RELIABILITY OF AN ARABIC VERSION OF THE
***ACADEMIC MOTIVATION SCALE* (AMS) ON STUDENTS AT AL-JOUF UNIVERSITY**

by

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DEDICATION

To my father, my mother, and all my brothers and sisters.

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CHAPTER 1 INTRODUCTION

From an assessment perspective, the *Academic Motivation Scale* (*AMS*) by Vallerand et al. (1992, 1993) purported to measure quality or type of motivation. Its development was based on the Self-Determination Theory of motivation (Deci & Ryan, 1985).

In its original manifestation, Self-Determination Theory pertained to two types of motivation: intrinsic and extrinsic (Deci & Ryan, 2000). Intrinsic motivation refers to a natural inclination for education and learning (Guay, Morin, Litalien, Valois, & Vallerand, 2015). It reflects students' participation in activities for challenge, enjoyment and satisfaction which leads to creating their tasks (Vallerand et al., 1992). In contrast, extrinsic motivation to needing an external gain or benefit to learn (Deci & Ryan, 2000). The external influences are needed to increase students' participation in leadership activity, such as the suggestion of reward for a successful job, earning extra points (Sternberg & Williams, 2002). Both intrinsic and extrinsic motivation help to explain why students want to reach an academic goal (Vallerand et al., 1992; Vallerand et al.,1993). Usher and Kober (2012) investigated motivation for participation in school activities (e.g., homework, exams), and behavior in school.

Motivation is important in increasing academic achievement. One use of the *AMS* is to help understand the link between motivation and academic performance. Kusurkar, Croiset, Kruitwagen, and ten Cate, (2011) suggested there is a positive relationship between motivation and academic achievement. Schunk, Pintrich, and Meece (2008) stated motivation is the "process whereby goal directed activity is instigated and sustained" (p.5).

Development of the *Academic Motivation Scale*

The *AMS* was developed from the French version of the *Echelle de motivation en Education* (*EME*) (Vallerand, Blais, Briere, & Pelletier, 1989). It was subsequently translated into

English (Vallerand et al., 1992), It can be used to assess students' motivation to attend college and their motivation about education and learning.

The *AMS* is comprised of 28 items grouped into 7 subscales, with each subscale comprised of 4 items. Each item is scored on a Likert scale of 1-7. According to Vallerand et al. (1992), the subscales are

1. Intrinsic Motivation to know
2. Intrinsic Motivation towards the accomplishment
3. Intrinsic Motivation to experience stimulation
4. Extrinsic Motivation-Identified Regulation
5. Extrinsic Motivation-Introjected Regulation
6. Extrinsic Motivation-External Regulation
7. Amotivation

"Intrinsic motivation to know" refers to the internal desire for academic practice and the willingness to discover unfamiliar tasks (Vallerand et al., 1992, Vallerand et al., 1993). "Intrinsic motivation toward accomplishment" indicates the desire to reach a high level of ability and efficiency. "Intrinsic motivation to experience stimulation" is the follow up of sensory activities and irritation (Vallerand et al., 1992, Vallerand et al., 1993). By contrast, extrinsic motivation is described as behavior encouraged by external factors such as rewards (Lee, Cheung, & Che, 2005). Extrinsic motivation refers to identified regulation, which is assessing the need to do activities in order to obtain individual value. Introjected regulation measures how much the students feel guilt. Extrinsic regulation refers to students participating in many events to gain reward or to avoid mistreatment.

The *AMS's* reliability evidence included (Alivernini & Lucidi, 2008) in Italy, (Karatas & Erden, 2012), in Turkey and (Barkoukis, 2008) in Greece. Validity evidence was due to Kevin, Bernard, Cunningham, and Motoike (2001), Vallerand et al., (1992), and Vallerand et al., (1993). It was used in Canada (Guay, Morin, Litalien, Valiois & Vallerand, 2015; Vallerand et al., 1992), the U. S. (Fairchild, Horst, Finney, & Barron, 2005), and Turkey (Can, 2015), but it was not yet used in Saudi Arabia. Lawler III (1973) noted motivation drives behavior and work toward academic success. Nevertheless, in the nearly half-century since, there have been no replication studies on motivation and academic success with Saudi students.

University Students in Saudi Arabia

In 2018, the reported population in Saudi Arabia was 33.4 million (General Authority for Statistics, Kingdom of Saudi Arabia, 2018). Therefore, every year applications to its universities increases and a larger number of students are accepted. According to the Ministry of Education, the number of university students in Saudi Arabia amounted to 6.5 million in 2018.

The Ministry of Education in Saudi Arabia established a project of educational and psychological scales applied to all regions of the educational department. The aim of this project is to prepare a list of psychological and educational standards according to the needs of the students. They reported the persistent need for diagnostic tools characterized by objectivity, quality and accuracy which help to display and then decrease some problems of psychical and educational reasons effect students' academic achievement. Thus, the Ministry of Education in Saudi Arabia may benefit from the *AMS* assessment instrument in supporting students in high academic performance (Ministry of Education, 2018).

Arabic Language

Ambos & Procha (2006) noted 280 million people in North Africa and the Middle East speak Arabic as a first language. More than 250 million people outside of this region speak Arabic as a second language (Lewis, 2009). Wright (2002) noted about 25 countries declared Arabic as their official language, and it is the third most spoken language after English and French.

AL- Jouf University

Al-Jouf University is a public university established in 2005 by royal decree in the Al-Jouf Northern region of Saudi Arabia. There were 25,941 fulltime students are enrolled in undergraduate programs in 8 separate colleges, with 60% female students and 40% male students (Aljouf University, 2018).

Statement of the Problem

The purpose of this study is to determine the psychometric properties of an Arabic translation of the *Academic Motivation Scale* with a sample of students from Al-Jouf University in Saudi Arabia.

Research Questions

The research questions are:

1. How does an Arabic translation of the *Academic Motivation Scale* correspond with the original 28 items of the English version in terms of cultural precision and terms of language?
2. Does the proposed Arabic translation of the *AMS* have acceptable reliability properties when administered to a sample of Arabic students?
3. Does the Arabic translation of the *AMS* have acceptable validity properties when administered to a sample among Arabic students?

4. Are there any gender differences in the score of the Arabic version of the *AMS*?

Study Assumptions

The assumptions in this study are:

1. The Arabic translation of *AMS* will preserve the original psychometric properties, including the internal consistency reliability and its predictive content and construct validity.
2. The translated *AMS* will be linguistically suitable for all Arab dialects.

Study Limitations

The current study will be limited to the Al-Jouf University Saudi student population in the academic years of 2019-2020 and will focus on students between 18 and 23 years old.

Definition of Terms

AMS: The *AMS* includes 28 items and seven subscales; it is an assessment instrument developed by Vallerand et al., (1992, 1993) and purports to measure student motivation for university attendance.

Reliability: Reliability refers to the consistency of a measurement instrument (Kerlinger & Lee, 2000). According to Sawilowsky (2000), instrument reliability is the "consistency that a test measures whatever it measures" (p.197).

Validity: Validity is the degree to which an instrument measures what it purports to measure. Maruyama and Deno (1992) stated validity is "the extent to which a measure actually assesses what it is intended to measure" (p.69).

Importance of the Study

Developing an Arabic version of the Academic Motivation Scale *AMS* is needed for Arabic students in many Arabic speaking countries. It is important to create an Arabic version of the *AMS*

with sound psychometric properties. This study will be necessary for demonstrating the reliability of the *AMS* and validity of its usage when translated into Arabic. The availability of this instrument may be helpful in understanding the level of motivation in post-secondary Saudi students, and help understand the relationship between motivation and academic performance in Saudi universities technical and vocational training colleges.

CHAPTER 2 LITERATURE REVIEW

One of the important results of educational procedure is to "produce responsible, self-sufficient citizens who possess the self-esteem, initiative, skills and wisdom to continue individual growth and pursue knowledge" (Sarason, 1990, p. 163). "self-determination knowledge and skills are important life skills for success throughout one's life" (Field & Hofffman, 1994, p. 164). Self determination which is defined by Field and Hoffman (1994)) as "the ability to identify and achieve goals based on a foundation of knowing and valuing oneself." (p. 164).

Self-determination theory explains the personal attitude which describe psychological needs and supports students to increase academic achievement and interest in the meaning of learning (Deci & Ryan 1985, 1991). This theory is widely used in the educational process when students improve their skills and motived self-determination knowledge so they will be able to succeed in their academic lives (Wehmeyer, 1997). Therefore, teachers need to teach students how to be more self-determined, in order to help them in their educational life (Mason, Field, & Sawilowsky, 2004; Wehmeyer, Agran, & Hughes, 2000).

