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SEARCH FOR KNOWLEDGE AND PROFESSIONAL SKEPTICISM OF ACCOUNTING STUDENTS – AN EXPERIMENTAL STUDY

SZUKANIE WIEDZY I SCEPTYCYZM ZAWODOWY U STUDENTÓW RACHUNKOWOŚCI – STUDIUM EKSPERYMENTALNE

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Summary: The purpose of this study is to examine whether university accounting programs shape such ‘search for knowledge’ trait in significantly more effective comparing other university programs in the field of economy. For this purpose I conducted an experimental study using Hurtt Professional Skepticism Scale – HPSS which is one of the most recognized skepticism measures. I surveyed 432 students of Poznań University of Economics who follow either accounting program or management program (control group). The results showed that only programs in accounting increased the mean level of ‘search for knowledge’ trait significantly comparing to management program. The robustness analysis showed that gender, professional experience and length of service had no statistically significant impact on results.

Keywords: auditing, search for knowledge, accounting students, experimental study, HPSS.

Streszczenie: Celem niniejszego studium jest zbadanie, czy uniwersyteckie kierunki rachunkowości kształtują cechę „poszukiwania wiedzy” w znacznie większym stopniu w porównaniu do innych programów uniwersyteckich w dziedzinie ekonomii. W tym celu przeprowadziłem badanie eksperymentalne przy użyciu Hurtt Professional Skepticism Scale – HPSS, która jest jedną z najbardziej uznanych miar sceptycyzmu. Przeprowadziłem ankietę wśród 432 studentów Uniwersytetu Ekonomicznego w Poznaniu, którzy studiują na kierunku rachunkowość lub zarządzanie (grupa kontrolna). Wyniki pokazały, że tylko studia na kierunku rachunkowość podniosły średni poziom cechy w sposób znaczący w porównaniu ze studiami na kierunku zarządzanie. Analiza odporności wyników na wpływ zmiennych niezależnych wykazała, że płeć badanych, doświadczenie zawodowe i jego długość nie miały statystycznie istotnego wpływu na wyniki.

Słowa kluczowe: audyt, szukanie wiedzy, studenci rachunkowości, badanie eksperymentalne, HPSS.

1. Introduction

Searching for knowledge is a characteristic that has been presented both in professional standards and literature [Bell et al. 2005; Nelson 2009; Hurtt et al. 2013; Ciołek 2017] as an essential ingredient of the auditors' professional skepticism. It can be defined as an interest in accumulating knowledge in a sense of a general curiosity or seeking knowledge for knowledge's sake [Johnson 1978, p. 14]. This aspect differs it from 'questioning mind', a trait which is considered to be a foundation of auditors' professional skepticism. A former is not motivated by a need to verify a specific conclusion or obtain specific information, while the latter is.

Although auditing standards do not define professional skepticism in a clear manner most of them refer to search for knowledge as an important aspect of such attitude. For example ISA 200 states that "Informed decisions throughout the audit cannot be made without the application of relevant knowledge". PCAOB auditing standards conclude that "the independent auditor must exercise his judgment in determining which auditing procedures are necessary in the circumstances to afford a reasonable basis for his opinion. His judgment is required to be the informed judgment of a qualified professional person". Although both regulators and researchers emphasize the importance of searching for knowledge in accounting and auditing procedures in other fields this attitude is being underlined as an essential trait of a skeptic as well. For example, in philosophy [Bunge 1991, p. 131] indicates that the desire to investigate encourages skepticism. A. Naess [1969, p. 5] states that "The mature skeptic is a seeker. He is prepared to investigate and evaluate any new argument in relation to any questions." R.H. Popkin and A. Stroll [2002, p. 36] underline that as a skeptics "we look deep into and beyond the obvious".

The main goal of this paper is to answer the question whether university accounting program stimulates in any way the mean level of 'search for knowledge' trait in accounting students comparing to the students of other programs in the field of economy. Both accounting and auditing professions require this trait to be above the average, therefore academic courses should shape this trait through teaching process. However, we do not know whether it is being shaped and what factors can be essential for such training to be successful if it is possible to efficiently stimulate the development of this trait at the university education level.

