

# Expanding The Scope of Professional Skepticism in Qatar: Developing an Arabic Hurtt Scale and Examining Influential Factors among Accountants

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## ABSTRACT

Professional skepticism is fundamental in the accounting profession, underpinning the critical assessment and judgement essential for the integrity of financial reporting and auditing. The absence of adequate professional skepticism can lead to significant consequences, including an increased risk of fraud, undetected errors, and a general decline in the quality of financial information. Such shortcomings can undermine stakeholder trust and lead to economic repercussions. In response to this, this study aimed to extend the study of professional skepticism in Qatar, an Arab-speaking country, by developing and validating an Arabic version of the professional skepticism scale (HPSS) developed by Hurtt (2010). To achieve this aim, the HPSS was translated, adapted, and tested for validity using a sample of 585 business students in Qatar. The findings suggested that the instrument performed better when fielded in Arabic rather than English, revealing a seven-factor structure that diverged from the original six-dimensional structure of the HPSS. Of these seven factors, only three conformed well to the dimensions developed by Hurtt (2010): Seeking Knowledge, Interpersonal Understanding, and a third factor combining items from the Self-confidence and Suspension of Judgement subscales. This study highlights the importance of using Arabic language instruments in the Middle Eastern context and provides a starting point for further research on the factors influencing professional skepticism in this environment. By examining these factors, the research sought to contribute to the literature and practice by offering insights into how the cultivation and application of professional skepticism can be enhanced among accounting professionals in Qatar, ultimately supporting the integrity and reliability of financial practices in the region.

**Keywords:** Professional Skepticism, Financial Reporting Integrity, Arabic Professional Skepticism Scale (APSS), Accounting in Qatar, Fraud Detection, Cultural Adaptation in Accounting.

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## INTRODUCTION

In many professions, the application of professional skepticism is beneficial, but in auditing, it is essential. Oversight and regulatory bodies in the United States, such as the Public Company Accounting Oversight Board (PCAOB), the International Auditing and Assurance Standards Board (IAASB), and the American Institute of Certified Public Accountants (AICPA), all stipulate that professional skepticism is fundamental when performing audit duties. Similar mandates exist internationally, underscoring the universal importance of skepticism in auditing. This is particularly critical in environments where International Financial Reporting Standards (IFRS) are used instead of US Generally Accepted Accounting Principles (GAAP). The principles-based nature of IFRS demands high levels of professional judgment, leading to complex audits that are deeply reliant on management's assertions (Martinov-Bennie *et al.*, 2022).

The absence of professional skepticism can have dire consequences, including an increased likelihood of undetected fraud, material misstatements, and overall diminished audit quality (Marden and Brackney, 2009). This, in turn, can erode public trust in financial reporting and lead to significant economic and reputational damage for entities and the broader financial market (Griffiths *et al.*, 2015). In transitional and emerging countries, where standardized accounting practices and robust governance may still be evolving, the role of professional skepticism becomes even more critical (Sari and Andrian, 2023). Auditors in these environments face unique challenges, making the cultivation and application of skepticism a paramount concern for the integrity and reliability of financial reporting (Ta *et al.*, 2022).

Moreover, accurately gauging the degree of professional skepticism auditors maintain during an audit is a challenging yet critical task, particularly given the absence of a universally accepted, precise definition of the term (West and Buckby, 2023). The nature of auditing work, which often involves navigating complex and nuanced financial landscapes, necessitates a reliable measure of skepticism to ensure auditors are effectively questioning and critically evaluating the evidence and assertions presented to them. A unique professional skepticism scale must be created to guarantee that suitable audit techniques are used during the audit, in compliance with the requirements

of auditing standards (Choo and Tan, 2000). Professional skepticism must be accurately measured to assess the effectiveness of auditors' work. It has been argued that failing to use professional skepticism can prevent auditors from spotting financial statement fraud (Beasley *et al.*, 2001; Moradi *et al.*, 2020). For this reason, and to address this significant gap in the auditing practice, Hurtt (2010) developed a scale specifically designed to gauge professional auditor skepticism.

Hurtt (2010) explained professional skepticism in terms of a variety of skeptic traits, such as questioning, suspension of judgement, seeking knowledge, comprehending others, self-determination, and self-assurance. The audit environment in the United States provides the foundation for Hurtt's (2010) Professional Skepticism Scale. Whether Hurtt's (2010) professional skepticism scale is appropriate for gauging the amount of professional skepticism employed by auditors in various audit contexts across various nations is debatable. Similar concerns about the potential impact of national settings, such as the impact of culture on auditors' professional skepticism when conducting audit work, were voiced by the Audit Practices Board (APB) in the United Kingdom in 2010. An auditor's level of skepticism during the judgement and decision-making phases of an audit may be influenced by cultural context. For instance, Endrawes *et al.* (2021) examined the influence of culture on professional skepticism from the perspective of national culture. The findings showed that auditors from various cultural backgrounds such as Egypt and Australia respond to audit evidence in various ways. Hurtt's (2010) professional skepticism scale has not yet been proven suitable in all circumstances. Hurtt *et al.* (2013) noted that given the preponderance of research on professional skepticism being conducted only in the United States, and they called for more research in international contexts (Hurtt *et al.*, 2013). However, conducting cross-cultural research has unique challenges, not the least of which is language (Zarei *et al.*, 2020). Additionally, cultural differences in understanding and perceptions can inhibit research, even in a bilingual environments, of which Arabic-speaking countries are no exception.

Arabic is one of the most commonly spoken languages in the world (Lewis *et al.*, 2016). It is second only to English in terms of the number of countries in which it is the predominant language (60 vs. 110) and is spoken by nearly 300 million people. As organizations in the Arabic-speaking world

become more integrated with the global business environment, the efficacy of audits conducted in the region has become more important to investors and partners in the international realm. Thus, understanding the ability of auditors in the Gulf region to exercise professional skepticism is critical to assessing the efficacy of their audits. As is the case for audit oversight bodies in 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), maintaining the attitude of professional skepticism has also gained the attention of audit oversight bodies in the region. Specifically, Qatar, in Western Asia and a Gulf Cooperation Council (GCC) country, released a new law in 2020 that imposed a regulatory requirement on audit firms to ensure the application of professional skepticism throughout the audit process (Qatar Law No. 8/2020 on the Regulation of the Auditing Profession). Therefore, this study aimed to extend the study of professional skepticism in Qatar, an Arab-speaking country. In doing so, the study developed and examined the validity of an Arabic-language version of the Hurr Professional Skepticism Scale (HPSS) through preliminary psychometric and cross-cultural validation using a sample of Arabic-speaking, English-speaking, and bilingual business students in Qatar.