Developing students' skills and supporting their skills with practice regarding to self-determination would create students with more self-determination (Argan, Snow, & Swaner, 1999; Malone, 2008; Peralte, Gonzalez-Torres, & Sobrino, 2005). Many school personnel help students to become motivated and self-determined by activities and improve their knowledge to meet the needs of daily skills and self-sufficiency (Wehmeyer, M. L. 2002). Psychologically, self-determination performance leads to wise behavior and circumspect choices (Nota, Soresi, Ferrari, & Wehmeyer, 2011).

Field and Hoffman (2002) noted dynamic communication and improvement of student's skills to help them know how they can discuss in educational meeting, wherefore, educational

programs prepare students to participate in many instructional discussion and lead students to understand educational planning.

Self-Determination Concept

When considering the field of special education and teaching students with disabilities, there are many different definitions of self-determination. In the field of disability, self-determination is an upcoming issue, especially when students move from schools to work or and integrate into society. This occurs wide students with disabilities. Educators and families stand against the passive stereotypes assigned and question this conflict (Field & Hoffman 1994).

Wehmeyer (1997) noted self-determination refers to self-governance of a nation. During the last two decades, the concept of self-determination has largely been used by people with disabilities to defend about their rights and control decisions concerning their lives (Ward, 1996). Field, Martin, Miller, Ward, and Wehmeyer (1998) defined self-determination as "a mix of aptitudes, information, and convictions empower an individual to participate in objective, guided, self-managed, and self-sufficient conduct" (p. 123).

Wehmeyer (1996a) termed self-determination as the ability to make decision free from any external influences, bias or obligation to others and to exercise the right to their choices. Self-determination is not a behavior in which individuals participate or activities persons share to perform. It is "enabling people to make things happen in their lives" (Wehmeyer, 2003, p.20). Mithaug (1998) suggested self-determination as an open door and competence or strength to seek the goals in life necessary for individual needs which develop a person's self-determination. Successfully helping students to understand self-determination skills support them to move to adulthood and help them make decisions in their life (Schloss, Alper & Jayne, 1994). Further, inclination to prohibit individuals from learning of many life skills are not only for people with

disabilities but also many of the youth are deficient in these important skills, there is a need to teach children life skills of decision making regardless of their physical abilities to exercise self-determination (Hoffman & Field, 1995).

A second use of the concept of self-determination appears in the literature pertaining to motivation, especially in Deci and Ryan (1985). They characterized self-determination in an individual's performance of motivated behaviors due to internal need. Although there are no external awards for participants, human nature is active and they are internally motived and desire to participate in various activities (Deci & Ryan, 1985). Accordingly, Deci and Ryan (1985) opined self-determination as such "self-determination is the capacity to choose and to have those choices, rather than reinforcement contingencies, drive or any other forces or pressures, be the determinants of one's actions. But self-determination is more than a capacity; it is also a need. We have posited a basic, innate propensity to be self-determining leads organisms to engage in interesting behaviors" (p.38).

The work of Deci and Ryan (1985) focused on the negative impact of the external rewards on positive internal motivation. This has led to generate attention and interest in education and student motivation (Deci, 1971; Deci & Ryan, 1985). Interestingly, much researches related to this approach has presented strategies to increase the need for motivation in students with or without disabilities in the classroom (e.g., Deci & Chandler, 1986; Deci, Hodges, Pierson, & Tomassone, 1992) and especially to understand student how motivation and behavior are affected by teacher orientation (e.g., Boggiano & Katz, 1991; Deci, Spiegel, Ryan, Koestner, & Kauffman, 1982; Flink, Boggiano, & Barrett, 1990).

Nature of Motivation

Self-determination theory is an approach investigated in improvement of human personality and motivation which control performance self-regulation by using classical empirical methods to clarify the value of a person's inner resources (Ryan, Kuhl, & Deci, 1997). Motivation is related to attitude, energy and insistence and equivalent in all part of activation and determination, thus being a concern to parents, teachers, leaders, managers, and coaches who encourage others to work (Deci & Ryan, 2000).

Motivation has an important value because it is considered central issue in psychology, for it is at the essence of cognitive, biological and social regulation (Deci & Ryan, 2000). Comparing between individuals who have real motivation and those who have external control, the first type has more interesting and confidence which increase to improve performance, creativity, and perseverance (Deci & Ryan,1991; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997).

Motivation has several concepts (e.g., Freud, 1923/1962; Hull, 1943; Skinner, 1953). One of the perspectives has been useful over the past years proposed performance can seen due to intrinsic or extrinsic motivation (e. g., de Charms, 1968; Deci, 1971, 1975). Intrinsic motivation leads individuals to performance behavior for their pleasure, in other words, for their own sake or intrinsic need or desire (Deci, 1971). For instance, reading a book fort pleasure or doing volunteer work are examples of intrinsic motivation (Deci & Ryan, 1985a, 1987).

Hart (1978) indicated from the period of birth, children are active, prying, obtrusive, playful and inquisitive although there is no external reward. Intrinsic motivation is characterized by the natural tendency of humans to assimilate, dominate, be superiority and seek social and cognitive improvement which supports life enjoyment (Csikszentmihalyi & Rathunde, 1993; Ryan, 1995). Deci and Ryan (1985) presented the Cognitive Evaluation Theory (CET) as a sub

theory of self-determination theory which has the goal of explaining variability within intrinsic motivation.

CET is framed environmental and social effects facilitate opposite and undermine intrinsic motivation (Deci & Ryan, 2000). The first important point to understand in the different sources of liberation and alienation of positive human nature is studying all conditions facilitate versus undermine intrinsic motivation, in fact, many studies in field of environmental factors in intrinsic motivation focus on the importance of autonomy versus control instead of competence (Deci & Ryan, 2000).

The issue of external rewards which can affect the intrinsic motivation is extremely more argumentative (Deci & Ryan, 2000). Generally, autonomous motivation is produced from intrinsic motivation; however, extrinsically motivation is more controlled (Deci & Ryan, 2000, 2008; Ryan & Deci, 2000; Vansteenkiste, Lens & Deci, 2006). According to self-determination theory, Deci and Ryan (1985) suggested another important type of motivation in addition to intrinsic motivation.

The main point, concerning about non-intrinsically motivated behavior is how and where individuals can obtain motivation to practice their task and how this motivation influences on performance quality and prosperity (Deci & Ryan, 2000). Parents, managers, leaders, teachers, and always aim to promote performance in individuals, but in return, individuals' motivation for behavior may be not show interested, unwillingness or negative docility (Deci & Ryan, 2000).

Accordingly, self-determination theory has shown these various motivations which explain the value and arrangement of performance have been internalized and integrated. Internalization reflects the acceptance of individuals a value or regulation, and integration indicates

transformation of this regulation to their own; thus, it will arise and engender individuals from their sense of themselves (Deci & Ryan, 2000).

Self-determination theory focuses on (a) the procedures of non-intrinsically motivated behavior turned into become real self-determined, and (b) the different ways social environment factors can effect those procedures. An act, work, or activity leads to rewards for extrinsic motivation, hence, in contradiction, performance of any activity in order to obtain satisfaction for behavior itself has been refer to intrinsic motivation (Deci & Ryan, 2000).

Extrinsic motivation is related to different behavior, where the aims of these behaviors are to reach goals beyond those potential in the action itself (Deci, 1975; Kruglanski, 1978). Self-determination theory suggests extrinsic motivation may differ extremely in its proportional autonomy (Ryan & Connell, 1989; Vallerand, 1997).

Heider (1958) indicated to intentional behavior when individuals have tools and instruments to do work but are not enjoying the work itself. For example, students who do their task because they understand its value in their chosen occupation are extrinsically motivated, as are individuals who do work in order to abide by their parents' rule. However, the first case includes a feeling of choice for extrinsic motivation, while the second case entails compliance of extrinsic regulation. Both are intended behaviors, but differ in relative autonomy (Heider, 1958).