In order to answer this question I conducted an experiment in order to measure the 'search for knowledge' trait level using the Hurtt professional skepticism scale [Hurtt 2010]. I surveyed first-year undergraduate and last year graduate accounting students (researched groups) as well as management students, who become a control group, using the questionnaire provided by R.K. Hurtt [2010]. I analyzed the change in researched trait mean level for both groups during 4 years of studying and provided robustness analysis, controlling the independent variables such as: gender and professional experience (type and length). The results I have obtained indicate that there are statistically significant differences in change of 'search for knowledge' trait

mean levels between researched group and control group. What more, the comparison of standard academic program students in accounting and ACCA accredited program students in accounting showed that the latter affects the trait mean level significantly. The change identified for accounting students following ACCA accredited program is statistically positive comparing to both management students (control group) and accounting students following standard academic program.

Performing the robustness analysis I found no evidence that gender has any impact on the change in the level of the trait for any of the surveyed groups. The impact of professional experience on the mean scores is statistically significant for the whole researched population, however it disappears when measured separately for both accounting students group and control group.

2. Data and methods

The data for hypotheses testing was collected with the part of questionnaire developed by R.K. Hurtt [2010] supplemented with demographic data form (see the Appendix). The subjects who took part in the research were first-year undergraduate and final-year graduate accounting students at Poznan University of Economics and Business. I also surveyed management students following separate program within the same faculty who were the control group for analysis. The university chosen for the study is one of the oldest economic universities in Poland located in important commercial and academic centre. In 2017 it was classified as “Top Business School with significant international influence” by Eduniversal rating agency.

There are two undergraduate and two graduate accounting programs offered to the students of Poznan University of Economics and Business. One of the latter is accredited by the Association of Chartered Certified Accountants. Graduates with diploma in accounting or finance are usually targeted by the top accounting, auditing and consulting firms (including the Big 4). However, it is important to mention that the students who finished the ACCA accredited program are exempt from 9 out of 14 exams required to obtain the certificate. According to the university internal research in most cases they are certified within one year after graduating. Therefore, there are differences in course materials and teaching methods used in both graduate accounting programs. The accredited program is supplemented in 60–70% with course materials provided by ACCA. The teaching methods used by educators who offer courses within the program are then different from ones being used under standard university graduate accounting courses. Hence, the students following ACCA accredited program are at some stages of the analysis become a subgroup in the results section.

The surveying process was conducted between November 15, 2017 and November 30, 2017 after being granted a permission for using Hurtt’s questionnaire from AAA (American Accounting Association). The instructions for surveyed subjects were provided in a written format as a part of the questionnaire. Such attempt ensured that the researched subjects received the same information. Most of the surveying

process was personally administered by the author. All of the researched subjects were instructed that filling in the questionnaire is voluntary and that the refusal meets no consequences for them. The surveying process was performed during the first or last 30 minutes of the selected lectures and took approximately 20–25 minutes to complete.

3. Research instrument

The questionnaire form used in this research was originally developed by R.K. Hurtt [2010] and designed in English (along with instructions). Consistently with prior studies [Hult et al. 2008; Ying, Patel 2016] I have translated the research instrument with the use of recursive translation procedures. This allows to ensure the accuracy of the research instrument translation into Polish. The process was performed as follows. The survey form and instructions provided by [Hurtt 2010] were initially translated into Polish and then retranslated back into English by a certified English translator whose native language is Polish. After repeating this forward-backward translation procedure three times some discrepancies identified by a group of three certified English translators were discussed jointly. This process was repeated until all discrepancies were eliminated. The final version of both questionnaire and instructions (Part B) were then supplemented with demographic data form design by the author (Part A). A research instrument obtained in such a way was then initially pilot tested by group of 12 academics from the Department of Finance and Business Accounting of Poznań University of Economics and Business. The pilot test suggested that the translation of the questionnaire is accurate as the preliminary results are similar to the ones obtained by R.K. Hurtt [2010] with Professional Auditors¹.

