ADAPTATION AND VALIDATION OF AN ARABIC VERSION OF MULTIPLE INTELLIGENCE DEVELOPMENT ASSESSMENT SCALE (MIDAS) AND THE RELATIONSHIP BETWEEN TWO MODES OF MIDAS ASSESSMENT

By

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MIDAS = Multiple Intelligence Development Assessment Scale

MI = Multiple Intelligence

IQ = Intelligence Quotient

IRT = Item Response Theory

CTT = Classical Test Theory

ADAPTASI DAN PENGESAHAN SKALA PENTAKSIRAN PERKEMBANGAN PELBAGAI KECERDASAN (MIDAS) DALAM BAHASA ARAB DAN PERHUBUNGAN ANTARA DUA MOD SKALA PENILAIAN MIDAS

ABSTRAK

Tujuan kajian ini adalah untuk mengadaptasi dan mengesahkan skala MIDAS kepada versi bahasa Arab dan menilai perhubungan antara keputusan dua mod skala ini berdasarkan respons kendiri pelajar dan penilaian guru terhadap kepelbagaian kecerdasan pelajar.Dua sampel utama dipilih dalam kajian ini, sampel yang pertama mengandungi seramai 1,404 pelajar daripada 13 buah sekolah di Jordan untuk pengesahan alat ukur MIDAS versi bahasa Arab.Di samping itu, sampel yang kedua terdiri dari pada 16 orang guru dan 48 orang pelajar daripada 2 buah sekolah yang dipilih untuk membandingkan keputusan dua mod penilaian MIDAS. Kerangka konsep bagi pengesahan dan perbandingan keputusan di antara dua mod Arabic MIDAS diperkukuhkan melalui tiga fasa utama: Fasa yang pertama ialah menterjemah MIDAS versi bahasa Inggeris kepada versi bahasa Arab. Kemudian diikuti dengan penentuan kesahan kandungan yang menggunakan pengesahan pakar dan juga kajian rintis. Fasa yang kedua melibatkan ujian dimensionaliti bagi subskala MIDAS versi bahasa Arab. Fasa yang ketiga pula melibatkan bentuk perbandingan bagi keputusan dua mod penilaian MIDAS versi bahasa Arab.

Keputusan kajian telah menunjukkan bahawa sebanyak 11 item versi bahasa Arab perlu diganti. Pekali ulang kaji kebolehpercayaan bagi ujian MIDAS ialah 0.85, dan

pekali kebolehpercayaan ketkalan dalaman untuk (sub-skala) MIDAS pula berada pada julat antara 0.78 dan 0.87. Langkah seterusnya ialah menggunakan program komputer Winsteps yang berasaskan kepada model Rasch untuk menguji keseluruhan dimensionaliti MIDAS versi bahasa Arab dan subskala-subskalanya. Hasil kajian menunjukkan terdapat 11 item (item 2, 3, 5, 7, 11, 13, 38, 98 107,109, dan 116) yang telah disingkirkan dari MIDAS versi bahasa Arab dan bakinya sebanyak 108 item lagi telah membentuk versi muktakhir MIDAS versi bahasa Arab. Kebolehpercayaan item-item subskala MIDAS berada pada julat antara 0.82 dan 0.99. SPSS versi 15 digunakan dalam bahagian kedua kajian ini bertujuan menguji keputusan dua mod alat ukur MIDAS versi bahasa Arab. Bagaimanapun, terdapat nilai korelasi yang sangat rendah di antara subskala-subskala bagi kedua-dua mod MIDAS versi bahasa Arab ini.

ADAPTATION AND VALIDATION OF AN ARABIC VESRION OF MULTIPLE INTELLIGENCE DEVELOPMENT ASSESSMENT SCALE (MIDAS) AND THE RELATIONSHIP BETWEEN TWO MODES OF MIDAS ASSESSMENT

ABSTRACT

The purpose of conducting this study was to adapt the Multiple Intelligence Development Assessment Scale (MIDAS), and then validate the Arabic version. Besides, in order to determine the relationship between the results of the two modes of MIDAS assessment, a comparison is made between the students' self-reports and the teachers' rating of the students' intelligence. Two groups of sample were selected in this study; the first group consisted of 1,404 students from 13 secondary schools in Jordan in order to validate the Arabic version of MIDAS. In addition, the second group consisted of 16 teachers and their 48 students from two selected secondary schools in order to compare the results of the two modes of MIDAS assessment. The conceptual framework for the validation of Arabic MIDAS and the comparison of the results between the two modes of Arabic MIDAS were established throughout three main phases: the first phase is the translation of MIDAS English version into Arabic language. This was followed by content validity using experts' judgments and the pilot study. The second phase involved the examination of construct validity of the Arabic MIDAS's subscales. The third phase involved comparing the results of two modes of Arabic MIDAS assessment.

