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Exploratory Factor Analysis on Hurtt's Professional Skepticism Scale: A Malaysian Perspective

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ABSTRACT

In auditing, professional skepticism refers to an attitude that requires ongoing questioning and critical assessment of evidence. An auditor needs to exercise professional skepticism to obtain sufficient and appropriate audit evidence to determine whether financial statements are free from material misstatements due to errors or frauds. Hurtt (2010) developed a professional skepticism scale to measure the level of an auditor's skepticism. However, the exercise of professional skepticism among auditors is very subjective and difficult to measure. The validity of the Hurtt skepticism scale in the context of different countries requires further examination. A factor analysis study is conducted to validate the suitability of the instrument based on Malaysian data. The results indicate that only five of the Hurtt (2010) skepticism traits are relevant in determining professional skepticism in the Malaysian environment. The suspension of judgment trait seems to be irrelevant since respondents feel that this trait requires more time to make audit decisions and may delay audit work. Malaysian auditors are not likely to possess such a trait because they are burdened with numerous audit tasks that must be completed by a deadline. The results suggest that variances may exist across different countries due to differences in environment.

Keywords: Professional Skepticism; auditing

INTRODUCTION

In auditing, auditors are required by professional standards to adopt the attitude of professional skepticism when performing audits (MIA 2008). The importance of professional skepticism is recognized by the auditing profession in Paragraph 15 of ISA 200 – The Objective and General Principles Governing an Audit of Financial Statements. The standard requires auditors to plan and perform audits with an attitude of professional skepticism that recognizes circumstances may exist that result in financial statements being materially misstated (MIA 2008). The requirement that auditors maintain an attitude of professional skepticism throughout the audit is also specified in Paragraph 12 of ISA 240 – The Auditor's Responsibility to Consider Fraud in An Audit of Financial Statements, which requires auditors to recognize the possibility that a material misstatement due to fraud could exist while performing an audit of financial statements. The standards acknowledge the fact that the auditor's previous experience with the entity may contribute to an understanding of the entity. However, subsequent changes in circumstances may occur that require the auditor to maintain an attitude of professional skepticism regardless of his or her past experience with the entity in relation to the perceived honesty and integrity of management and those charged with governance (Paragraph A8, ISA 240). ISA 240 specifies that while maintaining an attitude of professional skepticism, auditors are required to continually question whether the information and audit evidence obtained suggests any material misstatement due to fraud.

The application of a skeptical attitude by auditors has become part of Malaysian regulatory requirements. In Malaysia, the Audit Oversight Board (AOB) has imposed a regulatory requirement on audit firms to ensure the application of professional skepticism throughout the audit process (AOB 2011). Maintaining the attitude of professional skepticism has also gained the serious attention of audit oversight bodies in other countries, such as the United Kingdom (Audit Inspection Unit (AIU), 2010); Australia (Australian Securities and Investment Commission (ASIC), 2010); and the US (Public Company Accounting Oversight Board 2008).

The importance of skepticism as an essential element of the financial statement audit is also highlighted in auditing literature. Evidence shows that the skeptical attitude of an auditor is particularly important when examining fraud risks, the application of which may reduce material misstatements resulting from fraud (e.g., Grenier 2010; Harding & Trotman 2011; McCormack & Watts 2011). The failure of an auditor to approach audit work with a skeptical attitude may have serious implications for the auditing profession. This is evident from prior studies that indicate only a small percentage (i.e., less than 10%) of fraud incidences are detected by auditors (KPMG 2009; Zeune 1997). The failure to exercise skepticism is highlighted as the top three most important factors of audit deficiencies in SEC fraud related cases in the US (Beasley et al. 2001). Beasley et al. (2001) suggests that auditors must maintain an attitude of professional skepticism throughout the audit process and must be cognizant of circumstances

that may be a source of material misstatements in the financial statements.