This paper is organized as follows: Section II presents the literature review, conceptual framework, and research aim, and Section III describes the research context, as it displays the development of the accounting profession and accounting education in Qatar. Section IV, discusses the research methods and data collection. Section V presents the results. Finally, Section VI outlines the discussion, conclusions, limitations, and suggestions for future research.

## LITERATURE REVIEW

In recent years, the discourse on professional skepticism has evolved, with numerous studies contributing fresh insights and empirical evidence, which significantly expanded our understanding of how professional skepticism is manifested in various auditing environments and cultures. For instance, Xu *et al.* (2023) provided an incremental understanding of how professional skepticism is enacted and collectively constructed by auditors in practice

and shows that the meanings and practices of professional skepticism are fluid and emergent, emphasizing the role of individual and societal values in shaping skeptical behavior. Similarly, Li (2022) explored the relationship between regulatory changes in auditing standards and the application of professional skepticism, revealing a complex interplay between external regulation and internal auditor judgment.

These recent studies underscore the dynamic nature of professional skepticism, challenging and building upon earlier conceptualizations. They highlight the need for ongoing research and adaptation of auditing tools and approaches to keep pace with the changing landscape. Furthermore, the works of Austin *et al.* (2021) delved into the technological advancements in auditing, examining how emerging tools like artificial intelligence and data analytics are reshaping auditors' skeptical approaches. Their findings suggest that while technology offers new opportunities for enhancing skepticism, it also introduces unique challenges that auditors and firms must navigate.

The infusion of these contemporary studies into our literature review not only addresses the previous concerns regarding outdated references but also enriches our research with current perspectives and findings. They provide a more nuanced understanding of the multifaceted nature of professional skepticism, reflecting the latest developments and debates within the field. By incorporating these recent contributions, we ensure that our study is grounded in the most current and relevant academic discourse, thereby enhancing its validity and relevance to both scholars and practitioners.

Furthermore, the lack of professional skepticism has been a primary factor in several high-profile accounting fraud cases. The Enron scandal in 2001, perhaps the most infamous, highlighted auditors' failure to question complex financial statements and off-the-books practices, leading to one of the biggest bankruptcies in American history. Similarly, in 2002, the WorldCom scandal revealed auditors' failure to identify improper expense recording and inflated revenues, resulting in overstated assets by over \$11 billion. Across the globe, the Satyam Computer Services scandal in 2009, known as "India's Enron," involved over \$1 billion in fraudulent accounts due to inadequate auditor skepticism. In the financial sector, the collapse of Lehman Brothers in 2008 was partly attributed to the lack of scrutiny over

complex “Repo 105” transactions. Additionally, in 2003, the Italian dairy company Parmalat committed massive fraud involving the fabrication of assets and creation of fake transactions, with auditors failing to exercise adequate skepticism (Dickey *et al.*, 2022). Each case underscores the dire consequences of insufficient professional skepticism and emphasizes the importance of rigorous auditing practices.

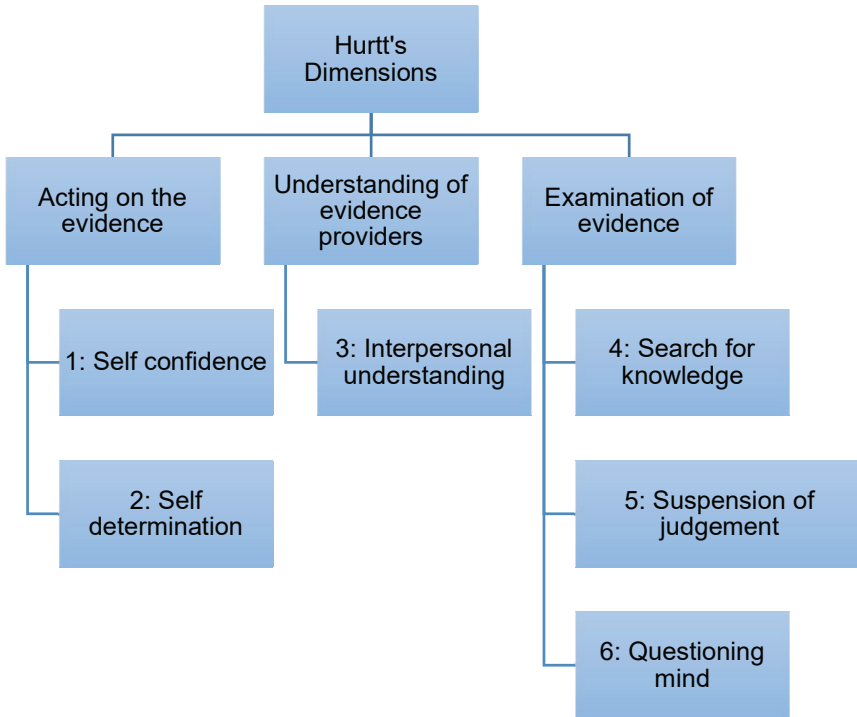
Like many other concepts in accounting and auditing, professional skepticism does not have a single definition. The word skepticism is derived from the Greek word *skeptikos*, which means reflection, view, or insight. This implies that skepticism requires an in-depth search for the truth (Epstein, 2015). According to the International Standards on Auditing (ISAs), professional skepticism refers to “an attitude that includes a questioning mind, being alert to conditions that may indicate possible misstatement due to error or fraud, and a critical assessment of audit evidence” (IAASB, 2012:3). The standards require an auditor to use their professional skills to plan and perform audits in a way that enables the auditor to recognize material misstatements in financial statements (Malagila *et al.*, 2020).