The complete questionnaire consists of two sections, Part A which collects the demographic data of the researched respondents further used as a control variables in the analysis, and Part B which collects data for hypotheses testing. In Part A the respondents were asked to provide the following information: age, gender, professional experience, course type they are actually following at the university (bachelor/master) and program field (accounting/management). It should be noted that the professional experience section consists of limited number of possible choices. Subjects could choose between no experience and experience in: Accounting firm/Accounting department, Auditing company, Financial department of a company, Other professional experience. The researched students were also asked to provide information about length of service (in years) if they have chosen any type of professional experience. Students were instructed to exclude any summer jobs, odd jobs and part-time jobs from their professional experience. To the section B of the questionnaire the data were collected with the use of six-point Likert scale for

¹ 6 out of 12 academics from the Accounting Department who agreed to take a part in the pilot test are actually certified Professional Auditors.

measuring the dependent variable. Students who agreed to take part in the research were asked to provide all the demographic data in the section A and mark answers to all the statements in section B.

4. Results and discussion

I received a total of 432 responses including: 146 questionnaires at the response rate 90% and 95 at the response rate 84% from undergraduate and graduate accounting students, respectively, and 84 questionnaires at the response rate 93% and 107 at the response rate 88% from undergraduate and graduate management students, respectively. The demographic details of surveyed subjects are reported in Table 1.

Table 1. Demographic data of the researched subjects

Demographic variables	1 st year undergraduate				2 nd year graduate				Total	
	Accounting students		Management students		Accounting students		Management students			
Gender	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Female	92	63.0	42	50.0	79	83.2	64	59.8	277	64.1
Male	54	37.0	42	50.0	16	16.8	43	40.2	155	35.9
Total	146	100	84	100	95	100	107	100	432	100
Age	<i>n</i>		<i>n</i>		<i>n</i>		<i>n</i>		<i>n</i>	
< 20	123	84.2	69	82.1	0	0.0	0	0.0	192	44.4
20	17	11.6	12	14.3	0	0.0	0	0.0	29	6.7
21	4	2.7	2	2.4	0	0.0	0	0.0	6	1.4
22	1	0.7	0	0.0	5	5.3	1	0.9	7	1.6
23	1	0.7	1	1.2	66	69.5	63	58.9	131	30.3
> 23	0	0.0	0	0.0	24	25.3	43	40.2	67	15.5
Total	146	100	84	100	95	100	107	100	432	100
Mean	19.2		19.1		23.2		23.6		21.1	
Stand. Dev.	0.7		0.8		0.6		0.9		2.3	
Professional experience	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
In accounting	2	1.4	1	1.2	41	43.2	3	2.8	47	10.9
In auditing	0	0.0	0	0.0	3	3.2	0	0.0	3	0.7
In other areas	30	20.5	21	25.0	30	31.6	82	76.6	163	37.7
No experience	114	78.1	62	73.8	21	22.1	22	20.6	219	50.7
Total	146	100	84	100	95	100	107	100	432	100

Source: own presentation.

Most of the researched subject (1st year undergraduate) were females (63.0%), at the age of 20 or younger (95.9%) with no work experience (78.1%). Similar characteristics were identified for the subjects representing control group, in which respondents consist in 50% of females, at the age of 20 or younger (96.4%) without work experience (73.8%). At both undergraduate groups approximately 1% claimed to have any professional experience in accounting or auditing. Final-year graduate accounting students were second researched group of subjects. It was highly dominated by females (83.2%), with most subjects of 23 years old or more (94.7%) having work experience (77.9%). The female dominance which occurred in this group is not unusual as about 90% of certified accountants in Poland are women [Masztalerz 2017]. It is also worth mentioning that about half (46.4%) of subjects from this group had professional experience in accounting or auditing. The control group was in contrast not so dominated by the females (59.8%), with most subjects being 23 years old or more (99.1%), and comparable share of subjects having work experience (79.4%). What makes control group subjects at final-year graduate level different from accounting students is that only few of them had any professional experience in accounting (2.8%).

The demographic variables such as gender, age, work experience (length and profile) were used as independent variables in the hypotheses robustness testing.

H1: University accounting programs do not shape significantly stronger ‘search for knowledge’ trait level in students (measured with HPSS) in comparison to the other programs in the field of economy.

In H1 I state that there is no statistically significant difference between students doing accounting programs and students doing other programs in the field of economy in change of ‘search for knowledge’ trait level measured with HPSS. The research results obtained are presented in the form of descriptive statistics and reported in Table 2.