Although professional skepticism is a very important element of audit procedures, the meaning of professional skepticism is unclear. The Malaysian auditing professional standards understand professional skepticism as an attitude that includes a questioning mind and critical assessment of audit evidence (MIA 2008). In the academic literature, no consensus on the definition of professional skepticism exists (Nelson 2009). Shaub (1996) equates professional skepticism with suspicion as opposed to trust, implying that auditors with a skeptical disposition have a lower level of interpersonal trust. Shaub (1996) suggests that auditors exhibit more professional skepticism when they believe that financial statements are likely to be materially misstated or when they need to accumulate more evidence in order to conclude that financial statements are not materially misstated. Hogarth and Einhorn (1992) propose that a skeptical individual is highly sensitive to negative evidence, but ignores positive evidence. An auditor is viewed as skeptical if he or she is sensitive to evidence that reduces the risk of failing to detect errors in the client's financial statements (McMillan & White 1993). Based on a review of professional skepticism literature, Nelson (2009) summarizes the definition of professional skepticism as a heightened assessment of risk that an assertion is incorrect and conditional on the information available to the auditor. The objective of the present study is to provide evidence on the suitability of using the Hurtt (2010) professional skepticism scale to measure professional skepticism in the Malaysian environment. The present study attempts to validate the Hurtt (2010) professional skepticism scale by conducting an experiment on respondents in Malaysia. The result is expected to help understand the relevance of the skepticism items suggested by Hurrt (2010) in determining the traits of professional skepticism in the Malaysian auditing work environment. The present study also intends to propose a modified Hurtt (2010) professional skepticism scale that is more suitable for the measurement of skeptical attitudes among auditors in Malaysia.

Professional Skepticism Scale

In the absence of a clear definition of the concept of professional skepticism, the level of professional skepticism that auditors maintain during an audit is difficult to determine. In order to ensure that proper audit procedures are applied during the audit in accordance with the requirements of auditing standards, a specific professional skepticism scale needs to be developed (Choo and Tan 2000). The exercise of professional skepticism needs to be appropriately measured in order to evaluate the effectiveness of auditors' performance. It has been argued that the failure to exercise professional skepticism may result in auditors failing to detect misstatements in the financial statements (Beasley et al. 2001). In response to the need for a specific professional skepticism scale, Hurtt (2010) develops a scale to measure the auditor's level of professional skepticism. Hurtt (2010) provides an explanation of professional skepticism in terms of various characteristics of skeptics, including questioning mind; suspension of judgment; searching for knowledge; interpersonal understanding; self-determining; and self-confidence. The Hurtt (2010) professional skepticism scale is based upon the audit environment in the United States.

Most studies concerning professional skepticism use the Hurtt (2010) professional skepticism scale to measure professional skepticism as it is the only scale currently available that is specifically designed for this purpose. The question is whether the Hurtt (2010) professional skepticism scale is suitable to measure the level of professional skepticism applied by auditors in different audit environments in various countries. The Audit Practices Board (APB) (2010) in the United Kingdom has raised a similar concern on the possible influence of country environments, such as the effect of culture on the professional skepticism of an auditor when performing audit work. During the processes of audit judgment and decision making, the skeptical attitude of an individual auditor may be influenced by cultural environment (Ferrel & Gresham 1985; Dubinsky & Loken 1989; Hamilton 2011). Endrawes and Monroe (2012) examine the impact of culture on professional skepticism from the perspective of national culture. The results provide evidence that auditors from different cultural backgrounds (i.e., Egypt and Australia) react differently to audit evidence. The appropriateness of using the Hurtt (2010) professional skepticism scale in different environments has yet to be validated.

Hurtt's Skepticism Traits

The Hurtt (2010) professional skepticism scale consists of thirty items that measure the level of professional skepticism of an individual. The thirty items are based upon the characteristics of individuals derived from auditing standards and psychological research. The thirty item instrument is included in Appendix 1. Hurtt (2010) conducts experiments to perform a rigorous and iterative scale validation process using students and professional auditors.