Self-determination theory distinguishes four types of extrinsic motivation, which may be performed as behavior regulation: (Deci & Ryan, 1985a, 1987; Ryan & Conell, 1989; Ryan, Connell, & Deci, 1985; Ryan, Connel, & Grolnick, in press). External regulation, introjected regulation, identified regulation, and integrated regulation are different types of extrinsic motivation which can be arranged from lower to higher levels of SDT (Deci & Ryan, 1985, 2000; Ryan & Deci, 2000). Extrinsic regulation is the least autonomous form of motivation, which refers

to external behavior regulation to satisfy external rewards or to avoid constraints. For example, students perform an activity to avert a teacher's attention, instead of enjoying work, this done for avoid negative criticism. In this case, the cause of participation is placed outside of the activity itself; thus, the motivation is extrinsic. Moreover, this behavior is non self-determination or even chosen (Deci & Ryan, 1985a). Extrinsic motivation may be performed to obtain rewards too, for example, an individual's desire receives promised prize from parents or peers by achieving high scores in school. Motivation is not self-determined; it is extrinsic. Both cases, students feel controlled by rewards or compulsion and behave according to parents or teachers' instructions to gain a prize or avoid punishment (Deci & Ryan, 1985a).

Introjected regulation is labeled as a second type of extrinsic motivation which based on the individual's internal control. Conversely, individuals may work hard or perform a certain behavior a way to gain ego enhancement or avoid anxiety. Thus, the control is now internalized, but it is not self-determined because it used as a pressure factor to attain special goals (Ryan, 1982).

Identified regulation depends on the benefit of an identified certain behavioral goal. For example, students might attendance private class to help improve their ability in a specific subject. In this case, individuals feel the value of work and act out of a sense of responsibility for regulating their behavior to do the activity. The motivation is external because it relies on the usefulness of improving their ability in a subject. Students then accept the action as personally important (Deci & Ryan, 1985, 2000; Ryan & Deci, 2000).

Integrated regulation occurs when an individual feel synthesis with their self; they integrate their performance along with other aspects of self-concept. Integrated regulation is the most autonomous of extrinsic motivation, in which the individuals participate in activities because they value the behavior and want to achieve personal goals. At this level, integration shown the

congruence between behavior and the persons' core sense of self. The integrated regulation is the highest level of self-determination for extrinsic motivation (Deci & Ryan, 200; Ryan & Deci, 2009).

To completely understand human behavior, in addition to intrinsic and extrinsic motivation, Deci and Ryan (1985a) indicated to a third construct, amotivation, when individuals may feel of incompetence and reduction of control. Individual are amotivated when they realize a privation of contingency between behavior and result; a motivational behavior is classified as being less self-determined because it is neither intrinsically nor extrinsically motivated which there is no aim or end and no eventuality of rewards or expectation of changing the events and participation in any work will cease (Deci & Ryan, 2000).

Amotivation may be considered as learned helplessness, because the individual will feel of uncontrollability and incompetence (Ambramson, Seligman, & Teasdale, 1978). Deci and Ryan (2000) indicated amotivation is at the far left of self-determination continuum. When amotivated, individuals do not act at all or they participate in an activity without purpose and just follow the motions (Deci & Ryan, 2000).

Amotivation is "the state of lacking the intention to act" (Ryan & Deci, 2000, p. 72). Amotivation originated from not valuing any work (Ryan, 1995), not feeling qualified for do any activity (Bandura, 1986), or even not looking forward it to yield a required result (Seligman, 1975). Studies in education have focused on the importance and the outcome of intrinsic motivation. It was been shown situational events to help to increase creativity (Ambabil, 1979, 1982, 1983; Amabile, Hennessey, & Grossman, 1986; Koestner, Ryan, Bernieri, & Holt, 1984; Kruglanski, Friedman, & Zeevi, 1971), more conceptual learning (Benware & Deci, 1984, Grolnick & Ryan,

1987), better interest (Harackiewicz, 1979; Ryan, Mims, & Koestner, 1983), and help to produce positive emotional behavior (Garbarino, 1975) rather than controlling events.

In contrast, the different forms of extrinsic motivation have been less self-determined because they are less positive in concept of performance and impact (Deci & Ryan, 1985). Amotivation is related with impaired cognitive behavior and least self- esteem (Abramson et al., 1978; Peterson & Seligman, 1984).

Grolnick and Ryan (1987), Harter and Connell (1984) and Vallerand, Blais, Briere, and Pelletier (1989) examined the correlation among motivation behavior and education outcomes. Harter and Connell (1984) found motivation was associated to individuals' academic achievement. Regrettably, Harter's (1981) Intrinsic/ Extrinsic Motivation Scale was used, which pits intrinsic motivation against extrinsic motivation. Subsequently, this scale prevented an independent estimate of these constructs and did not measure amotivation. Thus, the function of extrinsic motivation and amotivation is yet unexplored (Vallerand et al., 1992).

Grolnick and Ryan (1987) used the Self-Regulation Questionnaire which assessed individual's external, introjected, and identified regulation and intrinsic motivation toward school (Grolnick & Ryan, 1987; Ryan & Connell, 1989). By employing a self-determination index, they were able to measure the relationship between the higher level of self-determination and better conceptual education. However, they did not explore the particular function of each construct in education (Vallerand et al., 1992).

The *AMS* was used by Vallerand et al. (1989) to measure the concept of external, introjected, identified regulation, and intrinsic motivation, and amotivation in college students toward school. Moreover, they assessed other different learning measures which dealing with understanding of competence, emotions and the period in which students spend to do their

academic homework. Findings explored a positive correlation between intrinsic motivation and learning outcomes. In addition, identified regulation related with outcome in positive correlation, but not as robustly to intrinsic motivation. There was slightly negative correlation or none between external regulation and introjection. Finally, there was a strong negative relation between amotivation and educational outcomes (Vallerand et al., 1992).

Results from studies by Grolnick and Ryan (1987) and Vallerand et al. (1989) were encouraging, because they explored how the intrinsic motivation and extrinsic motivation (including identified regulation) and amotivation forms were associated with outcomes. In these studies, the outcome was assessed by motivational forms and measures, so, it was not clear to estimate the role of the motivational approach in achieving these outcomes. In addition, it was difficult to confirm causality was from motivational styles and outcomes. It may have been due to a third, spurious factor (Vallerand et al., 1992).

Subsequently, Vallerand (1992) conducted a study to measure intrinsic, extrinsic, and amotivation styles toward future behavior. It was estimated the predictive impacts of intrinsic, extrinsic, and amotivation (independents variable) to academic activities on persistence (dependent variable) in college students (Vallerand et al., 1992).

Students who continued and completed the semester in their college had more intrinsic motivation than students who withdraw from academic activities. A second interesting point was the correlation between extrinsic motivation (consist to the type of extrinsic motivation) and persistence in behavior. Accordingly, external and introjected regulation (non-self-determined type) did not correlate to behavior persistence (outcomes). Nevertheless, extrinsic motivation (self-determined type) integration and identification correlated positively to outcomes (Vallerand, 1992).

Psychometrics of the *AMS*

The *AMS* had good reliability and validity for college students. Vallerand (1992) conducted a study used the first experimental version of *AMS* at the beginning of academic year, were 1042 French_ Canadian subjects. They had a mean age of 17 years and all students in their first semester from a junior college of Montreal area. The results presented an acceptable level of reliability (Cronbach alpha) ranging from 65 to 83 and adequate evidence of validity for the motivation subscale. Grouzet, Otis and Pelletier (2006) examined various aspects of validity for the *AMS* in high school, the study applied on 643 students (from 8th to 10th grade) by wing SEM strategy. During 3 years, *AMS* showed a good evidence of validity depending on the sample and educational degree. Fairchild (2005) indicated the *AMS* had reasonable degree of reliability which reported Cronbach's coefficient values ranging between .77 to .90 for sample of 1,406 college students at an East Coast U.S. university, and mean age of 18 years.. Cokley, Bernard, Cunningham and Motoike (2001) also showed the *AMS* had acceptable reliability ranging between .70 to .86 among of 263 college students. Recently, Can (2015) noted *AMS* had a good reliability about .69 to .93 with 797 college students in Turkey.

The relationship between various types of motivation was examined by Alivernini and Lucidi (2008), Grouzet et al. (2006) and Otis et al. (2005). Higher positive correlations were found among intrinsic motivation and identified regulation than intrinsic motivation with external regulation. Thus, although the *AMS* has been widely used, it has not been applied in Saudi Arabia among university students. An examination of the psychometric properties of *AMS* is therefor of interest.

CHAPTER 3 METHODOLOGY

The primary purpose of this study is to translate the *Academic Motivation Scale (AMS)* (Vallerand et al. 1992) into Arabic and to determine its reliability and validity evidence, An Arabic version of this instrument may be very useful in assessing academic motivation among a sample of students attending to Al-jouf University in Saudi Arabia.