Professional skepticism is an attitude by which an auditor develops a questioning approach when analyzing financial reports and drawing conclusions (Nahar, 2018). Professional skepticism includes being alert (Grenier, 2016). For instance, some audit evidence may contradict other obtained information, and the auditor should question the reliability and validity of both sets of information with a critical mindset (Anis, 2017). Therefore, professional skepticism requires the auditor to balance suspicion and trust (Martinov-Bennie *et al.*, 2022). The auditor should not trust all the internal controls that are placed in an organization but should not be extreme in making suspicions (Endrawes *et al.*, 2021). Professional skepticism is not only important in the fraud context, but it is also crucial in more complex and highly judgment-dependent audit components, such as fair value estimates, accounting estimates, and in the evaluation of an organization’s assumptions and decisions (Agustin, 2020).

At the individual level, an auditor’s professional skepticism can be thwarted by personal biases as well as a lack of knowledge and expertise (Chen *et al.*, 2023). Some circumstances require in-depth knowledge of certain matters to make sound judgments. Inherited preferences and

expectations could undermine the professional skepticism of an auditor because the auditor will approach the work with prejudgment and reach immature conclusions (Hurt *et al.*, 2013). In addition, the auditor's character and cultural attributes may influence the auditor's level of professional skepticism. Some auditors may have beliefs that lead them to develop rationalizations for unexplainable judgments (Chen *et al.*, 2023). In some cases, the incentives and compensation auditors receive could affect their professionalism, as auditors may feel that their work performance is not appreciated (Coppage and Shastri, 2014).

Based on this, it is apparent that professional skepticism is an important area of study. To facilitate this stream of research, Hurt (2010) developed an instrument to measure professional skepticism at the individual level. The instrument comprises 30 items representing six dimensions of professional skepticism. These dimensions were developed based on a review of audit literature and codifications. As shown in Figure 1, the dimensions include Searching for Knowledge, Suspension of Judgment, Self-Determining, Interpersonal Understanding, Self-Confidence, and a Questioning Mind. In general, the traits have to do with how an auditor evaluates the evidence. These traits show an auditor's willingness to look for sufficient audit evidence and review it before reaching a conclusion (Verwey and Asare, 2022). Higher levels of professional skepticism among auditors are expected to hold off when making audit judgments, until more evidence is available (Hussin and Iskandar, 2014). Each trait comprises items that influence auditors' professional skepticism. Each trait of skepticism must be measured independently to ascertain an auditor's level of skepticism. To test each skepticism trait, Hurt (2010) offered a distinct scale. Evidence suggests that individual auditors may vary from one another in terms of their professional skeptical tendencies (Hurt 2010).



**Figure 1: Hurtt's Six Dimensions for Professional Skepticism**  
Adapted from Hosseini and Rezaei (2014)

As shown in Figure 1, having a “questioning mind”, “suspending in judgment”, and “search for information” are traits related to the study of evidence. Requirements for reasoning, evidence, justification, and proof are part of the questioning mind. The quality of skepticism is the ability to suspend judgment, which requires a person to form judgments carefully and reach such views after debate and new affirming facts (Ndaba *et al.*, 2021). Consider seeking knowledge to be curious. Interpersonal awareness of the motivation and integrity of evidence providers is one of the qualities associated with comprehending them. According to acting on the evidence, “self-confidence” and “self-determination” are the qualities to exhibit. Self-confidence refers to the professional tenacity to act in accordance with gathered evidence. Self-determination is an individual’s judgment of how much evidence is sufficient. These six dimensions are briefly discussed below.



*Self-Confidence:* Self-assurance has been highlighted by Mautz and Sharaf (1961) as a component of skeptical traits. Self-confidence refers to the extent to which auditors believe in themselves. Attitudes and actions are formed as a result of auditors' confidence and trust (Forsman and Johnson, 1996). Forsman and Johnson (1996) asserted that having self-confidence enables individuals to comprehend what can be done, what has already been accomplished, and to create goals for their own lives. Their lack of self-assurance cannot be utilized to support audit conclusions and judgments. To guarantee that every audit opinion is accurate, all the judgments and choices made during an audit should be kept confidential.

*Self-Determination:* An auditor who is fearlessly self-determined decides how to assess, create, and retain audit opinions. Rotter (1996) asserted that a person's internal and external strengths can affect the audit decision-making process. The self-determination attribute describes the extent to which motivation and personality influence how well each piece of information and justification is evaluated (Lefcourt, 1991). It is argued that auditors are not skeptical when accepting client explanations without more elaboration or drawing audit conclusions quickly. People who are skeptical will recognize the truth and vulnerable facts discovered and continue to conduct additional investigations until they are satisfied and self-assured to make their own conclusions (Kurtz, 1992).

*Understanding Interpersonal Relationship:* Understanding interpersonal relationships is a skeptical attribute necessary to comprehend the causes or intentions behind a client's actions (Hookway, 1990). According to the Interpersonal Deception Theory, most people do not communicate honestly. A skeptical auditor should be able to instinctively grasp each management activity, because communication always has a goal or message. The ability to understand human dynamics makes auditors more skeptical (Hookway, 1990). This shows that the auditor not only inquires about the client's activity but also inquires about the client's reason and determines from the client's motivation why they act in such a manner (Alawsi *et al.*, 2023).

*Searching for knowledge:* Philosophers regard the pursuit of knowledge as a key aspect of skepticism. Curiosity is the foundation of skepticism in seeking knowledge. According to Berlyne (1954), when a

person encounters something novel or more complicated, there is doubt. This doubt will provide us with information on how well informed people are about their curiosity. Curiosity promotes the development of attitudes among people who want to reduce uncertainty (Gagne, 1985).

*Suspension of judgment:* This is a characteristic of skepticism based on the concept of cognitive disclosure requirements (Kruglanski, 1990). An auditor's level of satisfaction with the information or evidence gathered prior to making audit considerations is known as the cognitive disclosure requirement (Peytcheva, 2014). According to the concept of cognitive disclosure requirements, the auditor should exercise skepticism throughout the consideration process and delay taking action until there is enough supporting documentation to identify the true root of the issue in concern (Safipour *et al.*, 2019). The auditor's suspension of judgment causes them to reject a statement without additional evidence; yet, they take their time and do not rush while making judgments (McGinn, 1989; Haghighi *et al.*, 2023).