Based on the thirty items, Hurtt (2010) identifies six traits of professional skepticism: questioning mind; suspension of judgment; searching for knowledge; interpersonal understanding; self-determining; and self-confidence. The traits relate to the way an auditor examines evidence. The traits indicate the willingness of an auditor to search for sufficient audit evidence and to examine the evidence before making any decision. An auditor who exhibits a higher level of professional skepticism is expected to wait for more information to obtain sufficient basis for audit judgments. The interpersonal understanding trait identifies the need to also consider the human aspects of an audit when evaluating evidence. Meanwhile, the self-determining and self-confidence traits address the ability of the individual to act upon the information obtained.

Each trait is comprised of items that contribute to the level of professional skepticism of auditors. In order to determine the level of skepticism of an auditor, each skepticism trait needs to be measured separately. Hurtt (2010) provides a separate scale for measuring each skepticism trait. Evidence shows that individual auditors may differ from one other in relation to differences in their traits of professional skepticism (Hurtt 2010). Each of the traits discussed above is discussed in detail in the following paragraphs.

Questioning Mind

Questioning mind refers to the attitude of an individual relating to curiosity and interest (Hurtt 2010). Auditors that have a questioning mind attitude will continually ask questions for the purpose of further clarification and definition; and demand reasons, justification or proof (Kurtz 1992). An auditor will adopt the questioning mind attitude in order to obtain sufficient evidence before making audit judgments or forming conclusions (McGinn 1989; Fogelin 1994). Auditors may also question the accuracy of their own judgments (McGinn 1989). Studies on skepticism attitudes align the nature of the mind with the question of doubt and distrust among auditors (Hurtt 2010).

Paragraph A20 of ISA 200 specifies that auditors must make critical assessments of audit evidence with a questioning mind regarding the validity of the evidence. The paragraph explains that in order to maintain a questioning mind, auditors must be alert to contradicting or questionable audit evidence with regard to the reliability of documents or management representations. With regard to the risks of material misstatement due to fraud, paragraph A7 of ISA 240 requires auditors to maintain a questioning mind and critical assessment of audit evidence. Due to the nature of fraud, auditors must have a skeptical attitude that results in the continual questioning of whether the information and audit evidence obtained suggests the existence of material misstatement due to fraud. The requirement in the auditing standards for auditors to continuously ask questions and make critical assessments of audit evidence during the course of audit work is consistent with the definition of skepticism by Fogelin (1994). Fogelin (1994) defines a skeptic person as one who calls things into question. Thus, the questioning mind attitude is an aspect of skepticism that is stringently required by auditing standards and widely supported by research in the accounting area, which, in turn, is expected to improve auditor performance.

Suspension of Judgment

Suspension of judgment is a dimension of professional skepticism that refers to an attitude whereby auditors will postpone making audit judgments until sufficient evidence has been gathered to explain the actual cause of an audit issue (Hurtt 2010). Philosophers view skeptics as unwilling to simply accept assertions and claims (Kurtz 1992). Instead, philosophers view skeptics as keeping an open mind and critically evaluating evidence (Kurtz 1992). Auditors who possess the trait of suspension of judgment will not accept any statement or explanation without critically evaluating the audit evidence. As a skepticism trait, the suspension of judgment will cause auditors to withhold their judgments until sufficient evidence is obtained (Mautz and Sharaf 1961). Although the importance of the suspension of judgment trait is highlighted in extant studies, generally auditing standards do not include any specific reference or discussion regarding the suspension of judgment trait.

Searching for Knowledge

Another trait of professional skepticism is searching for knowledge, which refers to the individual's curiosity or desire to investigate (Bunge 1991). The purpose of the investigation is to acquire additional information in order to reduce task uncertainties (Gagne 1985). An individual is faced with uncertainties whenever new or more complex assignments are experienced (Berlyne 1954). Uncertainties will cause a skeptical individual to look for more explicit information (Popkin & Stroll 2002). Mautz and Sharaf (1961) suggest that skeptical auditors are interested in searching for knowledge while performing audit works. The knowledge gained by auditors is useful for a variety of audit procedures and techniques. Paragraphs 19 of ISA 200 highlight the importance of having relevant knowledge, particularly when a risk of material misstatements due to fraud exists. In the event of high fraud risks, audit procedures must be enhanced and diversified to obtain more authentic information.

