was reasonably high (.76, *Phi* coefficient). D. Li *et al.* conclude from their findings that while the revision seems to fit reasonably well for the Chinese culture, there are some problems in the accuracy of the WISC-R for the Chinese (LaVoie, 1989b).

The role of environmental factors in IQ scores has also been considered by the Chinese. Using a longitudinal study of children from birth to 36 months, Y. Mao (1986) found that preschool attendance and gender were related to IQ scores. Those children who had attended preschool at an early age had higher IQ scores. Occupation of the family and being an only child, as well as certain personality factors, were also predictive factors. Children who were curious, persistent, and nonimpulsive had higher IQ scores. Mao concludes that adaptive behaviour and cognitive ability are the main indices of IQ at this age period.

Intellectual assessment has been used mostly to identify mental retardation, and to assess intellectual performance among the hearing impaired. The PPVT, for example, has been used to screen young children for learning disabilities. Gong and Gua (1984) reported that the PPVT correlated .65 with Chinese language score and .61 with arithmetic score in their sample of 7–8-year-old children. The Chinese are interested in gifted children, or what they

call "super-normal," but formal assessment has not been used to identify this group of children, although some attempts have been made to use such tests as analogical reasoning, problem solving, and mathematics to detect gifted children. However, intelligence testing has generated much controversy about such issues as the use of western tests with their cultural bias, and the problem of low correlations with certain measures of academic performance, particularly grade point average and course-work exam grades. LaVoie (1989b) cites a 1981 study by Wei and Shi who reported that their measure of IQ (national entrance exam scores) was minimally correlated with college grades.

Personality assessment

Among the personality measures translated into Chinese are the *Minnesota Multiphasic Personality Inventory* (MMPI), *California Psychological Inventory* (CPI), and the *Eysenck Personality Inventory* (EPI) (LaVoie, 1989b). However, the MMPI has been used more extensively than the other instruments. Clinical studies constitute most of the reported research, although a few projects involving personality assessment have been conducted in the schools. A study by Yang and Shun (1986) is representative of the assessment research. They used a trait-anxiety inventory to select high and low anxiety middle school students who were then given the MMPI. The two anxiety groups did not differ significantly on any of the MMPI scales. The MMPI has also been used to examine differences in parents of minimal brain-damaged children. Zhu (1987) reported that parents of these children scored higher on the Pd (psychopathic deviate) and PT (psychasthenia) subscales than parents of normals, which suggests a potential interactive factor, in that the behaviour problems of the children may, in part, be associated with the psychological adjustment of their parents.

Temperament in elementary and middle school children has been studied by G. Lin (1986), who developed a 40-item scale based on Galen's four classification theory of temperament – sanguine, melancholic, choleric, and phlegmatic. Lin found that children could be classified into one of the four categories. Independence in early adolescents (ages 11 – 14) is a concern of some psychologists and school personnel in China. In one such study (H. Mao, 1984), young adolescents identified their independence needs to include respect from peers, recognition as adults, and the admission of parents and teachers that they sometimes can be wrong. These independence needs were then paired with such adolescent personality traits as radicalism, stubbornness, exhibitionism, and noncompliance. From this conceptualization, Mao developed an instructional program for teachers of this age group so that they could provide guidance for adolescents in their independence seeking. Among the objectives of the program were to socialize the adolescent to

develop self-control, reduce conflict with parents, and to enhance moral values.

Clinical assessment

Much of the interest in this area can be attributed to the adoption of the medical model. Currently, clinical assessment is conducted in medical clinics where psychologists are located. There is a great need for behavioural assessment within the school setting, but the shortage of trained psychologists makes this service impossible at the present time. The *Luria-Nebraska Neuropsychological Battery* has been revised and normed for Chinese use by Xu and Gong (1987). The discriminant validity of the test was .90, based on the correct assignment of 70 of 78 subjects who had been previously diagnosed as normal or having some type of neurological disorder.

Child behaviour problems, particularly frustration, have received some attention in the Chinese psychological literature (e.g., Shun, 1986). Elementary and middle school students were asked to describe an event that angered/frustrated them most. Students identified such events as preparation for entrance exams for middle schools, interpersonal relations, and specifically, inability to form friendships, difficulty in getting along with teachers, parent relations, personal inadequacies, and failure to gain respect. Some age and gender differences in frustration were found by Shun. Elementary school children reported that parent relations and personal inadequacies were the most frustrating, whereas, middle school students indicated that interpersonal relations and failure to gain respect were the most frustrating. Boys were more likely to react to frustrating events with aggression, while girls responded with avoidance.