Table 2. Descriptive statistics of ‘Search for Knowledge’ trait level measured with HPSS

H1	Accounting Students			Management Students			Significance		
	<i>n</i>	Mean Score	Stand. Dev.	<i>n</i>	Mean Score	Stand. Dev.	<i>t</i>	<i>p</i>	Hypothesis Test Result
1 st year undergraduate	143	24.0	5.1	83	24.8	4.6	1.18	1.97*	Confirmed
2 nd year graduate	95	24.3	5.1	107	22.9	4.8	2.01	1.97*	Rejected
Mean Score change	0.3			-1.9					
Mean Score change (%)	1.3			-7.7					

H1a	Accounting Students (standard)			Accounting Students (ACCA)			Significance		
Subjects and means	<i>n</i>	Mean Score	Stand. Dev.	<i>n</i>	Mean Score	Stand. Dev.	<i>t</i>	<i>p</i>	Hypothesis Test Result
1 st year undergraduate	143	24.0	5.1	143	24.0	5.1	–	–	–
2 nd year graduate	69	23.6	5.0	26	26.4	4.9	2.45	1.98*	Rejected
Mean Score change	–0.4			2.4					
Mean Score change (%)	–1.7			10.0					
H1b	Management Students			Accounting Students (ACCA)			Significance		
Subjects and means	<i>n</i>	Mean Score	Stand. Dev.	<i>n</i>	Mean Score	Stand. Dev.	<i>t</i>	<i>p</i>	Hypothesis Test Result
1 st year undergraduate	83	24.8	4.6	143	24.0	5.1	1.18	1.97*	Confirmed
2 nd year graduate	107	22.9	4.8	26	26.4	4.9	3.32	2.61**	Rejected
Mean Score change	–1.9			2.4					
Mean Score change (%)	–7.7			10.0					

*, ** Significant at $p < 0.05$ and $p < 0.01$, respectively (two-tailed).

Source: own presentation.

The mean scores achieved by first-year bachelor (undergraduate) accounting students and control group (management students) are statistically indifferent ($p < 0.05$). Table 2 shows also that in contrast to the expectation, the mean score of subjects at final year graduate level doing accounting program differs significantly ($p < 0.05$) from the mean score of the control group. The mean score of management students decreased within 4 years by 7.7% while this same mean has increased in researched subjects group. Initially it can be stated that accounting program has significant impact on relative change in ‘search for knowledge’ trait level compared to the control group. Therefore, we can acknowledge H1 to be preliminary confirmed.

H1a: University accounting programs accredited by external accounting association of professionals do not shape significantly stronger ‘search for knowledge’ trait level in students (measured with HPSS) in comparison to the standard academic accounting programs.

With the H1a I distinguish between students of two different master programs in accounting offered by Poznan University of Economics and Business. Similarly to H1

I predict that none of these have significant impact on the trait level change comparing one to another. It should be mentioned that as there is only one accounting program on the undergraduate level so both groups have equal initial mean score. Therefore, the hypothesis is confirmed if there is no statistically significant difference in mean scores of these two groups at final year graduate level.

Descriptive statistics reported in Table 2 show that H1a may be initially rejected as the mean score at final-year graduate level differs significantly ($p < 0.05$). It should be noted that students of ACCA accredited accounting program increased their initial mean score by 10.0% while their colleagues doing standard academic master program in accounting have decreased their mean level of 'search for knowledge' trait by -2.9%.

H1b: University accounting programs accredited by external accounting association of professionals do not shape significantly stronger 'search for knowledge' trait level in students (measured with HPSS) in comparison to the other programs in the field of economy.

Under H1b I expect that researched subjects doing accounting program accredited by ACCA has not changed their 'search for knowledge' trait level significantly when compared to the control group. As the mean scores of these two groups differ significantly ($p < 0.01$) at final year master level and are indifferent ($p < 0.05$) at first-year bachelor level, the hypothesis is not initially supported by the results.

In order to confirm the finding for H1, H1a and H1b, I performed robustness analysis which measures the impact of independent variables on the test results. Firstly, I analyzed whether the gender significantly affects the mean score of 'search for knowledge' trait level for both researched subjects and control group subjects.