Reliability and Validity

Reliability is "the consistency that a test measures whatever it measures" (Sawilowsky, 2000, p. 197). In general, there are various types of reliability: test-retest, internal consistency, and parallel-form reliability. Internal consistency of the Arabic *AMS* for this study will be obtained via Cronbach's alpha (Cronbach, 1951; Cronbach & Meehl, 1955; Hinkin, 1998). Internal consistency reliability measures the interrelatedness between items (Netemeyer, Bearden, & Sharma, 2003).

According to Joppe (2000), "validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are. In other words, does the research instrument allow you to hit "the bull's eye" of your research object Researchers generally determine validity by asking a series of questions and will often look for the answers in the research of others" (p. 1). Cook and Beckman (2006) indicated validity which explains how legitimately confident the outcomes of a test an explained for a particular purpose. There are four different types of validity: content, concurrent, predictive, and construct validity. For this study construct validity of the Arabic *AMS* will be estimated through Exploratory Factor Analysis (EFA). Packer (2004) defined validity as "a complex statistical procedure which is conducted for a variety of purposes, one of which is to assess the construct validity of a test or a number of tests" (p. 121).

Participants

According to the Deanship of Admission and Registration at Al-jouf University, there are 7070 full-time students (51.6% male and 48.4% female) in 8 separate colleges in the academic year 2018/2019. Shown in Table 1 are the number and percentage of the study population at Al-jouf University in 8 colleges; Table 2 contains a number and percentage of male and female students of the study population (Deanship of Admission and Registration, 2018).

Table 1. *Study Population across Al-jouf University*

College	# of Students	Percentage
College of Education	229	3.29%
College of Science	553	7.93%
College of Law	292	4.19%
College of Applied Medical Sciences	69	.99%
College of Arts in Quraiat	1209	17.35%
College of Arts in Tabarjal	1179	16.92%
College of Business Administration	2270	32.57%
College of Preparatory year	1169	16.77%
Total	*7070*	*100%*

Note: Population from Al-jouf University academic year 2017/2018. Al-jouf University, Saudi Arabia, p. (24).

Table 2. *Study Population according to Gender*

Gender	*# of Students*	*Percentage*
Male	*3646*	*51.6%*
Female	*3424*	*48.4%*
Total	*7070*	*100%*

Instrument

The *Academic Motivation Scale (AMS)* contains 28 items. It was developed by Vallerand et al. (1992) for the aim of assessing student motivation to attend college and their motivation about education and learning. There are7 subscales, with each subscale comprised of 4 items. Each

item on the *AMS* is scored on 7-point Likert scale from 1= Does not correspond at all to 7= Correspond exactly, (Vallerand et al. 1992).

The original English version of the *AMS* must be translated into Arabic language for the purposes of this study. A request for permission was sent to the copyright of the *AMS* (Vallerand et al. 1992) to use and translate the scale. (See Appendix A). The researcher translated the *AMS* scale from English into Arabic. To confirm the concordance of the meaning of words and constructs among the Arabic and English versions of the *AMS*, a bilingual researcher in English and Arabic translated the instrument back ward back from Arabic into English language. Finally, the experts compared the meaning and constructs of the original version and the ward back translation version. (The instrument is presented in Appendix B).

Human Subjects Review

This study prospectus will be sent to human subject in Wayne State University Institutional Review Board and to Al-jouf University Research Ethics Committee for approval to conduct this research.

Sample

The random sample will be selected from 7070 students from 8 colleges who are attending their first year of Al-jouf University, Al-jouf, Saudi Arabia. They will be an estimated 365 students representing the population, solicited to participate. To select the study sample, male and female first-year university attendants in each College will be considered, broken down by gender. These demographic details obtained from the Deanship of Admission and Registration at Al-jouf University. Then, a randomly selected sample will be obtained of approximately 51.6% male and 48.4% female students from the 8 colleges, to match the proportions in the population.

Data Analysis

Translation. Research question 1 will be answered by a panel of experts. It were their task to evaluate the extent to which the Arabic *AMS* version matches the original version of *AMS* according of language and culture. The panel will consist of two Assistant Professor in The Department of Educational Psychology in Saudi Arabia who have bilingual expertise in Arabic and English, and who are familiar with the motivation research.

Reliability. SPSS (ver. 26) will be used to analyze the data necessary to answer study question 2 – 4. "Reliability and validity are tools of an essentially positive epistemology" (Winter, 2000, p.7, see also Bernard & Bernard, 2012, Fraenkel & Wallen, 2006, and Nunnally, Bernstein, & Berge, 1967). Cronbach alpha, a measure of internal consistency reliability, will obtained for the full scale, and the subscales. The item deletion approach was pursued to determine the impact on reliability based on any single item's removal. The Spearman-Brown prophecy adjustment to the internal consistency reliability will be applied to the subscales. In addition, descriptive statistics (mean, standard deviation, correlation) will be obtained on the full, subscale, and item level.

Validity. "Validity refers to the use of the test and not the test itself" (Sawilowsky, 2000, p. 197). An exploratory factor analysis, with principal components extraction and varimax rotation, will be conducted to examine the internal factor structure of the *AMS*. Coefficients was sorted by size, and coefficients below |.4| was suppressed for clarity. An analysis of the factor loadings, including such issues as multi-factor loading, will be used to provide construct validity evidence. If an alternative factor structure is obtained, Cronbach alpha will be reassessed for the resulting full scale, and associated subscales.

Gender differences

Research question 4 pertains to gender differences between student's scores of the Arabic *AMS*. The null and alternative hypotheses are:

$$H_o: \mu_F = \mu_M$$

$$H_A: \mu_F \neq \mu_M,$$

where μ_F, μ_M refer to the mean responses of female and male students, respectively. The Wilk-Shapiro test for normality and Levene's test for homoscedasticity will conducted to determine if the underlying assumptions will be met. If only the normality assumption is rejected, the alternative analysis will be the Wilcoxon Rank Sum test. If the homoscedasticity assumption is violated, the alternative analysis will be the Welch-Aspin test with Satterthwaite adjustment to the degrees of freedom. All underlying assumptions and tests of effects will be conducted at the nominal alpha level of 0.05.

In terms of a priori statistical power, assuming a small effect size of .2 and a two sided test, the minimum sample size required to obtain a power level of 0.80 is 393 per sex. A medium effect size of .5 reduces the minimum sample size requirement to 63 (https://www.stat.ubc.ca/~rollin/stats/ssize/n2.html). The 95% confidence interval, with the margin of error set to ±4.5% requires a sample size of 445, excluding spoilage. The minimum acceptable level, 90% confidence interval with ±5% margin of error, will require a sample size of 261, excluding spoilage (http://www.raosoft.com/samplesize.html).

Analyses will initially be conducted aggregated response from all eight Colleges. However, if the samples sizes obtained broken down by College within Al-jouf University meets the minimum acceptable level indicated above, then a breakdown analysis by College will also be calculated.

CHAPTER 4 RESULTS

In this study, the psychometric properties of an Arabic translation of the *Academic Motivation Scale (AMS)* was examined. It was administered to a sample of the first - year university students from AL- Jouf University- Al-Jouf, Saudi Arabia.

Student Demographic

The total sample included 275 students of which 147 were male (53.52%) and 128 were female (46.48%). The average age for students was 21 years (range =19-23) years. Depicted in Table 3 are students' demographic characteristics across the eight Colleges in AL-Jouf University, and shown in Table 4 are the demographic characteristic of the students in terms of gender.

Table 3. *Study Sample at AL-Jouf University*

College	# of Student	Percent
College of Education	29	10.67
College of Science	10	4.33
College of Law	20	7.67
College of Applied Medical Sciences	11	4.67
College of Arts in Quraiat	62	21.67
College of Arts in Tabarjal	34	12.33
College of Business Administration	35	12.67
College of Preparatory year	74	26
Total	275	100.0

Table 4. *Gender For Participating Students*

	Gender	#of Student	#Percentage
Valid	Male	147	53.52
	Female	128	46.48
	No response	21	7.6
	Total	275	100.0

Correlations

The correlations between 28 items were statistically significant, with nominal alpha set to 0.05. Examples of those positively correlated include Q1 with Q13 (r = 0.37); Q3 with Q7 (r = 0.41); Q17 with Q9 (r = 0.53), and Q26 with Q15 (r = 0.43). There were statistically significant negative relationships between Q11 with Q5 (r = -0.47); Q19 with Q13 (r = -0.26); Q23 with Q12 (r = -0.37) and Q28 with Q5 (r = -0.15). Due the size of the complete Inter- Item Correlation Matrix it is placed in the Appendix. Analysis on the *AMS* and descriptive statistics are showed in Table 5.