Chinese psychologists have also been concerned with the problem of school dropout. Shao (1986), in his study of middle school (i.e., secondary school) dropouts, found that 17% of the friends of dropouts were still in school, but 20% had already dropped out. Interestingly, 60% of the dropouts' friends were classified as conduct disorders. Personal characteristics associated with this group of dropouts included less time spent in reading, lower motivation and poor study habits, more time loitering, and greater incidence of serious delinquent activities, than in-school students. These characteristics are similar to those describing school dropouts in the United States (e.g., Steinberg, 1989). When the dropouts were asked about their future goals, 44% responded that they were free to do whatever they wanted, 45% were concerned and did not know what they would or could do, 8% said that they would stay at home and wait for the government to help them, and 2% said that they had ruined their life.

Achievement assessment

More attention has been given to achievement assessment than any of the others because it impacts directly on educational placement. The Chinese are concerned with selecting the most capable students to attend their "key" (i.e., highly selective) junior and senior high schools. Achievement tests are used throughout the country to select these students. The entrance examination for admission to middle schools is a standardized test developed by the Educational Bureau of the government and consists of the following sections: Chinese language, mathematics, history, natural science, geography, moral education, and physical training. The minimum score for admission to a middle school is 60%, but all students are ranked for admission purposes. Students in the top 10% of the ranking are admitted to "key" middle schools, which are the best schools in the country. Other than this evaluation program, achievement testing in the classroom, as used in the United States, is not practiced in China.

Although the Chinese education system has committed major resources to the development of the middle school admission examination, little or no research has been conducted on the reliability or validity of the test, but some insight into achievement assessment in China can be gained from cross-cultural studies. Hess, Chang, and McDevitt (1987) investigated the relation between sixth-grade-children's mathematics performance and the attributions of their mothers about this performance. Boys and girls and their mothers from the following cultural groups, China (47 families), Chinese-American (51 families), and Caucasian-Americans from the United States (47 families), were involved in the study. Each mother was asked to indicate how well her child had performed in mathematics during the sixth grade, and then to provide explanations for the child's success (if the child had performed well) or the child's failure (if the child had not performed well). Children were also asked to explain the reasons for their level of performance.

Maternal explanations for the failure of their child to perform at a higher level were similar among the three cultural groups in that the mothers emphasized the child's level of effort, but the Chinese mothers cited lack of effort, an internal factor, as the primary cause for poor performance. Chinese-American mothers placed the blame on lack of ability, inadequate training at school, and insufficient help at home. American mothers, however, tended to spread the responsibility across a number of factors, most of which were not controllable by the family or the child. Mothers of American children were more likely to place responsibility for poor performance on the school, whereas both groups of Chinese mothers were more likely to attribute responsibility to training in the home. Mothers also differed in the action that they

would take in responding to failure performance in their children. American and Chinese-American mothers indicated that they would try to determine the reason for the failure, but Chinese mothers stated that they would express anger and perhaps punish the child.

Responses of the children were similar to those given by their mothers. Children from China chose controllable causes (i.e., effort) for their poor performance; whereas, both Chinese-American and American children were less likely to attribute poor performance to controllable factors, and American children were more likely to perceive luck as a factor in poor performance. But all children from the three cultures more often identified controllable factors (i.e., effort) in their attributions for poor performance than did their mothers.

Mothers' attributions for their child's success in mathematics also differed among the cultures. Mothers from China more often gave credit to the school, while Chinese-American mothers saw home training as most important, and American mothers selected ability, effort, and school training as the critical factors. Perhaps the most revealing finding was the mothers' responses to high performance by their children. Chinese-American and American mothers were more likely to reward their child with praise for good performance. Mothers from China, on the other hand, were more likely to set higher standards for their child, and less likely to offer praise for high performance.

These findings have significance for school-based assessment research on achievement. As Hess *et al.* (1987) suggest, the results indicate that motivational factors are important sources of differences in achievement, and that cultural factors have to be considered. It is apparent from the Hess *et al.* study that certain attributions about academic performance are stable, and these beliefs appear to be incorporated into the socialization process.