H2: There is no statistically significant difference in mean level of 'search for knowledge' trait (measured with HPSS) between females and males in the researched groups and control groups.

Table 3. The impact of gender on H1, H1a and H1b

Subjects and means	Females			Males			Significance		
	<i>n</i>	Mean Score	Standard Deviation	<i>n</i>	Mean Score	Standard Deviation	<i>t</i>	<i>p</i>	Hypothesis Test Result
1 st year undergraduate	131	24.1	4.8	95	24.6	5.1	0.75	1.97*	Confirmed
2 nd year graduate	143	23.8	5.0	59	22.9	4.8	1.18	1.97*	Confirmed
Mean Score change	-0.3			-1.7					
Mean Score change (%)	-1.2			-6.9					

* Significant at $p < 0.05$ (two-tailed).

Source: own presentation.

Under H2 I expect that there is no impact of gender on the level of ‘search for knowledge’ trait measured with HPSS and in consequence the gender structure of researched groups does not affect significantly the test results of H1, H1a and H1b. The results reported in Table 3 show that the impact of gender on mean scores is insignificant ($p < 0.05$) both at first-year undergraduate level and final year graduate level. The obtained results support H2 and controlling for gender was unnecessary.

H3: There is no statistically significant difference in mean level of ‘search for knowledge’ trait (measured with HPSS) between groups of researched subjects with and without professional experience.

I measured the impact of work experience on the researched subjects ‘search for knowledge’ trait level measured with HPSS. Detailed statistics are reported in Table 4. In H3 I expect that such impact exist but it does not affect mean scores significantly. The results show that professional experience significantly ($p < 0.05$) affects the mean score for final year graduate students.

Table 4. The impact of professional experience on H1, H1a and H1b

Subjects and means	No experience			With experience			Significance		
	<i>n</i>	Mean Score	Standard Deviation	<i>n</i>	Mean Score	Standard Deviation	<i>t</i>	<i>p</i>	Hypothesis Test Result
1 st year undergraduate	172	24.2	4.8	54	24.7	5.4	0.60	1.98*	Confirmed
Accounting Dept./Office				3	21.0	6.1			
Auditing Firm									
Financial Department				5	28.4	8.5			
In Other Areas				46	24.5	5.0			
2 nd year graduate	43	22.1	4.4	159	24.0	5.0	2.23	1.97*	Rejected
Accounting Dept./Office				45	24.2	5.2			
Auditing Firm				3	30.0	4.0			
Financial Department				4	27.3	4.3			
In Other Areas				107	23.6	5.0			
Mean Score change	-2.1			-0.7					
Mean Score change (%)	-8.7			-2.8					

Source: own presentation.

Initial robustness analysis shows that the impact of the professional experience disappears when applied to both researched subjects group and control group separately, significant at ($p < 0.05$). Detailed results are presented in Table 4a.

Table 4a. The impact of professional experience on H1

Accounting students	No experience			With experience			Significance		
	<i>n</i>	Mean Score	Stand. Dev.	<i>n</i>	Mean Score	Stand. Dev.	<i>t</i>	<i>p</i>	Hypothesis Test Result
1 st year undergraduate	111	24.1	4.9	32	23.7	6.0	0.41	1.97	Confirmed
2 nd year graduate	21	23.3	4.0	74	24.6	5.3	1.07	1.98	Confirmed
Mean Score change	-0.8			1.0					
Mean Score change (%)	-3.3			4.1					
Management students	No experience			With experience			Significance		
	<i>n</i>	Mean Score	Stand. Dev.	<i>n</i>	Mean Score	Stand. Dev.	<i>t</i>	<i>p</i>	Hypothesis Test Result
1 st year undergraduate	61	24.3	4.7	22	26.0	4.0	1.55	1.97	Confirmed
2 nd year graduate	22	21	4.5	82	23.2	4.8	1.93	1.98	Confirmed
Mean Score change	-3.3			-2.8					
Mean Score change (%)	-13.6			-10.9					

Significant at $p < 0.05$ (two-tailed).

Source: own presentation.

As the impact of professional experience disappears within the researched subjects group and control group there is no need to continue controlling for this independent variable and performing further analyses with equalized professional experience structures. At this point it can be stated that results obtained for H3 supports the initial finding in H1, H1a and H1b.