*Questioning mind:* This refers to the capacity of the mind to keep challenging the validity of the matter throughout the audit process (Fogelin, 1994). Auditors with doubts about the validity of audit evidence frequently do so. Audit views should be supported by adequate evidence. The problems that have always been raised show an auditor's skepticism toward the veracity or truth of anything. The skeptical auditor will keep considering audit evidence since, in his opinion, the audit findings ought to be accurate.

Unsurprisingly, Hurtt (2010) developed an instrument in English. Auditing research is primarily conducted in English-speaking environments and is published in English-language journals. The Scientific Journal Rankings (SCImag, 2022) lists 164 top accounting and auditing journals worldwide. Of these journals, approximately 76% were US (#54) or UK (#70). While research publications on auditing are primarily conducted in English, a large number of individuals in the auditing profession either do not speak English or use English as a second language.

A number of studies have tested the effect of the use of English as a second language on communication and decision-making abilities and found significant differences in English grammar and vocabulary between participants whose first language is English and those who use English

as a second language (Lin, 2010; Crosthwaite, 2011). Individuals whose first language is Arabic have a particular set of difficulties that hinder their understanding of English (Patil, 2010). Reading in English is difficult for students whose first language is Arabic (Cobb and Horst, 2001; O’Sullivan, 2010; Saidi and Al-Mahrooqi, 2012). One challenge is the nature of these two writing systems. English is composed and read from left to right, whereas Arabic is composed and read from right to left. Certain sounds in each of the languages are absent in the other one; for example there is no equivalent for the letter ‘p’ or ‘v’ in Arabic and there are no equivalents for the letters غ, ع, ق, خ, or ث in English. Moreover, Saadullah *et al.* (2014) found that Arabic-speaking individuals’ ethical judgment and decision-making are significantly better when ethical dilemmas are presented to them in Arabic compared to when the same dilemmas are presented in English. This may also be true in situations where the participants in a research study are completing an instrument in their second language, which would seriously affect the validity of the findings of any such study. Thus, to conduct valid research in Arabic-speaking environments, Arabic language measures should be used.

To address this limitation and permit the investigation of professional skepticism in the Arabic-speaking world, we developed an Arabic version of the Hurtt Professional Skepticism Scale by translating it into Arabic. We examined the psychometric and cultural validity of the instrument by comparing the results of using the translated version of the instrument with the original English version when fielded to subjects in an Arab context. Additionally, we compared the results of using both instruments in an Arab context with Hurtt’s (2010) findings in the US context.

## **THE ACCOUNTING PROFESSION AND ACCOUNTING EDUCATION IN QATAR**

This section presents an understanding of the current state of accounting education in Qatar and the key stages in its growth to justify its selection as the research environment. According to the International Monetary Fund, despite Qatar’s modest peninsula-sized location on the northeastern coast of the Arabian Peninsula, it is one of the richest nations in the world owing to its high GDP per capita (IMF, 2022). Given that Qatar possesses

the third-largest natural gas reserves in the world, its economy is heavily dependent on oil and gas sectors.

Qatar's economy, which predated the discovery of oil in 1940, was mostly dependent on fishing and pearling. Additionally, there was no formal educational system in Qatar. Instead, instruction was primarily carried out by the Kuttab, often known as "traveling educators," who visited various villages to impart linguistic lessons and the Quran's religious reading (Nasser, 2017). In the 1950s, a modern educational system took its place, but it lacked technical and vocational education, as well as opportunities for skill development. The system also lacked careful consideration of educational policies (Khodr, 2011). As a result, Qatar launched several reforms in the 1970s and the 1980s in an effort to combat illiteracy among a sizable nomadic population. Nevertheless, quality has received less attention (Nasser, 2017). The need to establish sustainable economic development locally, acquire a competitive edge regionally, and obtain a better position internationally served as the driving force for such reforms, motivated by an awareness of the inefficiency of the current educational system (Khodr, 2011).

According to Al-Kuwari *et al.* (2021), the Qatari government has targeted investments in education to accomplish a number of aims, including eradicating illiteracy, transitioning from a hydrocarbon-based economy to a knowledge economy, and maintaining cultural purity due to billions of dollars in surpluses from the oil and gas industry (see also Weber, 2011).

The RAND Corporation, a well-known research organization, was asked to review the country's educational system in 2001 and make recommendations for creating a top-notch educational system that would meet the changing demands of the nation. Education reform, also known as Education for a New Era, began to be put into practice in 2002 and focused on the administration and provision of educational services, curriculum, caliber of teachers, and accessibility of relevant resources (Khodr, 2011). The achievements made in only three years were impressive (Al-Kuwari *et al.*, 2021).

The reforms have also been applied to higher education, with significant changes made to Qatar University, the country's main public university, the

Qatar Foundation (QF), and Education City. QF was founded in 1995 as a non-profit organization that supports and runs initiatives in education, science and research, and community development. In 2003, QF developed Education City (EC), the country's educational center, which welcomed American and European higher education providers and established satellite campuses of one renowned tier university (Nasser, 2017). "The City has been established to build a knowledge-based economy, produce a pool of well-trained graduates and lifelong learners, and ultimately make Qatar not only an educational hub in the region but also a knowledge-producing country with an economically sustainable system and a diversified economy" (Khodr, 2011: p.517).

According to the national policy stated in Qatar's National Vision 2030, a world-class education system is key to achieving economic success, which also endorses quality education as a component of human capital development and a cornerstone of the knowledge economy. Qatar's rating, according to the World Education Quality Index issued by the World Economic Forum in 2021, is the fourth internationally and first in the region for educational quality, and is indicative of the remarkable educational gains the country has made. Notably, in the last two decades, Qatar's Human Development Index (HDI) has increased dramatically. During that time, Qatar had an average value of 0.819 points, ranging from 0.729 points in 1980 to 0.857 points in 2013. The most recent figure was 0.848 points in 2020. For reference, the 2020 global average, calculated from data from 185 nations, is 0.723 points (Human Development Report, 2022).