Table 5. *Item Statistics, Sample n=254, for the AMS*

	Mean	Std. Deviation
Q1	5.41	1.921
Q2	5.59	1.391
Q3	5.93	1.299
Q4	4.92	1.772
Q5	2.25	1.751
Q6	5.39	1.593
Q7	5.78	1.504
Q8	6.12	1.177
Q9	5.70	1.393
Q10	5.78	1.449
Q11	4.97	1.710
Q12	3.17	2.029
Q13	6.08	1.207
Q14	6.05	1.284
Q15	6.02	1.279
Q16	5.45	1.561
Q17	5.60	1.587
Q18	5.04	1.809
Q19	3.88	1.809
Q20	5.64	1.504
Q21	5.56	1.618
Q22	5.98	1.184
Q23	5.66	1.476
Q24	5.87	1.319
Q25	5.60	1.533
Q26	3.28	2.288
Q27	5.61	1.483
Q28	5.93	1.351

Internal Consistency Reliability

Internal consistency was analyzed by using Cronbach's Alpha. For the entire scale it was 0.90. The full scale mean was 5.29, and the standard deviation was 0.86. There is no clear evidence to delete any single item because the improvement of the Cronbach's Alpha would be not advantageous, as shown in Table 6. The internal consistency and related descriptive statistics for the seven subscales are shown in Table 7.

Table 6. *Item-Total Statistics of the AMS*

	Scale Mean If Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Squared Multiple Correlation	Coronach's Alpha if Item Deleted
Q1	142.83	542.771	.435	.313	.910
Q2	142.66	544.368	.602	.602	.907
Q3	142.31	550.177	.550	561	.908
Q4	143.32	538.836	.527	.470	.908
Q5	145.99	591.162	-.104	.380	.920
Q6	142.86	530.509	.713	.599	.905
Q7	142.47	540.835	.604	.582	.907
Q8	142.13	557.723	.472	.612	.909
Q9	142.54	539.783	.674	.655	.906
Q10	142.46	540.906	.629	.575	.907
Q11	143.28	529.125	.678	.636	.906
Q12	145.07	570.852	.107	.269	.917
Q13	142.17	552.067	.561	.567	.908
Q14	142.20	550.981	.543	.496	.908
Q15	142.22	554.844	.479	.493	.909
Q16	142.80	535.373	.658	.594	.906
Q17	142.65	534.617	.657	.641	.906
Q18	143.20	529.887	.627	.612	.906
Q19	144.37	561.174	.179	.358	.917
Q20	142.60	536.470	.669	.576	.906
Q21	142.68	535.317	.633	.566	.906
Q22	142.26	554.622	.526	.580	.909
Q23	142.59	539.176	.642	.629	.907
Q24	142.37	545.388	.621	.619	.907
Q25	142.64	533.812	.694	.639	.906
Q26	144.97	570.157	.091	.434	.919
Q27	142.63	537.806	.659	.596	.906
Q28	142.32	541.348	.671	.553	.906

Table 7. *Subscales Statistics of the AMS*

Subscale	Mean	SD	*Cronbach Alpha*	N of Items
Intrinsic Motivation to know	5.59	1.19	.81	4
Intrinsic Motivation toward accomplishment	5.66	1.21	.82	4
Intrinsic Motivation to experience stimulation	5.14	1.37	.81	4
Extrinsic Motivation Identified	5.81	1.10	.78	4
Extrinsic Motivation Introjected	5.85	1.11	.78	4
Extrinsic Motivation external regulation	5.88	1.06	.72	4
Amotivation	3.19	1.56	.72	4

Table 8. *Spearman Brown of the AMS*

Subscale	Cronbach Alpha	Number of Items	Spearman-Brown
1	.81	4	.967
2	.82	4	.969
3	.81	4	.967
4	.78	4	.961
5	.78	4	.961
6	.72	4	.947
7	.72	4	.947

Validity

Exploratory Factor Analysis (EFA) with principal components analysis (PCA) as the extraction method and varimax rotation was conducted to examine the construct validity of Arabic *AMS*. Kaiser's (1960) eigenvalue was set at the ≥ 1 criterion. The scree plot (Cattel, 1966) was also obtained (Williams et al., 2010) to assist in determining the potential number of factors extracted. There was a four factor solution, with many positive loading on factor one: Q25, Q11, Q2, Q9, Q17, and Q4. The items having a positive loading on factor two were: Q20, Q8, Q15, Q7, Q28, and Q10. On factor three, the items Q26, Q5, Q19, and Q12 had positive loading. Q1 and Q3 had positive loading on factor four (see Table 8). Q28, 24, 21 and 20 loaded on factor 1. Q3 loaded on factor 1 and 4. Therefore, these seven factors may be considered for deleted in a follow-up

study. The four factor explained 57.83% of the total variance, as noted in Table9, so it is not advisable to delete the items loading on multiple factors based on the data for this analysis.

Table 9. *Rotated Component Matrix for the AMS*

	Component			
	1	2	3	4
Q25	.746			
Q18	.745			
Q11	.723			
Q6	.722			
Q2	.710			
Q23	.692			
Q9	.690			
Q16	.682			
Q17	.662			
Q27	.655			
Q4	.626			
Q20	.575	.512		
Q24	.525	.503		
Q8		.747		
Q22		.732		
Q15		.709		
Q14		.698		
Q7		.643		
Q13		.609		
Q28	.515	.567		
Q10		.559		
Q21	.456	.526		
Q26			.804	
Q5			.736	
Q19			.707	
Q12			.619	
Q1				.513
Q3	.422			.490

Table 10. *Variance Explained*

	Initial Eigenvalue			Rotation Sum of Squared Loadings		
Component	Total	% of Variance	Cumulative%	Total	% of Variance	Cumulative%
1	10.858	38.779	38.779	7.209	25.746	25.746
2	2.608	9.316	48.095	5.289	18.888	44.634
3	1.670	5.964	54.059	2.372	8.471	53.105

4	1.063	3.798	57.856	1.330	4.751	57.856

Gender Differences

The null and alternative hypotheses are:

$$H_o: \mu_F = \mu_M$$

$$H_A: \mu_F \neq \mu_M,$$

where μ_F, μ_M refer to the mean responses of female and male students, respectively. The Kolmogorov-Smirnov and Shapiro-Wilk tests were conducted, and the assumption of normality was rejected ($p < 0.05$) for both tests, as indicated in Table 10.

Table 11. *Tests of Normality*

	Kolmogorov-Smirnov			Shapiro-Wilk		
		df	Sig.	Statistic	df	Sig.
Total_score	.142	274	.000	.912	274	.000

However, Levene's test for homoscedasticity was not violated, $\rho > 0.05$. Thus, the statistical analysis for the test of gender differences is the Wilcoxon Rank Sum / Mann-Whitney U test. As shown in Table 11, it was not statistically significant ($\rho > 0.05$), indicating there is no need to develop gender norms for the Arabic translation of the *AMS*.

Table 12. *Mann- Whitney Test*

Gender	N	Mean	Mean Rank	Sum of Rank	Exact sig.(2-tailed)
Male	123	5.26	123.72	15217.00	.626
Female	128	5.27	128.20	16409.00	
Total	251				

CHAPTER 5 DISCUSSION

The purpose of the current study was to develop and test the reliability and validity of an Arabic version of the *AMS* in a sample of Arabic student in AL-Jouf University. In addition this study aimed to examine gender differences in the Arabic *AMS.*

Study Summary

The current study has four key research questions. The first research question was as follows: How does an Arabic translation of the *Academic Motivation Scale* correspond with the original 28 items of the English version in terms of cultural precision and terms of language? The *Academic Motivation Scale* (*AMS)* an twenty eight item by Vallerand et al. (1992, 1993) purported to measure the quality of motivation and development was based on the Self- Determination theory of motivation was translated into Arabic by the researcher, and then to confirm the concordance of the meaning of words and constructs among the Arabic and English version of the *AMS*, a bilingual researcher in English and Arabic translated back ward back from Arabic into English. Lastly, the experts compared and reviewed the meaning and constructs of the original version. According to the experts' recommended, the Arabic translation of AMS correspond with the original 28 item of English version in term of culture precision. For example, item 1 of the original AMS explains how the similarity in culture in social habits and beliefs among English and Arabic subjects that high- school degree will not qualify them a good job.

The three remaining study questions were answered by using SPSS (ver. 26). A total of 275 Arabic students studying in eight colleges at AL-jouf University in Saudi Arabia participated in this study. The Arabic *AMS* was completed during of the beginning of the second semester of the 2019-2020 academic year.