Interpersonal Understanding

Interpersonal understanding refers to the understanding of reasons or motivations of an individual that drive the person's behavior (Hallie 1985; Hookway 1990). From an auditing perspective, interpersonal understanding refers to the extent auditors appreciate the motivation and integrity of the individuals who present the audit evidence. It is pertinent that auditors are skeptical in understanding the motives and incentives of the information provider to enable them to challenge and correct the prior assumption imbedded in their audit works. The interpersonal understanding trait also requires auditors to be doubtful of the actions and behavior of a client. Auditors must comprehend the motives and incentives which may drive the client's behavior. Currently, auditing standards in general have not made any explicit reference on the dimension of interpersonal understanding as a skepticism component.

Self-Determining

The self-determining trait refers to the ability of an auditor to decide on the adequacy of the information presented as

evidence before they make audit judgments (Hurtt 2010). Highly self-determining auditors rely less on clients' suggestions and will not be easily influenced by the belief or opinion of others. Skeptical auditors will be determined to undertake additional investigations and evidence until they are personally satisfied and confident to form their own decisions (Kurtz 1992). Mautz and Sharaf (1961: 35) relate the self-determining nature of an auditor with the attitude of professional courage, stating that "the auditor must have the professional courage not only to critically examine and perhaps discard the proposals of others, but to submit his own inventions to the same kind of detached and searching evaluations." Mautz and Sharaf (1961) suggest that self-determining is a necessary criterion for professional skepticism. Although the importance of this trait in audit work is highlighted in scholarly discussions, this aspect of professional skepticism has not received any general discussion in auditing standards.

Self-Confidence

The self-confidence trait refers to feelings of self-worth and belief in one's own abilities (Hurtt 2010). Auditors who possess this trait are more confident to perform audit tasks effectively and make their own audit judgments and conclusions (Boush et al. 1994). Auditors that possess the self-confidence attribute are capable of challenging client's assumptions and decisions; and are suspicious of evidence presented to them (Linn et al. 1982). Self-confident auditors are certain of their work and able to defend themselves against pressure from others. Self-confidence can subsequently reduce the risk of material misstatements in financial statements due to fraud. Although self-confidence is recognized as an important trait of professional skepticism that must be maintained by auditors during the conduct of audit work, in general auditing standards are currently silent on the self-confidence dimension of professional skepticism.

Methods

The present study employs a questionnaire survey method on thirty questions as identified by Hurtt (2010) in measuring six traits of professional skepticism. A sample of the survey instrument is provided in Appendix 1. The questionnaires are distributed to a group of respondents comprised of final year accounting students of Bachelor of Accounting Program. The respondents are requested to respond to each question during the classroom session. The researcher observed the session to ensure a high response rate and minimize incorrect responses due to a misunderstanding of the questions by the respondents (Keller and Warrack 2003).

Respondents are requested to provide responses based upon a six-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree). Twenty two questions are in the form of positive statements. The remaining 8 questions are in the form of reverse statements. The statements are intended to identify each respondent's level of professional skepticism. The inclusion of both positive and reverse statements ensures that participants consider the question seriously and provide a more meaningful response, which should reduce acquiescent bias and extreme response bias (Sauro 2011). Acquiescent bias occurs when participants generally go on auto-pilot and agree to all statements (Sauro 2011). Extreme response bias is somewhat related to acquiescent bias except that respondents basically pick the most extreme rating and provide it to many or all items (Sauro 2011). The aggregate scores of thirty items measure the degree of professional skepticism. Higher scores indicate a higher level of professional skepticism, while lower scores indicate a lower level of professional skepticism.