Qatar makes an intriguing research setting for a number of reasons, including globalization, transnational education in developing nations, regional competition, and the internationalization of education. The established structures and institutions in Qatar have been tested by the acceleration of globalization drivers, changes in demographic patterns, and an increase in per capita growth rate over the past 20 years. The EC's internationalization of education was a crucial strategy for overcoming these obstacles. One of the main reasons behind education internationalization is the pressure to adhere to locally and internationally recognized norms and increase Qatari students' competitiveness abroad. As a result, branch universities in the EC acted as global institutions for the current transnational educational systems (Al-Hail *et al.*, 2021).

Furthermore, Qatar's distinct sociopolitical system and abundant financial resources make it impossible to categorize it as a developing nation, especially when compared to other nations in the MENA area (Zguir *et al.*, 2021). The results of earlier studies in this area are likely no longer relevant in this situation. In addition, when compared to other nations, such as Saudi Arabia, Qatar's accounting system and the accounting profession as a whole are still in their infancy (Awadallah and Elgharbawy, 2021). The nation lacks a comprehensive set of national accounting standards, and only companies registered on the Doha Stock Exchange are obligated to report their financial information in accordance with the IFRS (Awadallah, 2018).

## RESEARCH METHODS AND DATA COLLECTION

Several steps are necessary for using an instrument in other languages and cultures. First, the instrument must be translated into the target language. Blind back-translation was used to ensure that the instrument maintained cultural as well as linguistic equivalence. After the translated instrument was developed, its psychometric properties must be evaluated. This includes evaluating the discriminant and convergent validity of the scale as well as factorial validity. Convergent validity was determined by examining the Cronbach's (1951) alpha value for the entire scale as well as for each subscale. Discriminant validity was examined using exploratory factor analysis. Additionally, confirmatory factor analysis (CFA; Byrne, 2006) was used to determine whether the factor structure of the translated instrument was equivalent to the six dimensions of the original instrument. Furthermore, both the original instrument and Arabic language version were fielded in the same context. The results of each subset were compared to each other and to the results found by Hurtt (2010) with a US sample to determine whether there were differences attributable to culture rather than language.

### Measures

The instrument fielded in this study was the 30-item Hurtt Professional Skepticism Scale (Hurtt, 2010). The instrument used a six point Likert-type scale to assess each item. A participant's total score on the items was used as a measure of their professional skepticism. As shown in Table 1, the instrument consisted of items representing six constructs. The constructs

were Search for Knowledge (six items), Suspension of Judgment (five items), Self-Determining (six items), Interpersonal Understanding (five items), Self-Confidence (five items), and Questioning Mind (three items). Depending on their native language, the subjects completed either the original instrument developed by Hurtt (2010) or the translated version developed as part of this study.

**Table 1: List of Items**

Construct	Number of Statements
Search for Knowledge	6
Suspension of Judgment	5
Self-Determining	6
Interpersonal Understanding	5
Self-Confidence	5
Questioning Mind	3
Total number of statements	30

## Translation

The translation process of the instrument was designed to ensure content and semantic equivalence. First, cross-cultural content equivalence was determined by content experts. Three accounting faculty members who were knowledgeable about auditing practices in the Middle East assessed each item on the original English scale and determined that they were relevant to auditors in the region, and no cultural differences were found.

A blind back-translation technique was implemented to ensure semantic equivalence. To accomplish this, a bilingual and bicultural faculty member whose first language was Arabic translated the English instruments into Arabic. Two other bilingual and bicultural individuals then back-translated the Arabic version of the instrument into English. Consistent with best practices, one of the back-translators was an accounting faculty member familiar with accounting terminology, while the other translator was fluent in the cultural and linguistic nuances of the target language, but did not have accounting domain knowledge. Neither back-translator had knowledge of the study. Finally, two non-Arabic-speaking faculty members assessed the two back-translated versions to identify any discrepancies between them

and the original instrument. Again, one participant had accounting-specific knowledge, while the other did not. They compared the original English version of the instruments to the two back-translated versions to ensure that there were no omissions or additions of information, as well as to identify any differences in content, syntax, or grammar that could indicate that there is a change of meaning or lack of clarity in the Arabic instruments. A sample of the survey instrument in both languages is provided in the Appendix.

## **Subjects**

The survey instrument was carefully distributed to a group of respondents comprising accounting students enrolled in the Bachelor of Accounting Program at the College of Business and Economics (CBE) of Qatar University. On one hand, this university was selected for its prominence as the premier higher education institution in Qatar, known for its academic excellence and substantial student population. Specifically, the accounting program at CBE was not only the most comprehensive in the region but also boasted prestigious accreditations from AACSB Business and AACSB Accounting. These accreditations underscored the program's adherence to international educational standards and commitment to continuous improvement. Furthermore, the program was endorsed by leading professional bodies, including CPA Australia, IMA, CIMA, and ACCA. Such endorsements reflected the program's relevance and alignment with the professional and ethical standards expected in the global accounting and auditing fields. This made the college an ideal setting for examining professional skepticism among future professionals who were being educated under these rigorous standards.

On the other hand, Qatar was chosen as the geographical focus of this study due to its unique economic and cultural landscape, with its rapidly growing economy and significant role in the global financial market. The cultural nuances of Qatar provided a rich backdrop for exploring the cultural dimensions of professional skepticism.

The data were collected from undergraduate students at CBE, chosen for its reputation and the availability of a diverse student body with both Arabic and English tracks. Approximately 4500 students enroll annually on average in these tracks. The survey was meticulously prepared in



both languages and distributed to 650 students from accounting and non-accounting classes over the 2021–2022 academic year. The selection of the sample size was influenced by the population size and resource constraints. A drop-and-collect strategy employed in data gathering was responsible for the high response rate of ninety percent of the 650 submitted student questionnaires. Table II displays the descriptive statistics of the sample.

Based on the above and with reference to Table 2, the sample comprised 585 undergraduate students. All participants were at least 18 years old, with a mean age of 21.38 years. Males comprised 29% of the sample and females comprised 71% of the sample. The majority of participants (65%) were in their third (junior) year of the BBA program. A further 28% were in their fourth (senior) year, and 7% were in their second (sophomore) year.

