

A Practical Exploration of the Reform of the Teaching Mode of Accounting Speciality in Applied Undergraduate Programmes under the 1+X Certificate Mode

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Abstract: This paper takes the series of surveys on "Comprehensive Nurturing Mode of Applied Undergraduate Accounting Majors under the 1+X Certificate System" conducted by School of Management Engineering, Guilin University in 2023 as the research samples, and empirically investigates the willingness of applied undergraduate accounting majors to participate in the 1+X examination and its influencing factors by using a mixed model. The results show that "lack of ability" and "lack of interest" are the difficulties that hinder the students' participation in 1+X examination, while "employment competitiveness" and "knowledge application ability" are the factors that affect the students' willingness to participate in 1+X examination. "Employment competitiveness" and "Knowledge application ability" are the motivation sources for accounting students of applied undergraduate program to participate in the 1+X examination. The research in this paper expands the research field of applied undergraduate accounting majors' participation in 1+X examination, and provides new ideas for applied undergraduate colleges and universities to pay attention to and guide students to improve their comprehensive ability by participating in 1+X examination.

Keywords: 1+X Certificate; Applied undergraduate program; Accounting; Reform of the teaching profession

1. Introduction

Applied undergraduate accounting professionals are an indispensable part of contemporary economic development [1]. And the continuous innovation of teaching mode in applied undergraduate colleges and universities helps college graduates to be well-prepared to cope with the ever-changing career demands in China. The 1+X certificate model has become an effective method to bridge the gap between academia and industry, and to improve students' practical skills and employability. This paper delves into the practical application of the 1+X certificate model in the teaching reform of the undergraduate accounting programme, revealing its strengths and challenges. The 1+X certificate model is a novel educational concept that combines a basic academic degree ("1") with a flexible and specialized vocational certificate ("X"). This approach combines higher education with industry needs and promotes skill acquisition and adaptability [2]. In terms of teaching accounting majors in applied undergraduate program, the 1+X model should not only equip students with theoretical knowledge, but also equip them with the practical abilities required by the modern job market. This paper analyses in-depth the changing situation of the accounting industry and the requirements for graduates to master diversified skills through a questionnaire survey of accounting majors in Guilin University.

2. Theoretical analysis and research hypothesis

2.1. Difficulties and Current Situation of Accounting Students' Participation in 1+X Examinations in Applied Undergraduate Program

Applied undergraduate accounting students have been facing a number of challenges in participating in the 1+X examination, mainly deficiencies in cognitive preparation and motivational orientation. These difficulties are prominently characterized by "lack of competence" and "lack of interest", which greatly

influence the current status of participation in the examination. "Lack of competence" refers to students' perceived inadequacy in grasping the key points and difficulties of accounting studies, which is emphasized by the fact that the 1+X examination requires students to have a comprehensive understanding of the underlying principles and their application in the real world. Accounting, as a complex subject, requires a nuanced grasp of numerical acuity, critical analysis and interpretive skills[3]. At the same time, "lack of interest" is a major obstacle to students' active participation in examinations. The academic pursuit of accounting requires students to have sustained curiosity and dedication, and this disinterest may stem from the fact that the exams are not aligned with the professional trajectory of the applied undergraduate programme. In addition, the survey also analyzed the possible impact of 'exam fees' and 'exam preparation time' on the 1+X exam. Based on this, the following hypotheses are proposed:

Hypothesis 1: Lack of ability inhibits the willingness of applied undergraduate accounting students to participate in 1+X examination

Hypothesis 2: Lack of interest inhibits the willingness of applied undergraduate accounting students to participate in the 1+X examination

Hypothesis 3: Examination fees are too high, which inhibits the willingness of accounting students in applied undergraduate program to participate in the 1+X examination.

Hypothesis 4: Insufficient preparation time for the examination inhibits the willingness of accounting students of applied undergraduate program to participate in the 1+X examination.

2.2. Analysis of the willingness of accounting students of applied undergraduate programmes to participate in the 1+X examination and the causes of their participation

Our study delves into the propensity of accounting students in applied undergraduate programmes to take the 1+X examination and elucidates the driving factors behind their participation. Through a comprehensive survey and in-depth interviews, we found that a significant proportion of students showed strong interest in the 1+X examination because it not only enhances their competitiveness in the job market, but also enriches their ability to synthesis their accounting knowledge and satisfies their intrinsic desire for personal challenge and growth. This investigation highlights the subtle interplay between students' motivations for taking the 1+X and emphasises the importance of tailoring educational provision to these multifaceted aspirations. Based on this, the paper proposes the following hypotheses:

Hypothesis 5: Employment competitiveness positively promotes the willingness of applied undergraduate accounting students to participate in 1+X examination

Hypothesis 6: Knowledge application ability positively promotes the willingness of applied undergraduate accounting majors to participate in 1+X examination.

Hypothesis 7: Social pressure positively promotes the willingness of accounting students in applied undergraduate programmes to participate in the 1+X examination.

3. Data collection and preliminary processing

The data in this paper comes from a series of surveys on "1+X Certificate System Integrated Nurturing Mode for Applied Undergraduate Accounting Majors under 1+X Certificate System" conducted by Guilin University of Management and Engineering in 2023, and combined with the demographic variables of the questionnaires to make the following statistics, out of 240 questionnaires issued, 221 valid questionnaires were recovered, and the validity rate of the questionnaires was 92.08%. Of the 240 questionnaires distributed, 221 valid questionnaires were collected, and the validity rate of the questionnaires was 92.08%. The report firstly conducts a reliability test on the 221 returned valid questionnaires, which cover the current stage of students' willingness to participate in the 1+X examination, factors prompting students to participate in the 1+X examination, and the mentality of preparing for the 1+X examination, etc., and then obtains the reform proposals and recommendations for the teaching mode of accounting majors of applied undergraduates under the 1+X certificate mode based on the questionnaire data.