The second study question was does the proposed Arabic translation of the *AMS* have acceptable reliability properties when administered to a sample of Arabic students? Cronbach's alpha, a measure of internal consistency indicated the Arabic *AMS* showed adequate internal consistency α =.91 which is comparable with Cronbach's alpha .83 found by Vallerand (1992). These finding suggest the Arabic version of *AMS* can provide reliable and internally consistent measurements of Academic Motivation for Arabic students. The Cronbach's alpha levels for the seven subscale of AMS indicated to a good inter-item consistency, from .72 to .82. The Cronbach's alpha coefficients was .81for intrinsic motivation to know, .82 for intrinsic motivation toward accomplishment, .81 for intrinsic motivation to experience stimulation, .78 for extrinsic motivation identified, .78 for extrinsic motivation introjected, .72 for extrinsic motivation external regulation, and .72 for a motivation. The Spearman- Brown adjustment were between .94 to .96. These finding revealed a high level of internal consistency reliability for the entire scale, as well as the individual subscales, when the translated Academic Motivation Scale was administered to these Arabic students.

The third study question was does the Arabic translation of the *AMS* have acceptable validity properties when administered to a sample among Arabic students? An exploratory factor analysis, with principle component extraction and varimax rotation was conducted to examine the internal factor structure of the *AMS*. Examination of explained variance where the number of factors extracted should be stopped when approximately 50-60% of the variance is explained (Williams et al., 2010). Four factors was the best solution loading of the Arabic *AMS* using eigenvalue ≥ 1, and examination of explained variance.

When examining the four factors, shown factor one included 19 items which in general measure the intrinsic motivation. Additionally, three main subscales had loaded in this factor. 11

items belong to factor two which assess the extrinsic motivation, and this factor loaded of three basic subscales. Third factor consisted of 4 items which focus on a motivation. Lastly, factor four included 2 items measure the extrinsic motivation. These results confirm AMS is a reasonably valid instrument, in terms of internal factor structure, for measuring the quality of Arabic students' motivation in Saudi Arabia, although the seven subscales are best reduced to a four factor solution. The EFA results may be provide a valid measurements of the construct academic motivation scale based on this sample of Arabic speaking students.

Lastly, study question 4 pertains to gender differences in the score of the Arabic version of the *AMS*. The null and alternative hypotheses are:

$$H_o: \mu_F = \mu_M$$

$$H_A: \mu_F \neq \mu_M,$$

where μ_F, μ_M refer to the mean responses of female and male students, respectively. The Kolmogorov-Smirnov and Shapiro-Wilk tests were conducted, the assumption of normality was rejected for both tests. Levene's test for homoscedasticity was not violated. Thus, non-parametric Wilcoxon Rank Sum/ Mann- Whitney U test was conducted. The results were not statistically significantly different Given the lack of difference among the gender groups, there is no need to develop gender norms for the scale.

Limitation of the study

Data collected of this study are limited to students from just one University (Al-Jouf University). Hence, the sample may not be representative of Arabic speaking students studying at other universities around the world. Additionally, the students was voluntarily participated in this study via their e-mail.

The demographic characteristics of the current study was limited to the first- year university Arabic students between 19-23 years old. Thus, the sample was not representative of university students at other level and other ages.

Implication for Future Studies

When students improve their skills and motived self- determination knowledge, they will be able to succeed in their academic lives (Wehmeyer, 1997). In Saudi Arabia, there is no motivation intervention program for Saudi students. Therefore, a reliable and valid Arabic version of *AMS* is necessary for researchers and teachers who interested in measuring of academic motivation of Saudi students. Future studies will develop on Arabic version of *AMS* for differs university students.

APPENDEX A: PERMISSION TO USE ACADEMIC MOTIVATION SCALE AMS

Hello,
This is Wafa Alruwaili a doctoral student at Wayne State University, Detroit, MI U.S. I am working on my dissertation and I have an interest in translating The Academic Motivation Scale into Arabic and I would like your permission to use The Academic Motivation Scale (AMS) and translate the scale to the Arabic language and using the translating version in my study. With an emphasis to save your AMS scale Copyright and do not use test for any purposes except of scientific research for my study.

Thank you,

Wafa Alruwaili
Doctoral student- Education Evaluation & Research
Wayne State University- Detroit, Michigan. U.S
Email: fy4223@wayne.edu

Title : The Academic Motivation Scale: A Measure of Intrinsic, Extrinsic, and Amotivation in Education.
Author: Robert J. Vallerand, Luc G. Pelletier, Marc R. Blais, et al
Publication: Educational and Psychological Measurement.
Publisher: SAGE publications
Date: 12/01/1992
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APPENDEX B: ORIGNAL ACADEMIC MOTIVATION SCALE AMS

ACADEMIC MOTIVATION SCALE (AMS-C 28)

COLLEGE (CEGEP) VERSION

Robert J. Vallerand, Luc G. Pelletier, Marc R. Blais, Nathalie M. Brière, Caroline B. Senécal, Évelyne F. Vallières, 1992-1993

Educational and Psychological Measurement, vols. 52 and 53

Scale Description

This scale assesses the same 7 constructs as the Motivation scale toward College (CEGEP) studies. It contains 28 items assessed on a 7-point scale.

References

Vallerand, R.J., Blais, M.R., Brière, N.M., & Pelletier, L.G. (1989). Construction et validation de l'Échelle de Motivation en Éducation (EME). Revue canadienne des sciences du comportement, 21, 323-349.

WHY DO YOU GO TO COLLEGE (CEGEP) ?

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to college (CEGEP).

Does not correspond at all	Corresponds a little	Corresponds moderately	Corresponds a lot	Corresponds exactly
1	2 3	4	5 6	7

WHY DO YOU GO TO COLLEGE (CEGEP) ?

1. Because with only a high-school degree I would not find a high-paying job later on.	1	2	3	4	5	6	7
2. Because I experience pleasure and satisfaction while learning new things.	1	2	3	4	5	6	7
3. Because I think that a college (CEGEP) education will help me better prepare for the career I have chosen.	1	2	3	4	5	6	7
4. For the intense feelings I experience when I am communicating my own ideas to others.	1	2	3	4	5	6	7
5. Honestly, I don't know; I really feel that I am wasting my time in school.	1	2	3	4	5	6	7
6. For the pleasure I experience while surpassing myself in my studies.	1	2	3	4	5	6	7
7. To prove to myself that I am capable of completing my college (CEGEP) degree.	1	2	3	4	5	6	7
8. In order to obtain a more prestigious job later on.	1	2	3	4	5	6	7
9. For the pleasure I experience when I discover new things never seen before.	1	2	3	4	5	6	7
10. Because eventually it will enable me to enter the job market in a field that I like.	1	2	3	4	5	6	7
11. For the pleasure that I experience when I read interesting authors.	1	2	3	4	5	6	7
12. I once had good reasons for going to college (CEGEP); however, now I wonder whether I should continue.	1	2	3	4	5	6	7
13. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.	1	2	3	4	5	6	7
14. Because of the fact that when I succeed in college (CEGEP) I feel important.	1	2	3	4	5	6	7
15. Because I want to have "the good life" later on.	1	2	3	4	5	6	7

Does not correspond at all	Corresponds a little	Corresponds moderately	Corresponds a lot	Corresponds exactly
1	2 3	4	5 6	7

WHY DO YOU GO TO COLLEGE (CEGEP) ?

16. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.	1	2	3	4	5	6	7
17. Because this will help me make a better choice regarding my career orientation.	1	2	3	4	5	6	7
18. For the pleasure that I experience when I feel completely absorbed by what certain authors have written.	1	2	3	4	5	6	7
19. I can't see why I go to college (CEGEP) and frankly, I couldn't care less.	1	2	3	4	5	6	7
20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.	1	2	3	4	5	6	7
21. To show myself that I am an intelligent person.	1	2	3	4	5	6	7
22. In order to have a better salary later on.	1	2	3	4	5	6	7
23. Because my studies allow me to continue to learn about many things that interest me.	1	2	3	4	5	6	7
24. Because I believe that a few additional years of education will improve my competence as a worker.	1	2	3	4	5	6	7
25. For the "high" feeling that I experience while reading about various interesting subjects.	1	2	3	4	5	6	7
26. I don't know; I can't understand what I am doing in school.	1	2	3	4	5	6	7
27. Because college (CEGEP) allows me to experience a personal satisfaction in my quest for excellence in my studies.	1	2	3	4	5	6	7
28. Because I want to show myself that I can succeed in my studies.	1	2	3	4	5	6	7

KEY FOR AMS-28

# 2, 9, 16, 23	**Intrinsic motivation - to know**
# 6, 13, 20, 27	**Intrinsic motivation - toward accomplishment**
# 4, 11, 18, 25	**Intrinsic motivation - to experience stimulation**
# 3, 10, 17, 24	**Extrinsic motivation - identified**
# 7, 14, 21, 28	**Extrinsic motivation - introjected**
# 1, 8, 15, 22	**Extrinsic motivation - external regulation**
# 5, 12, 19, 26	**Amotivation**

أخي الطالب/ الطالبة:

تحية طيبة.. بإستخدام المقياس أدناه، حدد إلى أي مدى تتوافق كل فقرة من الفقرات التالية مع إحدى أسباب إلتحاقك بالجامعة حيث تتراوح درجة الموافقه من (١) اعارض بشدة حتى (٧) أوافق بشدة

أعارض بشدة						اوافق بشدة
١	٢	٣	٤	٥	٦	٧

لماذا أذهب إلى الجامعة ؟

	١	٢	٣	٤	٥	٦	٧
١- لأن شهادة الثانويه العامه لاتؤهلني بالحصول على وظيفة ذات دخل عالي.	☐	☐	☐	☐	☐	☐	☐
٢- أذهب إلى الجامعة لأنني أشعر بالسعادة والرضا عندما أتعلم أشياء جديدة.	☐	☐	☐	☐	☐	☐	☐
٣- التعليم الجامعي يساعدني للاستعداد بشكا أفضل للوظيفة.	☐	☐	☐	☐	☐	☐	☐
٤- لأنني اشعر بالسعادة عندما اتواصل مع الآخرين واخبرهم بأفكاري الخاصة.	☐	☐	☐	☐	☐	☐	☐
٥- بصراحة، لا أعرف لماذا اذهب إلى الجامعة، اشعر وكأنني اضيع وقتي.	☐	☐	☐	☐	☐	☐	☐
٦- لأنني استمتع عندما أكافأ نفسي اثناء دراستي.	☐	☐	☐	☐	☐	☐	☐
٧- لكي اثبت لنفسي انني قادر على اكمال دراستي الجامعية.	☐	☐	☐	☐	☐	☐	☐
٨- أذهب إلى الجامعة لكي احصل على وظيفة مثالية في وقت ما.	☐	☐	☐	☐	☐	☐	☐
٩- لأنني استمتع عندما اكتشف أشياء جديدة لم أعرفها سابقاً.	☐	☐	☐	☐	☐	☐	☐
١٠- لأنني سوف أكون قادراً على دخول سوق العمل في المجال الذي أحب.	☐	☐	☐	☐	☐	☐	☐
١١- لأنني اشعر بالمتعة عندما اقرأ عن مؤلفين مثيرين للإهتمام.	☐	☐	☐	☐	☐	☐	☐
١٢- كان لدي أسباب مقنعه، لكن الآن لا اعلم هل استمر ام لا.	☐	☐	☐	☐	☐	☐	☐

١٣- اشعر بالمتعة والإثارة عندما احقق انجازاتي الشخصية.	☐	☐	☐	☐	☐	☐	☐
١٤- في الواقع، سوف اشعر بأنني شخص مهم بعد نجاحي في الجامعة.	☐	☐	☐	☐	☐	☐	☐
١٥- أذهب إلى الجامعة لأنني ارغب أن احصل على حياة كريمة فيما بعد.	☐	☐	☐	☐	☐	☐	☐
١٦- لأنني اشعر بالسعادة عندما ألتقي مع أشخاص في المجال الذي أحب.	☐	☐	☐	☐	☐	☐	☐
١٧- الجامعة تساعدني في اختيار أفضل التوجهات المهنية.	☐	☐	☐	☐	☐	☐	☐
١٨- اذهب إلى الجامعة لأنني استمتع في معرفة وفهم ما كتبه المؤلفين.	☐	☐	☐	☐	☐	☐	☐
١٩- لا أعرف لماذا اذهب إلى الجامعة، ولكن بكل صراحة لن اتركها.	☐	☐	☐	☐	☐	☐	☐
٢٠- لأنني اشعر بالرضا عند انجاز واجباتي الأكاديمية.	☐	☐	☐	☐	☐	☐	☐
٢١- اذهب إلى الجامعة لكي اثبت لنفسي انني شخص ذكي.	☐	☐	☐	☐	☐	☐	☐
٢٢- لكي أحصل على راتب وظيفي جيد فيما بعد.	☐	☐	☐	☐	☐	☐	☐
٢٣- أذهب إلى الجامعة لأنني أتعلم أشياء جديدة بإستمرار.	☐	☐	☐	☐	☐	☐	☐
٢٤- بعد سنوات قليلة، سوف تتطور مهاراتي كطالب.	☐	☐	☐	☐	☐	☐	☐
٢٥- لإحساسي الرائع عندما أقرأ عن مواضيع مهمة بالنسبة لي.	☐	☐	☐	☐	☐	☐	☐
٢٦- لا أدري، لا أستطيع أن أفهم مالذي أفعله في الجامعة.	☐	☐	☐	☐	☐	☐	☐
٢٧- لأن الجامعة تشعرني بالرضا عن ذاتي في مجال دراستي.	☐	☐	☐	☐	☐	☐	☐
٢٨- أذهب إلى الجامعة لكي أثبت لنفسي أنني قادر علي النجاح في دراستي	☐	☐	☐	☐	☐	☐	☐

WAYNE STATE UNIVERSITY

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CONCURRENCE OF EXEMPTION
IRB-19-11-1480-B3 Expedited/Exempt Review-EXEMPT

DATE:	January 15, 2020
TO:	Alruwaili, Wafa, Administration & Organization Stud
	Hill, William, Administration & Organization Stud
FROM:	Millis, Scott, Professor, B3 Expedited/Exempt Review
PROTOCOL TITLE:	RELIABILITY OF AN ARABIC VERSION OF THE ACADEMIC MOTIVATION SCALE (AMS) ON STUDENTS AT AL-JOUF UNIVERSITY
FUNDING SOURCE:	NONE
PROTOCOL NUMBER:	IRB-19-11-1480

The above-referenced protocol has been reviewed and found to qualify for Exemption according to category 2

The following attachments and consent/assent documents have been reviewed and approved by the IRB.

Notes:
Note to PI: This application has been given a Status Check-In Date. Please submit a Status Update Report for this project by 01/13/2022. The Minimal Risk Status Update Form is available on the IRB's website. Modifications/changes to the research project will need to be submitted via an amendment to the WSU IRB.

Protocol/Proposal/Dissertation (dated 01/09/2020)

Research Information Sheet - Arabic Version

Research Information Sheet - English Version (dated 11/25/2019)

Data Collection Tools (2): (I) Academic Motivation Scale (AMS-C 2) - English Version, and (II) Academic Motivation Scale (AMS-C 2) - Arabic Version.

A waiver of written documentation of consent has been granted according to 45CFR46.117(c). This waiver satisfies: 1) risk is no more than minimal, 2) the waiver does not adversely affect the rights and welfare of research participants, 3) the research could not be practicably carried out without the waiver, and 4) the participants will be given information.

Attachments

LETTER OF SUPPORT
Alruwaili_Proposal-3
information-sheet. Wafa Alruwaili..
Information sheet.Arabic..
APPROVED Items for AMS scale (1)
APPROVED information-sheet. Wafa Alruwaili.. (1)
APPROVED Information sheet.Arabic.. (3)
APPROVED AMS Scale. Wafa Alruwaili..Arabic (1)
AMS Scale. Wafa Alruwaili..Arabic
Items for AMS scale