H4: There is no statistically significant difference in mean level of ‘search for knowledge’ trait (measured with HPSS) between groups of researched subjects with the different length of professional experience.

The researched subjects were also asked to provide information on length of service (years). Under H4 I expect that this independent variable has no significant impact on ‘search for knowledge’ trait mean level for both accounting and management students groups. For this purpose I performed one-way ANOVA ($p < 0.05$) to test the significance of such impact. The mean scores of the researched subjects and control group subjects were divided into six sets with the respect to the length of service that subjects provided in a questionnaire. Each of six dependent variable sets was examined

for significant outliers using InterQuartile Range (IQR), tested for normality with Shapiro-Wilk ($p < 0.05$) and for homogeneity of variances with Levene's test ($p < 0.05$). The obtained results for all of the assumptions required for ANOVA showed that analysis of variances can be performed. The final findings show that the length of service does not significantly ($p < 0.05$) affect the level of questioning mind measured with HPSS in the researched subjects group and control group. This result supports the H4.

5. Conclusions

The main purpose for this paper was answering the question whether university programs in accounting has significantly stronger impact on students' 'search for knowledge' trait level change during 4 years of studying in comparison to the other academic programs in the field of economy. Both professional standards and literature indicate this trait to be essential for auditors but it is also justified to indicate its relevance for accountants and financial officers.

By examining changes of 'search for knowledge' trait mean levels during the 5-years of university education in accounting, this study helps to understand how different approaches to teaching the same content can impact the behavioral characteristics of graduates that are desired in their future jobs. The results indicate that standard academic program in accounting has statistically significant impact on the 'search for knowledge' trait level in students comparing to management program. However, the accounting students who followed the ACCA accredited program in accounting had significantly increased their mean score for this trait during their university education in comparison to both management students and accounting students (standard program). This finding may indicate that the teaching instruments and teaching methods may effectively shape the desire for searching new knowledge in students. It is worth underlining that the ACCA accredited program puts much more pressure on solving real life accounting problems.

The findings presented in the paper contribute not only to the accounting literature, but also have implications for academic education and practice. This study examines the possibility of efficient training 'search for knowledge' trait at the university level. The results show that with proper content, teaching methods, teaching instruments and greater emphasis on solving real-life accounting/auditing problems we may shape this trait significantly.

However, the study is subject to several limitations. It should be noted that this research is limited only to the concept of 'search for knowledge' defined by R.K. Hurtt [2010]. The results may be different for differently defined and measured trait. The questionnaire used in the surveying process was translated into Polish with procedures applied in the prior studies and with accurate precision. However, there still may exist some translation inefficiencies. It should also be mentioned that the study conducted at Poznan University of Economics and Business may provide results that are somehow

different for similar experimental research conducted at the other universities offering accounting programs. Therefore, future research should explore the notion of ‘search for knowledge’ trait in more detailed way as well as explore the methods of training for accounting students that have major impact on developing this trait.

Appendix

Dear students

We would like to ask your help in providing some data for a research project that is being implemented jointly by the staff members of Poznań University of Economics and Katowice University of Economics. For this purpose we have prepared a special questionnaire, which we want you to fill in. Of course, this is not obligatory. You can return the empty survey at any time, even now. There are no consequences for this. However, if you decide to spend 15–20 minutes of your time to help us, please take our survey seriously and give us honest and thoughtful answers. Surveys are anonymous and any information you enter will be used only for our research.

We thank all of you.

THE QUESTIONNAIRE

PART A

A. Your age (years)

B. Gender (K – female / M – male)

C. Nationality

Professional experience

D. (if you do not have any professional experience than leave the blanks empty)

Seniority (years)

I work in (mark the answer with X):

Accounting Department/Accounting Office

Auditing

Financial Department

none of the above

E. After graduation I would like to work as:

an Accountant

an Auditor

none of the above

F. I am currently (L – an undergraduate student, S – graduate student)

G. Your degree course (FiR – Finance and Accounting, I – other)

I.* As an undergraduate student my degree course was (FiR – Finance and Accounting, I – other)

* Only for graduate students

PART B

Before you start to fill in part B of the survey please read the instructions below:

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.

	strongly disagree						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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