The majority of the participants were accounting majors (69%), and an additional 31% were accounting minors. While 14% of subjects had completed no specific coursework in auditing, 68% were enrolled in the Auditing I course, 14% in the Auditing II course, and 18% in the Internal Audit course at the time of the study; 2021-22.

In terms of language ability, 76% of the participants indicated that they were “Completely Fluent” in Arabic, while 3% indicated they had little or no fluency in Arabic. The mean self-reported score for Arabic fluency was 9.49 on a 10-point scale with a median of 10. Many students reported varying degrees of English proficiency. The mean score for English proficiency was 7.5 with 46% reporting a score of at least eight. Some students (0.4%) reported that they had no English proficiency, and 18% reported their fluency in English to be less than six on a 10-point scale. Participants elected to complete either the original HPSS instrument in English or the Arabic version of the instrument. A total of 134 subjects completed the English version and 451 completed the Arabic version.

**Table 2: Profile of Participating Respondents**

Factors	No.	%	Factors	No.	%
<b>Major/Minor</b>			<b>Year</b>		
Accounting as Major	404	69	Fourth (Senior)	164	28
Accounting as Minor	181	31	Third (Junior)	380	65
<b>Total</b>	<b>585</b>	<b>100</b>	Second (Sophomore)	41	7
			<b>Total</b>	<b>585</b>	<b>100</b>
<b>Gender</b>					
Female	415	71	Track		
Male	170	29	Arabic	451	77
<b>Total</b>	<b>585</b>	<b>100</b>	English	134	23
			<b>Total</b>	<b>585</b>	<b>100</b>

## Analysis

The students were prompted to respond to each question during a class session to ensure a high response rate and reduce inaccurate responses brought on by respondents’ misinterpretations of the questions. The sessions were monitored by one of the research team members. Respondents were then asked to respond on a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). There were 30 questions, 22 of which were positive statements. The final eight questions took the form of contradictory assertions. The statements were meant to reveal the degree of professional skepticism held by each respondent. The presence of both affirmative and negative statements encouraged participants to provide thoughtful responses that should lessen excessive reaction bias and acquiescent bias (Sauro and Lewis 2011). Acquiescent bias occurs when individuals typically agree with every proposition out of habit (Sauro and Lewis 2011). Although respondents essentially choose the most extreme rating and give it to many or all items, excessive response bias is somewhat similar to acquiescent bias (Sauro and Lewis, 2011). The sum of the scores on the 30 items determined how professional-skeptical a person is. Higher scores denoted higher professional skepticism, while lower scores denoted lower professional skepticism.

The number of predictors (30) in the questionnaire was taken into consideration while determining the sample size, which necessitated

a sample of 150 (five observations for each observation) and 600 (20 observations per observation) observations (Hair *et al.*, 2010). On the other hand, too large a sample causes all differences to be statistically significant as the statistical tests become highly sensitive, making too small a sample statistically insensitive due to the high sampling error (Hair *et al.*, 2010). In addition, the desired sample size of at least 395 observations was determined by considering the population size (4500 students), confidence level (95%), and margin of error (5%). The actual sample size (585) exceeded the desired size because of the high response rate, which can increase the statistical power of the test.

Additionally, data were initially reviewed and checked for missing information. The percentage of missing data in the current study was less than 10%, which is the limit for discarding data according to Hair *et al.* (2010) for all variables, according to a check using SPSS-24. Little's MCAR test confirmed the randomness of missing data (missing completely at random MCAR). Therefore, one of the most popular and effective methods utilized in this study to impute relatively lower levels of missing values was mean substitution (Tabachnick and Fidell, 2007).

The reliability of the dimensions of the original and translated Hurtt instruments was determined using Cronbach's alpha coefficient, corrected item-total correlations, and alpha estimated with dropped items. Consistent with standards in the discipline, a value greater than .70 for Cronbach's alpha was used to establish reliability. Furthermore, items whose deletion would increase the alpha value by .10 or more or whose corrected item-to-total correlation was less than .30 were considered poor items.

Principal component analysis (PCA) was used to identify the factor structure of the translated version of the instrument, as well as the English version of the instrument, when administered in an Arab context. Factor structures were compared to determine whether there were differences attributable to the language of the instruments. Additionally, the results of the current study were compared with the factor structure of the original HPSS instrument to determine if there were differences that could be attributable to culture rather than translation.

## RESULTS

### Reliability

Cronbach’s alpha was used to assess the reliability of the variables, and the results showed that all had values of at least 0.70. These results were above the threshold and showed that the multiple measures for each construct were highly consistent (Hair *et al.*, 2010). Specifically, the internal reliability of the full scale was established with a Cronbach’s alpha value of .898 for the Arabic instrument and .934 for the English instrument. This is comparable to the findings of Hurtt (2010), whose results indicated an alpha value of .86 for the entire scale. Reliability for all subscales met the criteria for both languages (see Table 3).

**Table 3: Internal Reliability**

Construct	Cronbach’s Alpha		
	Arabic Instrument	English Instrument	Hurtt, 2010
Search for Knowledge	.901	.910	.86
Suspension of Judgment	.785	.910	.83
Self-Determining	.774	.723	.76
Interpersonal Understanding	.763	.794	.90
Self-Confidence	.834	.811	.91
Questioning Mind	.707	.704	.67

### Factor Analysis

Factor analysis using principal component analysis (PCA) with varimax rotation was used to determine the factor structure of the instrument. Initially, the patterns of skeptical traits for the selected samples were identified using factor analysis. Two statistical measures were examined prior to the application of the factor analysis to assess the eligibility of the data for factoring. To ensure the suitability of factor analysis, Bartlett’s Test of Sphericity was significant ( $p < 0.05$ ). (Pallant, 2007). Given the value of  $p = 0.000$ , factor analysis was applicable in this situation. Second, a value between 0 and 1 should be used for the Kaiser-Meyer-Olkin (KMO) measure of sample adequacy. In this instance it had a value of 0.603, which was higher than the suggested value of 0.6. (Pallant, 2007).