Inter-Item Correlation Matrix

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28
Q1	1.000	0.327	0.352	0.234	-0.071	0.318	0.359	0.346	0.316	0.347	0.320	-0.120	0.378	0.242	0.281	0.302	0.293	0.296	0.074	0.301	0.251	0.393	0.296	0.347	0.281	0.002	0.262	0.309
Q2	0.327	1.000	0.544	0.388	-0.194	0.563	0.377	0.240	0.527	0.391	0.456	-0.075	0.359	0.336	0.274	0.528	0.528	0.476	-0.009	0.384	0.355	0.283	0.614	0.439	0.503	-0.044	0.521	0.404
Q3	0.352	0.544	1.000	0.211	-0.183	0.435	0.413	0.404	0.515	0.546	0.382	-0.105	0.347	0.391	0.382	0.400	0.525	0.302	-0.031	0.426	0.344	0.400	0.433	0.477	0.337	-0.141	0.410	0.436
Q4	0.234	0.388	0.211	1.000	-0.050	0.471	0.300	0.202	0.379	0.226	0.435	0.110	0.271	0.243	0.200	0.524	0.270	0.370	0.078	0.428	0.430	0.240	0.422	0.363	0.426	0.104	0.449	0.397
Q5	-0.071	-0.194	-0.183	-0.050	1.000	-0.151	-0.213	-0.239	-0.252	-0.201	-0.047	0.335	-0.275	-0.100	-0.165	-0.101	-0.121	0.026	0.373	-0.176	-0.028	-0.194	-0.187	-0.253	-0.147	0.469	-0.180	-0.157
Q6	0.318	0.563	0.435	0.471	-0.151	1.000	0.501	0.290	0.576	0.458	0.579	0.095	0.443	0.383	0.318	0.547	0.499	0.537	0.109	0.543	0.454	0.348	0.480	0.484	0.553	0.049	0.574	0.542
Q7	0.359	0.377	0.413	0.300	-0.213	0.501	1.000	0.584	0.483	0.505	0.417	-0.035	0.465	0.511	0.418	0.341	0.361	0.329	0.032	0.502	0.457	0.415	0.430	0.512	0.409	-0.081	0.441	0.515
Q8	0.346	0.240	0.404	0.202	-0.239	0.290	0.584	1.000	0.383	0.525	0.283	-0.068	0.547	0.472	0.489	0.279	0.339	0.178	-0.135	0.359	0.368	0.526	0.253	0.348	0.335	-0.146	0.373	0.374
Q9	0.316	0.527	0.515	0.379	-0.252	0.576	0.483	0.383	1.000	0.561	0.625	0.004	0.505	0.381	0.270	0.532	0.534	0.486	0.042	0.526	0.459	0.296	0.528	0.491	0.582	-0.077	0.441	0.486
Q10	0.347	0.391	0.546	0.226	-0.201	0.458	0.505	0.525	0.561	1.000	0.366	0.014	0.548	0.409	0.425	0.422	0.478	0.376	0.100	0.479	0.393	0.465	0.424	0.468	0.488	-0.052	0.465	0.436
Q11	0.320	0.456	0.382	0.435	-0.047	0.579	0.417	0.283	0.625	0.366	1.000	0.152	0.344	0.328	0.237	0.469	0.568	0.657	0.088	0.498	0.446	0.316	0.478	0.375	0.551	0.141	0.427	0.413
Q12	-0.120	-0.075	-0.105	0.110	0.335	0.095	-0.035	-0.068	0.004	0.014	0.152	1.000	-0.059	0.055	-0.023	0.038	0.063	0.151	0.258	0.047	0.094	-0.074	-0.037	-0.098	0.023	0.387	0.019	0.046
Q13	0.378	0.359	0.347	0.271	-0.275	0.443	0.465	0.547	0.505	0.548	0.344	-0.059	1.000	0.469	0.414	0.392	0.337	0.308	-0.026	0.503	0.323	0.452	0.417	0.545	0.442	-0.178	0.461	0.460
Q14	0.242	0.336	0.391	0.243	-0.100	0.383	0.511	0.472	0.381	0.409	0.328	0.055	0.469	1.000	0.541	0.389	0.349	0.242	0.014	0.434	0.417	0.411	0.265	0.461	0.327	-0.008	0.354	0.449
Q15	0.281	0.274	0.382	0.200	-0.165	0.318	0.418	0.489	0.270	0.425	0.237	-0.023	0.414	0.541	1.000	0.365	0.324	0.234	-0.040	0.376	0.316	0.538	0.352	0.459	0.297	-0.112	0.342	0.438
Q16	0.302	0.528	0.400	0.524	-0.101	0.547	0.341	0.279	0.532	0.422	0.469	0.038	0.392	0.389	0.365	1.000	0.593	0.468	0.131	0.449	0.441	0.266	0.443	0.490	0.521	0.029	0.470	0.449
Q17	0.293	0.528	0.525	0.270	-0.121	0.499	0.361	0.339	0.534	0.478	0.568	0.063	0.337	0.349	0.324	0.593	1.000	0.570	0.086	0.436	0.502	0.326	0.501	0.406	0.512	-0.012	0.523	0.441
Q18	0.296	0.476	0.302	0.370	0.026	0.537	0.329	0.178	0.486	0.376	0.657	0.151	0.308	0.242	0.234	0.468	0.570	1.000	0.118	0.421	0.321	0.181	0.517	0.355	0.591	0.173	0.427	0.356
Q19	0.074	-0.009	-0.031	0.078	0.373	0.109	0.032	-0.135	0.042	0.100	0.088	0.258	-0.026	0.014	-0.040	0.131	0.086	0.118	1.000	0.051	0.167	0.054	0.078	-0.025	0.114	0.469	0.047	0.088
Q20	0.301	0.384	0.426	0.428	-0.176	0.543	0.502	0.359	0.526	0.479	0.498	0.047	0.503	0.434	0.376	0.449	0.436	0.421	0.051	1.000	0.556	0.426	0.454	0.541	0.553	-0.079	0.561	0.565
Q21	0.251	0.355	0.344	0.430	-0.028	0.454	0.457	0.368	0.459	0.393	0.446	0.094	0.323	0.417	0.316	0.441	0.502	0.321	0.167	0.556	1.000	0.503	0.379	0.369	0.406	0.112	0.448	0.535
Q22	0.393	0.283	0.400	0.240	-0.194	0.348	0.415	0.526	0.296	0.465	0.316	-0.074	0.452	0.411	0.538	0.266	0.326	0.181	0.054	0.426	0.503	1.000	0.414	0.462	0.344	-0.059	0.342	0.476
Q23	0.296	0.614	0.433	0.422	-0.187	0.480	0.430	0.253	0.528	0.424	0.478	-0.037	0.417	0.265	0.352	0.443	0.501	0.517	0.078	0.454	0.379	0.414	1.000	0.605	0.588	-0.030	0.493	0.491
Q24	0.347	0.439	0.477	0.363	-0.253	0.484	0.512	0.348	0.491	0.468	0.375	-0.098	0.545	0.461	0.459	0.490	0.406	0.355	-0.025	0.541	0.369	0.462	0.605	1.000	0.554	-0.163	0.510	0.541
Q25	0.281	0.503	0.337	0.426	-0.147	0.553	0.409	0.335	0.582	0.488	0.551	0.023	0.442	0.327	0.297	0.521	0.512	0.591	0.114	0.553	0.406	0.344	0.588	0.554	1.000	0.030	0.623	0.516
Q26	0.002	-0.044	-0.141	0.104	0.469	0.049	-0.081	-0.146	-0.077	-0.052	0.141	0.387	-0.178	-0.008	-0.112	0.029	-0.012	0.173	0.469	-0.079	0.112	-0.059	-0.030	-0.163	0.030	1.000	-0.009	-0.006
Q27	0.262	0.521	0.410	0.449	-0.180	0.574	0.441	0.373	0.441	0.465	0.427	0.019	0.461	0.354	0.342	0.470	0.523	0.427	0.047	0.561	0.448	0.342	0.493	0.510	0.623	-0.009	1.000	0.575
Q28	0.309	0.404	0.436	0.397	-0.157	0.542	0.515	0.374	0.486	0.436	0.413	0.046	0.460	0.449	0.438	0.449	0.441	0.356	0.088	0.565	0.535	0.476	0.491	0.541	0.516	-0.006	0.575	1.000

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ABSTRACT

RELIABILITY OF AN ARABIC VERSION OF THE *ACADEMIC MOTIVATION SCALE* (AMS) ON STUDENTS AT AL-JOUF UNIVERSITY

by

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Major: Evaluation and Research

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"self-determination knowledge and skills are important life skills for success throughout one's life" (Field & Hofffman, 1994, p. 164). Self-determination theory explains the personal attitude which describe psychological needs and supports students to increase academic achievement and interest in the meaning of learning (Deci & Ryan 1985, 1991). However, there are no measure created in Arabic that measure a student's academic motivation. Thus, this study was developed the twenty eight item English version into Arabic. The purpose of this study was to translate and then test the reliability and validity of an Arabic version of the *AMS*. The participants were 275 Saudi students studying in AL-Jouf University (53.52% male, 46.48% female). An Arabic version was translated by the researcher and then back translated by a panel of experts. The *AMS* had high level of internal consistency reliability, Cronbach's alpha was 0.91. Exploratory factor analysis (EFA) resulted was four factor loading explaining 57.83% of the total variance. These finding suggest that *AMS* is a valid measure for determining the degree of the academic motivation for the Arabic speaking students.

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