The findings of this study indicated that, the content of eleven items in the Arabic version of MIDAS need to be modified to match the Arabic content. The reliability coefficient computed was obtained using test re-test method and has a value of 0.85 for the overall MIDAS and for the different subscales ranging between 0.78 - 0.87. In addition, the Winsteps program based on Rasch model was used to

examine the construct validity of the overall Arabic MIDAS and its subscales. The results revealed that, there were eleven items removed from the Arabic version (item 2, 3, 5, 7, 11, 13, 38, 98 107,109, and 116) and the remaining 108 items formed the final Arabic version of MIDAS. The internal consistency coefficients for the different MIDAS's subscales were in the range of 0.82 to 0.99. Moreover, SPSS program version 15 was implemented in the second part of this study in order to determine the relationship between the results from the two modes of Arabic MIDAS assessment. The findings of this study indicated that there is a high correlation between the results of the two modes for the overall Arabic MIDAS. However, the correlations between the two modes for all the Arabic MIDAS's subscales are low.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

In the Middle East, there are many international initiatives sought to help Arab countries to embrace modernization by effecting reforms in their educational systems, such as the United National Development Program (UNDP) (Samak, 2006). This is because education in the Arab countries has become a serious issue in the wake of neglect in many Arab countries (Yamani, 2006). In fact, until 1963 there was very little of what could be called educational planning in Jordan. Then, the Jordanian authorities started to realize that educational development could support economic development, and commenced educational planning on an organized basis (Hussain, 2005). Many educationists have asserted the need for a comprehensive policy reform which takes into account different dimensions of effectual reform (Karsou, 2005).

As stated by Billeh (2003,p7)

> *"Comprehensive policy reform of the educational system should be geared in improving quality, standards, relevance, efficiency, and the access. In this regard, any mechanisms and terms of reference built into policy framework should include identifying of regional needs and priorities; mobilizing human and financial resources within the region according to those need priorities; setting up a collaborative mechanism that allows countries to share and exchange information, experiences and expertise in the planning and implementation of the needed reforms".*

Furthermore, education is a key catalyst and enable for social and economic development in countries throughout the world. Meanwhile, incentive reforms are intended to address behavior problems and deal with the motivation of those whom involved in the education process. For example, public financing could be tied to higher student examination scores and innovation, thus ensuring accountability for performance and enhancing the quality of education (Hindi, 2008; Selinger, 2007)

In a keynote address, Jordanian Deputy Prime Minister Marwan AL-Muasher said:

> "*The quality of education in the region has not kept up with the needs of the economy; education systems do not support adequately the development by girls and boys of analytical skills, problem solving skills, critical thinking, and innovation. It is time to pay greater attention to these skills to reach, if not exceed, the level of attention given to illiteracy and school enrolment" (Hind, 2008, P.13).*

In achieving the vision for Jordan's future and innovative spirit, Jordan launched a program of education reform in 1985 to undertake a comprehensive critique of its education system that could be used to design an inclusive reform program. In addition, the continually work toward the aspired goal geared to establish an educational system that will enable its graduates to match the highest international standards of educational achievement. Moreover, the World Bank has actively supported the Jordan's school system to be compared favorably with those in other Middle Eastern countries.

The introduction of a Diagnostic Assessment approach in different subjects was one of the recommendations of the 1987 National Conference on Education Reform (Ministry of Education, 2000). Diagnostic assessment is a teaching-learning method, which involves systematic gathering of information about individual students' attainment to identify their strengths and weaknesses.