Based on the preliminary tests, the analysis was performed using split samples based on the language of the instrument. Table IV shows the results of the exploratory factor analysis. In both cases, the analysis resulted in a seven-factor structure that was inconsistent with the structure of the original instrument. Of the seven factors, only three seemed to conform well to the dimensions developed by Hurtt (2010): Seeking Knowledge, Interpersonal Understanding, and a third factor combining items from the Self-Confidence and Suspension of Judgment subscales. Given that there was little difference between the structures found using English and Arabic instruments, it appeared that the translation was equivalent to the English version. However, since the factor structure did not match that of the original instrument when validated by Hurtt (2010) using a US sample, there was reason to believe that there may be cultural issues affecting the results.

To further explore possible cultural differences, confirmatory factor analysis was conducted, in which the number of factors extracted was fixed at six in an attempt to derive a structure consistent with Hurtt's (2010) number of factors. Table V shows the results for the two instruments (Arabic and English) in the current study compared with the factor structure found by Hurtt (2010). Again, three factors emerged, which were relatively consistent with Hurtt's (2010) findings: Search for Knowledge, Interpersonal Understanding, and a third factor. In this case, we found the same combination of the Suspension of Judgment and Self-Confidence items for the English instrument as we found in the exploratory factor analysis. However, on the Arabic instrument, the Self-Confidence items were loaded by themselves. Two of the Suspension of Judgment items loaded on a fourth factor, but the others did not load cleanly on any factor. The remaining items had issues with cross-loading or loading into the wrong factors.

**Table 4: Exploratory Factor Analysis**

	Rotated Component Matrix – Arabic Instrument						
	1	2	3	4	5	6	7
SK1	.849						
SK2	.858						
SK3	.704						
SK4	.645						
SK5	.739						
SK6							
SJ1							
SJ2							
SJ3							
SJ4							
SJ5							
SD1							
SD2				.684			
SD3							
SD4				.564			
SD5							-.834
SD6						.610	
IU1			.826				
IU2			.745				

	Rotated Component Matrix – English Instrument						
	1	2	3	4	5	6	7
SK1		.731					
SK2		.697					
SK3		.800					
SK4		.721					
SK5		.697					
SK6		.671					
SJ1	.680						
SJ2	.775						
SJ3	.821						
SJ4	.637						
SJ5	.767						
SD1					.639		
SD2					.804		
SD3						.721	
SD4							
SD5							.713
SD6					.591		
IU1					.614		
IU2					.723		

Rotated Component Matrix – Arabic Instrument							
	Component						
	1	2	3	4	5	6	7
IU3			.819				
IU4				.570			
IU5						-.562	
SC1	.854						
SC2	.662						
SC3	.781						
SC4	.726						
SC5	.707						
QM1					.794		
QM2					.552		
QM3							

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
 Language = Arabic  
 Loadings below .55 suppressed

Rotated Component Matrix – English Instrument							
	Component						
	1	2	3	4	5	6	7
IU3			.666				
IU4				.703			
IU5					.716		
SC1	.860						
SC2							.898
SC3	.861						
SC4	.840						
SC5	.871						
QM1					.685		
QM2		.649					
QM3							

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
 Language = English  
 Loadings below .55 suppressed

**Table V: Confirmatory Factor Analysis**

	Rotated Component Matrix - Hurtt (2010)						Rotated Component Matrix - Arabic Instrument						Rotated Component Matrix - English Instrument					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
SK1	.91						.846											
SK2	.83						.837											
SK3	.83						.680											
SK4	.82						.649											
SK5	.77						.764											
SK6*	.55																	
SJ1	.82								.606									
SJ2	.80																	
SJ3	.77																	
SJ4	.76																	
SJ5	.69								.640									
SD1	.76																	.740
SD2	.76									.639						.627		
SD3	.74																	.741
SD4	.64																	
SD5	.56																	
SD6*	.49																	
IU1	.90										.820							.654
IU2	.88										.726							.712
IU3	.88										.823							.690
IU4	.79																	.698
IU5	.75																	
SC1					.90													.859
SC2					.87													.879



	Rotated Component Matrix - Hurtt (2010)						Rotated Component Matrix - Arabic						Rotated Component Matrix - English					
	Component						Instrument						Component					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
SC3					.87		SC3	.771					SC3	.858				
SC4					.84		SC4	.702					SC4	.836				
SC5					.81		SC5	.708					SC5	.871				
QM1						-.85	QM1				.771		QM1				.644	
QM2						-.78	QM2						QM2		.633			
QM3						-.60	QM3						QM3				.566	

\*Item from Questioning Mind construct that loaded on other construct.  
 Rotation Method: Oblimin with Kaiser Normalization.  
 Language = English  
 Loadings below .55 suppressed

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
 Language = Arabic  
 Loadings below .55 suppressed

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
 Language = English  
 Loadings below .55 suppressed

## DISCUSSION AND CONCLUSIONS

The current research demonstrated the appropriateness of Hurtt's (2010) skepticism scale for assessing the use of professional skepticism by auditors in settings different from those of the United States, specifically within the Arab context. By revalidating a translated version of Hurtt's Professional Skepticism Scale based on responses from accounting students at a national university in Qatar, this study makes several significant contributions to both the literature and practice, particularly from a managerial perspective.

Firstly, the factor analysis conducted was a crucial step in understanding the construct of professional skepticism in a non-Western environment. The fundamental objective of this study was to assess the psychometric properties of the translated instrument in a new cultural setting. The factor analysis provided essential insights into the discriminant validity of the Arabic version of the scale, indicating that it performed better when fielded in Arabic than in English. This finding is critical for practitioners and researchers in the region as it suggests that native language instruments are more effective in capturing the nuanced understanding of professional skepticism among Arabic-speaking auditors.

From a managerial perspective, understanding these nuances is vital. Managers and audit team leaders need to be aware that cultural and linguistic nuances can significantly impact how professional skepticism is understood and applied in practice. The enhanced discriminant validity of the Arabic version suggests that using this adapted tool can lead to more accurate assessments of auditors' skepticism in the Arab world, thereby improving audit quality and reliability.