Results

Profile of the Participants

A total of ninety five students of the Second Semester Advanced Auditing and Investigation course, Session 2010/2011, participated in the survey. The present study uses the accounting students as surrogates for practicing auditors. The use of students as surrogates for auditors is widely practiced in the auditing behavioral research due to the unavailability of appropriate subjects. Researchers in behavioral research in the accounting field utilize students as proxies for auditors (e.g., Ashton & Kramer 1980). Mortensen et al. (2012) provide evidence to support the appropriateness of using accounting students to surrogate for audit practitioners. The study finds that accounting students make similar judgments to practitioners (Mortensen et al. 2012). The level of accounting knowledge gained through undergraduate study systematically influences the judgments of students (Mortensen et al. 2012). The final year accounting students included as the sample in the present study have undertaken audit papers and acquired the requisite knowledge during the accounting education program. The knowledge gained during the undergraduate program at the University is associated with semantic memory, which is the memory of concept meanings and relations (Libby 1995). Houghton and Hronsky (1993) demonstrate that university accounting students have similar cognitive structures to real auditors or accountants. Therefore, the use of final year accounting students is argued to be appropriate since a skeptical attitude is a concept in auditing. Furthermore, the thirty items used to measure skepticism relate to the general concept of professional skepticism, which is derived from the psychology perspective (Hurtt, 2010). These items are not too technical and they are understood by the accounting students.

The profile of participants is presented in Table 1. Out of 95 respondents, 30 were males (31%) and 65 were females (69%). The average age of the respondents is 23

TABLE 1. Profile of the Participants

Profile		Frequency	Percentage
Gender	Male	30	31%
	Female	65	69%
	Total	95	100%
Age	Average	23 years	
Race	Malay	35	37%
	Chinese	59	62%
	Indian	1	1%
	Total	95	100%
Working experience	Yes	22	23%
	No	73	77%
	Total	95	100%

years. Respondents consist of 35 ethnic Malays (37%); 59 ethnic Chinese (62%); and one ethnic Indian (1%). Most of the respondents (77%) had no working experience, while 23% of the respondents had some experience working in audit and accounting firms.

TEST OF DATA

The present study utilizes principal component factor analysis to identify the component factors in the thirty item questionnaire. Prior to performing the analysis, the present study examines the factorability of the 30 skepticism items, which involves two steps. First, the Kaiser-Meyer-Olkin (KMO) is performed to measure the sampling adequacy. The results indicate a value of 0.70, which is above the recommended value of 0.6 (Pallant, 2007). Second, the Bartlett's Test of Sphericity value is significant at p=.000. According to Pallant (2007), the significant value of Bartlett's Test of Sphericity should be 0.05 or smaller. The results from the tests of the data support the factorability of the correlation matrix, which enables the performance of factor analysis.

ANALYSIS OF DATA

The factor analysis is based on 95 samples. According to Hair et al. (2010: 102), the minimum sample required to perform a factor analysis is at least five times the number of variables analyzed, while a more acceptable sample size would have a 10:1 ratio. Six variables are examined in the present study. Therefore, the minimum requirement is 30 samples, while 60 samples would meet the criterion of a 10:1 ratio for a more acceptable sample size. Thus, the sample in the present study is considered adequate as it exceeds the minimum requirements of Hair et al. (2010: 102).

The principal component analysis method is used to extract factors and adopt a factor loading of .55 and above to determine the significant loadings on a particular factor (Hair et al. 2010: 117). Two techniques are used in the present study to assist in the decision concerning the number of factors to retain: Kaiser's Criterion and a scree test. According to the Kaiser's Criterion, only factors with an eigenvalue of 1.0 or more may be retained for further investigation. As a result, nine factors are extracted from the Kaiser's Criterion result. However, results from the scree test reveal a clear break between the fifth and sixth components. Catell (1966) recommends retaining factors that are above the elbow or breaking in the plot because these factors contribute the most to the explanation of the variance in the data set. The scree test suggests only five component factors are relevant and should be retained in the examination of professional skepticism in the present study.

Results of the analysis are presented in Table 2. The results reveal the five component factors that are extracted from the data, which are questioning mind; search for knowledge; interpersonal understanding; self-determining; and self-confidence. The five component factors explain 50.6% of the variance. An oblimin rotation provides the best defined factor structure. All items had primary loadings over 0.55. All items loading in this factor also have a high reliability of Cronbach Alpha. This is consistent with Hair et al. (2010), who suggests that the reliability coefficient should be 0.60 or higher in order to be considered adequate in exploratory research. The factor loading matrix for the results of factor analysis is presented in Table 2.