Nowadays, the Jordanian educational system still uses the traditional assessment techniques, in evaluating students' abilities and in measuring students' intelligences in Jordanian schools, whereas the Jordanian teachers' focus on measuring the students' academic achievement by using the traditional assessment. The traditional assessment techniques refer to the use of paper and pencil test. Therefore, in line with the comprehensive policy reform launched in Jordan' and in order to improve the quality of the assessment systems in Jordan there is a need to identify a new goal-oriented method that measures student's intelligence such as the application of MI theory in the schools; which is designed to evaluate the students' intelligence (Hussain,2005). Throughout this identification, teachers would be provided with a variety of assessment techniques that assist the teachers in understanding their students' intelligence and thinking

1.2 Background of the Study

In 1990, Jordan became the first Arab country to participate in the International Assessment of Educational Progress (IAEP). In addition, Jordan, which is considered as a tribal culture is being influenced by the pace and the rapid expansion of technological changes throughout the world. The intention of this participation was to develop the Jordanian educational assessment methods and to provide the educators with a firm base to fully understand students intelligence and to provide the students themselves with a variety of self-analysis instruments directed to their skills and intelligence to allow them to decide their appropriate future study which enable them to contribute fully the growth of the country.

In 1995, the General Directorate of Examinations and Tests in the Ministry of Education in Jordan began work on the examination and assessment reform, and continued until the year 2001. In which, at the end of the second semester of the scholastic year 2000/2001, each directorate of education in Jordan administers achievement tests in at least two subjects for both the tenth grade and the first secondary class (grade 11), following the criteria stated by the Directorate of tests. In addition, the purpose of these achievement tests is to inform students and teachers of students' level of achievement, and to introduce them to different types of questions which assess the various skills and higher intelligence abilities, and thereby help the student to prepare for the examination of the general secondary education certificate (Al-Tawjehi). The aim of this assessment is to assist the teachers in identifying the educational obstacles which confront their students, as well as to put forward some remedial plans to overcome these obstacles and to identify the points of strengths so that to enrich and consolidate them. The current greatest obstacle that hinders the

quality improvement in Jordan is the lack of assessment information and techniques (Billeh, 2003).

In studying relationship of human behavior, thinking, and intelligence, a measurement model is required to combine information across a large number of items' responses. Multiple Intelligences (MI) are of great interest, and MIDAS instrument is a useful instrument in measuring students' MI. Whereas Intelligence Quotient (IQ) test and similar tests are still use today in which, these tests focus mainly on the measurement of the IQ and measures rote memorization skill and focus on single intelligence aspect (Chisholm, 1998). The two most widely used standardized tests of intelligence are the Wechsler scales and the Stanford-Binet instruments. They are psychometrically sound, and measure only linguistic and logical/mathematical intelligence. Gardner (as cited in Jabber, 1993a/2003) argues for making assessment a natural part of the learning environment. The constant assessment of skills that occurs in apprenticeship or the self-assessment that occurs in experts who have internalized a standard of performance based on the earlier guidance of teachers. However, many aspects of intelligence such as the music intelligence, spatial intelligence are not included into the traditional assessment but they were included into MI theory which has not been used in Jordanian schools.

Gardner (1983) proposed a broader definition of Multiple Intelligence that includes the existence of seven basic intelligences as the major of MI theory. MI theory was controversial in the psychology arena; however, it attracted considerable attention from the educational community. While Gardner's MI theory has been welcomed and practiced by many educationists within the educational arena, wider

use has been limited by the lack of a practical, reliable, and valid method of assessment. Shearers (1996) represents one such method that known MIDAS. The Multiple Intelligence Development Assessment Scale (MIDAS) provides an objective measure of the Multiple Intelligence as reported of a person by the person or by a knowledgeable informant (Shearer, 1996). The MIDAS scales struggle to describe the course and direction of intellectual growth and achievement potential for each of the Gardner domains. In short, the MIDAS provides an effective method of obtaining a self-report profile of ones Multiple Intelligences. Collectively, there is a need to introduce the MIDAS instrument to the Arabic culture to enable teachers, counselors, and parents to use it in the schools. In addition, there is a need to introduce a new valid instrument that enables educators to assess students' intelligence and provide assessment information of students by themselves or by others. Moreover, the purpose of conducting this study is to adapt and validate an Arabic version of Multiple Intelligence Assessment Development Scale (MIDAS) and to conduct a comparison between the results of the students' self-report and the teachers' rating of the students' intelligence.