Furthermore, the study highlights the need for accounting and auditing tools that are culturally and linguistically adapted. This is not just a methodological preference but a practical necessity in a globalized business environment where understanding and effectively leveraging diverse perspectives is key to success. Managers and audit regulators in Arab countries, and indeed in any non-English speaking countries, should consider these findings when developing training programs, assessment tools, and regulatory frameworks.

Moreover, the findings indicate that professional skepticism is potentially influenced by cultural factors such as fatalism, risk aversion, and educational approaches. These insights are invaluable for managers and educators who are responsible for training and developing auditors. Understanding the cultural dimensions that might influence skepticism can lead to more targeted and effective training programs, which in turn can enhance the critical thinking and judgment skills that are essential for quality auditing.

While the use of a student sample and the need for further validation in broader and professional settings are acknowledged limitations of this study, the results provide a significant starting point for further research and practice. The study contributes to the literature by establishing the importance of using Arabic language instruments in the Middle Eastern context and offers a foundation for future research to build upon. For practitioners, particularly those in managerial or educational roles, this study serves as a call to consider cultural and linguistic factors seriously when assessing and developing professional skepticism within their teams.

In conclusion, while further studies, including those employing regression analysis on broader and more diverse samples, would undoubtedly add value, the current study's focus on factor analysis has provided critical initial insights into the cultural adaptation of professional skepticism measures. These insights are not only academically valuable but also offer practical implications for managers and educators looking to foster an environment of rigorous and culturally attuned professional skepticism.

## APPENDIX

## Arabic-language Version of the Hurtt Professional Skepticism Scale (HPPS)

يستخدم الناس عادةً العبارات الواردة أدناه للتعبير عن أنفسهم. يرجى وضع دائرة حول رقم العبارة التي ترى أنها تعبر بشكل عام عن شعورك. لا يوجد إجابة صحيحة أو خاطئة. لا تأخذ وقتاً كثيراً في التفكير بالإجابة. يُرجى تحديد الإختيار المناسب لك كما هو موضح أدناه:

(1) أخالف الرأي تماماً (6) أوافق الرأي تماماً

6	5	4	3	2	1	العبارات
6	5	4	3	2	1	1- في أغلب الأحيان أقبل توضيحات (مبررات) الأشخاص دون التفكير بها.
6	5	4	3	2	1	2- لدي شعور جيد ورضا عن نفسي.
6	5	4	3	2	1	3- أعطي لنفسي الوقت الكافي للحصول على معلومات إضافية قبل أخذ القرار عن حالة معينة.
6	5	4	3	2	1	4- إن التعليم في حد ذاته يؤثر حماسي.
6	5	4	3	2	1	5- لدي إهتمام بمعرفة الأسباب التي تدفع الناس إلى التصرف بالطريقة التي هم عليها.
6	5	4	3	2	1	6- أنا واثق من قدراتي.
6	5	4	3	2	1	7- في أغلب الأحيان أرفض التصريحات المعطاة مالم يكن لدي دليل على صحتها.
6	5	4	3	2	1	8- إكتشاف معلومات جديدة هو شيء ممتع.
6	5	4	3	2	1	9- أخذ وقتي كاملاً عند إتخاذ أي قرار.
6	5	4	3	2	1	10- في أغلب الأحيان أميل إلى القبول مباشرة بما يقوله الناس لي.
6	5	4	3	2	1	11- لا أهتم بسلوك الأشخاص الآخرين.
6	5	4	3	2	1	12- لدى ثقة ذاتية بالنفس.
6	5	4	3	2	1	13- يخبرني أصدقائي بأنني عادةً أسأل عن الأمور التي أراها أو أسمعها.
6	5	4	3	2	1	14- أرغب بفهم سبب سلوك الأشخاص الآخرين.
6	5	4	3	2	1	15- أعتقد أن التعلم في حد ذاته شيء ممتع.
6	5	4	3	2	1	16- عادةً أقبل الأمور التي أراها أو أقرأها أو أسمعها من مظهرها الخارجي.
6	5	4	3	2	1	17- لا أشعر بالثقة في نفسي.
6	5	4	3	2	1	18- عادةً ألاحظ التعارض بين التوضيحات (التبريرات) المتعددة.
6	5	4	3	2	1	19- في أغلب الأحيان أتفق مع أفكار أعضاء مجموعتي.
6	5	4	3	2	1	20- لا أرغب بإتخاذ القرارات بشكل متعجل.
6	5	4	3	2	1	21- لدي الثقة في نفسي.
6	5	4	3	2	1	22- لا أرغب بإتخاذ القرار حتى أطلع على جميع البيانات المتاحة الجاهزة.
6	5	4	3	2	1	23- أرغب بالبحث من أجل الحصول على المعرفة.
6	5	4	3	2	1	24- كثيراً ما أسأل عن الأمور التي أراها أو أسمعها.
6	5	4	3	2	1	25- من السهل أن يقوم الآخرين بإقناعي.
6	5	4	3	2	1	26- نادراً ما أخذ في إعتباري سبب تصرف الناس بطريقة معينة.
6	5	4	3	2	1	27- أفضل التأكد من أنني قد أخذت بالإعتبار أغلب المعلومات قبل إتخاذ القرار.
6	5	4	3	2	1	28- أستمتع في محاولة تحديد مدى صحة ما أقرأه أو أسمع.
6	5	4	3	2	1	29- أستمتع في التعلم.
6	5	4	3	2	1	30- يستهويني معرفة تصرفات الأشخاص والأسباب وراء تصرفاتهم.

## English-language Version of the Hurtt Professional Skepticism Scale (HPPS)

Statements that people use to describe themselves are given below. Please circle the response that indicates how you *generally feel*. There are no right or wrong answers. Do not spend too much time on any one statement. (1 = Strongly Disagree, 6 = Strongly Agree)

1. I often accept other people's explanations without further thought.	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.	1	2	3	4	5	6
11. Other people's behavior does not interest me.	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 people's 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.	1	2	3	4	5	6
17. I do not feel sure of myself.	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.	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 do not 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.	1	2	3	4	5	6
26. I seldom consider why people behave in a certain way.	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

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