Further insight into factors that impact on school-based assessment of achievement in China emerges from a second series of cross-cultural studies involving first- and fifth-grade children (22 classrooms at each grade level) from Beijing (China), and Chicago (USA). In one study, Lummis (1989) administered curriculum-based achievement tests of vocabulary and mathematics to the students. Analyses of the test scores showed that the American sample had a higher mean score on vocabulary, but the Chinese students scored higher on the math tests. The data analyses also revealed that the score variance on both vocabulary and mathematics was much larger for the American sample than for the Chinese sample, indicating greater individual differences among the American students than among the Chinese students.

One likely explanation for the cultural differences is teaching. Uttal and Lee (1989) found some major differences among the two groups of teachers. Chinese teachers devote more time to lesson preparation and other activities associated with instruction. Further, nearly all of their instructional time is used in classroom teaching. There is no individual instruction as we know it. The teaching objective of Chinese teachers is to bring slow students to the level of the class, so they spend more time teaching the slow student. Other beliefs held by Chinese teachers include: it is important to get the correct answer quickly, therefore speed in problem solution is emphasized; one works very intensely in the classroom; and a good teacher is one who can explain a lesson clearly. That is, one needs to teach well at all times. These findings suggest that school-based achievement assessment in China has a different meaning, which should result in a different plan of action than similar assessment in the United States.

Conclusions

It becomes evident from this discussion that school-based assessment is in its infancy in China. Various assessment measures are available, but the primary objective of assessment appears to be limited to placement rather than diagnosis or evaluation. Sattler (1988) makes an important distinction between psychological assessment and psychological testing, which fits this discussion quite well. Psychological testing involves the use of tests, which provide findings, whereas psychological assessment provides an interpretation of these findings given the child's situation. Some psychological testing is done in China, particularly for placement. But psychological assessment as practised in the United States, is not occurring at the present time in China. However, teachers in China are conducting school-based assessment to the extent that they not only perform ongoing evaluation, but they also modify their teaching to correct the identified problems. Unlike the United States, where the focus is on individuality, ability grouping is not used in China. Rather, the teacher strives to increase the performance of the entire classroom. This approach fits with the educational philosophy in China which assumes that if a problem exists, one focuses on teaching because that is where the problem is likely to reside.

Most psychologists would agree that assessment measures are merely tools to sample behaviour. We need to know more about the child to determine the why of the child's behaviour. When a child in China does not meet the expected standards in the classroom, Chinese teachers help the child with the deficient work and focus on their teaching to increase uniformity of performance in the classroom, whereas in the United States we tend to assess why the child has a problem.

Recent events in China will probably mandate changes in the educational system. Political studies have always been part of the curriculum at all levels, and the student's understanding of political philosophy has been assessed in entrance exams to secondary schools and universities. Starting in the Fall of 1989 increased emphasis has been placed on political philosophy in the schools. Assessment of political understanding will probably occur at all levels of schooling. The Chinese are adamant in their belief that the solution to problems, such as alienation, disruptive behaviour, and disrespect is to reeducate people and insist on accountability.

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I would like to acknowledge the contribution of those persons who assisted me with this manuscript. Lai Qun, University of Nebraska at Omaha, assisted with the translations of the articles from Chinese journals. Aron Armfield, University of Nebraska at Omaha, and Qicheng Jing, Institute of Psychology, Academia Sinica, were consulted about matters of applied psychology in the People's Republic of China.

Joseph C. LaVoie (Ph.D., University of Wisconsin-Madison) is a professor of developmental psychology in the Department of Psychology, University of Nebraska at Omaha. Professor LaVoie's research interests are in social and personality development in children and adolescents, specifically peer relations, social competence and its relation to academic performance, and individuation processes in adolescence. His interest in school psychological services in the People's Republic of China is the result of a six-month assignment in China as a visiting scholar, and his doctoral studies in cultural anthropology.

Joseph C. LaVoie (Ph.D., Université du Wisconsin-Madison) enseigne la psychologie du développement au département de psychologie de l'Université du Nebraska, à Omaha. Ses recherches portent sur le développement social et le développement du caractère des enfants et adolescents, notamment sur les relations entre pairs, les compétences sociales et leur corrélation avec les résultats scolaires et les processus d'individuation chez les adolescents. Son intérêt pour les services psychologiques scolaires en République populaire de Chine est le fruit d'un séjour de six mois qu'il a effectué en Chine à titre de chercheur invité et de ses études de doctorat sur l'anthropologie culturelle.