The results indicate that seventeen items out of the 30 items of the Hurtt (2010) professional skepticism scale are extracted and best suited to measure skepticism in the present study. The remaining thirteen items are not classified among any of the specified traits of professional skepticism. Thus, the thirteen items are excluded from the measurement scale due to low factor loading and their failure to meet the pattern matrix. According to Pallant (2007), the ideal number of loading on each component should be three or more items. The seventeen items are loaded into five components, which are questioning mind; search for knowledge; interpersonal understanding; self-determining; and self-confidence. The results show that the suspension of judgment trait is loaded only on one item (i.e., item 22, which states 'I don't like to decide until I've looked at all of the readily available information')

TABLE 2. Results of Factor Analysis

Item	Statement	Component Factors					
		Questioning Mind	Suspension of Judgment*	Search for Knowledge	Intersonal Understanding	Self-Determining	Self-Confidence
7	I often reject statements unless I have proof that they are true.	0.556					
13	My friends tell me that I usually question things that I see or hear.	0.831					
24	I frequently question things that I see or hear.	0.782					
22*	I don't like to decide until I've looked at all of the readily available information.		0.471				
15	I think that learning is exciting.			0.620			
23	I like searching for knowledge.			0.629			
29	I relish learning.			0.792			
5	I am interested in what causes people to behave the way that they do.				0.769		
11(R)	Other peoples' behavior doesn't interest me.				0.570		
14	I like to understand the reason for other peoples' behavior.				0.671		
30	The actions people take and the reasons for those actions are fascinating.				0.681		
1(R)	I often accept other peoples' explanations without further thought.					0.651	
10(R)	I tend to immediately accept what other people tell me.					0.722	
25(R)	It is easy for other people to convince me.					0.801	
2	I feel good about myself.						-0.864
6	I am confident of my abilities.						-0.620
12	I am self-assured.						-0.647
21	I have confidence in myself.						-0.553
Eigenvalues (rotation sum)		2.99	2.29	3.65	3.50	2.90	3.41
% of various explained		4.60	4.50	21.07	7.69	10.76	6.45
Cumulative % of various explained		50.57	60.89	21.07	39.52	31.83	45.97
Cronbach's alpha reliability		0.69	NA	0.75	0.68	0.65	0.77

Note: 1. (R) – reverse item.
2. Only factor loadings above 0.55 are shown.
3. * denotes item being rejected for failing to meet component's pattern and low factor loading (0.471).
4. NA - not applicable.

with a factor loading of 0.471. As a result, the suspension of judgment trait is not included as a component of professional skepticism in the present study.

The results suggest that the suspension of judgment trait may not considered to be an attribute of professional skepticism in the Malaysian environment. The trait suggests that auditors who possess the suspension of judgment trait will not accept any statement without critically evaluating the audit evidence. However, the results of the present study indicate that the suspension of judgment trait may be excluded from the determination of professional skepticism. The exclusion of the suspension of judgment trait of professional skepticism may imply that auditors in Malaysia do not postpone audit judgments

until sufficient evidence is obtained in order to explain the actual cause of an audit issue. The finding may be related to the tight work schedule environment and need to meet deadlines for audit work as demanded by clients (Mohamed and Ismail 2011; Agoglia 2007). The result suggests that the suspension of judgment trait may not be an important component of professional skepticism in the audit environment in Malaysia. The results suggest that when providing guidance to the auditing profession and audit firms on professional skepticism, consideration needs to be given on the differences in environment that may exist across different countries.

Conclusion and Limitations

The present study validates the suitability of the skepticism scale developed by Hurtt (2010) for the purpose of measuring the application of professional skepticism by auditors in an environment other than that of the United States. The present study obtained responses from final year accounting students at a university in Malaysia on the 30 items of the Hurtt (2010) professional skepticism scale. The results show that some differences exist arise due to a different environment, specifically in regards to the number of items utilized to ascertain the skepticism traits; and the number of traits utilized to determine the level of professional skepticism. The present study finds only 17 of the 30 items suggested by Hurtt (2010) are relevant in determining traits of professional skepticism in Malaysia. In addition, the present study finds that only five traits of professional skepticism exist in the Malaysian environment as opposed to the six traits suggested by Hurtt (2010) in the US environment. In Malaysia, the suspension of judgment trait is found to be irrelevant for auditors to maintain a professional skepticism attitude. The finding suggests that traits of professional skepticism may differ between different environments in different countries. The result is consistent with prior studies that suggest the influence of environment on professional skepticism, such as audit working environment (Ferrel and Gresham 1985) and organizational environment (Dubinsky and Loken 1989). The five traits measured in the skepticism scale reflect the most appropriate constructs that contribute to the application of a professional skepticism scale in the Malaysian audit environment.

The present study has some limitations. Firstly, the use of students as a surrogate for auditors may pose a problem relating to the generalization of the results to real audit work. In order to validate the reliability of the scale, it should be verified in the Malaysian environment using a wider range of participants. Secondly, the present study does not consider the possible effect of situational variables, such as organizational or cultural factors. Further study should be undertaken to identify factors that may have an influence on professional skepticism.

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APPENDIX 1

Please read the following statements carefully and circle the score on a 6 point scale ranging from 1 (strongly diasgree) to 6 (strongly agree). (Please circle only one answer for each statement).

	Statements	Strongly Disagree	Disagree	Slightly Diasgree	Slightly Agree	Agree	Strongly Agree
1.	I often accept other peoples' explanations without further thought. (r)	1	2	3	4	5	6
2.	I feel good about myself.	1	2	3	4	5	6
3.	I wait to decide on issues until I can get more information.	1	2	3	4	5	6
4.	The prospect of learning excites me.	1	2	3	4	5	6
5.	I am interested in what causes people to behave the way that they do.	1	2	3	4	5	6
6.	I am confident of my abilities.	1	2	3	4	5	6
7.	I often reject statements unless I have proof that they are true.	1	2	3	4	5	6
8.	Discovering new information is fun.	1	2	3	4	5	6
9.	I take my time when making decisions.	1	2	3	4	5	6
10.	I tend to immediately accept what other people tell me. (r)	1	2	3	4	5	6
11.	Other peoples' behavior doesn't interest me. (r)	1	2	3	4	5	6
12.	I am self-assured.	1	2	3	4	5	6
13.	My friends tell me that I usually question things that I see or hear.	1	2	3	4	5	6
14.	I like to understand the reason for other peoples' behavior.	1	2	3	4	5	6
15.	I think that learning is exciting.	1	2	3	4	5	6
16.	I usually accept things I see, read or hear at face value. (r)	1	2	3	4	5	6
17.	I don't feel sure of myself. (r)	1	2	3	4	5	6
18.	I usually notice inconsistencies in explanations.	1	2	3	4	5	6
19.	Most often I agree with what the others in my group think. (r)	1	2	3	4	5	6
20.	I dislike having to make decisions quickly.	1	2	3	4	5	6
21.	I have confidence in myself.	1	2	3	4	5	6
22.	I don't like to decide until I've looked at all of the readily available information.	1	2	3	4	5	6
23.	I like searching for knowledge.	1	2	3	4	5	6
24.	I frequently question things that I see or hear.	1	2	3	4	5	6
25.	It is easy for other people to convince me. (r)	1	2	3	4	5	6
26.	I seldom consider why people behave in a certain way. (r)	1	2	3	4	5	6
27.	I like to ensure that I've considered most available information before making a decision.	1	2	3	4	5	6
28.	I enjoy trying to determine if what I read or hear is true.	1	2	3	4	5	6
29.	I relish learning.	1	2	3	4	5	6
30.	The actions people take and the reasons for those actions are fascinating.	1	2	3	4	5	6

Note: r – reverse statement