4. Reliability analysis

4.1. Cronbach's alpha test

Table 1 shows the results of the reliability test of the questionnaire, the Cronbach's alpha coefficient of the questionnaire is 0.8596 for the 20 questions related to the measurement of the model, and the reliability of the questionnaire survey maintains a high level.

Table 1 Cronbach's alpha test

Cronbach's alpha test	Item Count	Sample Size
0.8596	20	221

4.2. Validity analysis

In this paper, we refer to the way of Rodríguez-Medina et al. (2020) to analyse the validity of the findings [4], Table 2 shows the validity test using KMO test and Bartlett's sphere test. The test results show that the modified KMO value of 0.857 meets the test criteria, and the significance p-value of 0.000 for the Bartlett's sphere test also meets the test criteria. Therefore, this paper will be further analysed based on the questionnaire.

Table 2 KMO and Bartlett's test

KMO Quantity of Sample Suitability		0.857
Bartlett's test of sphericity	approximate chi-square	1949.459
	Degrees of freedom	190
	Significance	0.000***

5. Empirical analysis

5.1. Descriptive statistics

The results of the descriptive analyses of the main variables in this report are shown in Table 3: The mean value of willingness to take exams in the sample data is 1.606, with a minimum value of 0 and a maximum value of 2, which indicates that the students in the sample data have a stronger willingness to take the 1+X exams. Other than that there is no significant gap between the measurements of other variables.

Table 3 Descriptive statistics

variable	N	mean	min	max	p50	sd	variance
Willingness to take exams	221	1.606	0	2	2	0.716	0.513
Fee	221	0.425	0	1	0	0.496	0.246
Interest	221	0.262	0	1	0	0.441	0.194
Time	221	0.593	0	1	1	0.492	0.242
Abilities	221	0.403	0	1	0	0.492	0.242
Competitiveness in employment	221	3.814	1	5	4	1.060	1.125
Ability to apply knowledge	221	3.855	1	5	4	1.012	1.024
Social Pressure	221	3.167	1	5	3	1.150	1.322

5.2. Benchmark Regression

5.2.1. An Empirical Analysis of the Difficulties and Current Situation of Accounting Students' Participation in 1+X Examinations in Applied Undergraduate Program

In this paper, we conducted a benchmark regression of the variables on the difficulties and status of the 1+X examination for accounting students of applied undergraduate program. Columns (1), (2), (3), and (4) in Table 4 of the benchmark regression regress the willingness to take the examination on the interest, ability, cost, and time, respectively, in which the effect of interest on the willingness to take the examination is negatively significant at the level of 1%, and that of ability on the willingness to take the

examination is negatively significant at the level of 10%. The effect of interest on willingness to take the exam is negatively significant at the 1% level, and the effect of ability on willingness to take the exam is negatively significant at the 10% level, suggesting that the difficulties faced by applied undergraduate accounting students in participating effectively in the 1+X exams are rooted in the challenges of "lack of ability" and "lack of interest". The two non-significant factors of "high cost" and "lack of time" indicate that the cost of the examination and the preparation time do not hinder the willingness of accounting students in applied undergraduate program to take the examination. "Lack of ability" and "lack of interest" prevented applied accounting students from actively preparing for the examination.

Table 4 Benchmark regression of difficulties and status of participation in 1+X exams for accounting students in applied undergraduate program

	(1) Willingness to take exams	(2) Willingness to take exams	(3) Willingness to take exams	(4) Willingness to take exams
Interest	-0.308*** (-2.858)			
Abilities		-0.169* (-1.725)		
Fee			0.074 (0.760)	
Time				0.104 (1.066)
_cons	1.687*** (30.574)	1.674*** (26.990)	1.575*** (24.766)	1.544*** (20.473)
N	221.000	221.000	221.000	221.000
r ² a	0.032	0.009	-0.002	0.001

t statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

5.2.2. Analysis of the willingness of accounting students of applied undergraduate programmes to participate in the 1+X examination and the causes of their participation

In this paper, we conduct a benchmark regression on the variables regarding the willingness of accounting students of applied undergraduate program to participate in 1+X examination and its causes. Columns (1), (2), (3) and (4) in Table 5 of the benchmark regression regress the willingness to participate in 1+X examination on the competitiveness of employment, the ability to use knowledge and the pressure of society respectively. The effect of both employment competitiveness and knowledge application ability on examination intention is significant at 1% level, which indicates that the motivation of accounting students in applied undergraduate program to participate in 1+X examination effectively lies in "improving employment competitiveness" and "knowledge application ability". The effect of "social pressure" is not significant, which means that "social pressure" does not hinder the willingness of accounting students of applied undergraduate program to take the examination.

Table 5 Benchmark regression on the willingness and causes of participation in 1+X exams for accounting students in applied undergraduate program

	(1) Willingness to take exams	(2) Willingness to take exams	(3) Willingness to take exams
Competitiveness in employment	0.210*** (4.834)		
Ability to apply knowledge		0.215*** (4.716)	
Social Pressure			0.012 (0.291)
_cons	0.807*** (4.700)	0.778*** (4.289)	1.567*** (11.061)
N	221.000	221.000	221.000
r ² a	0.092	0.088	-0.004

t statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

6. Conclusions

The 1+X certificate model provides an effective path for undergraduate accounting education reform that bridges the gap between theory and practice. The case study of Guilin University shows that actively promoting the reform and practice of the 1+X certificate model is conducive to improving the employability of graduates and fostering close collaboration between academia and industry. Although challenges remain, positive outcomes highlight the potential of the 1+X certificate model to create a more skilled and adaptable workforce.

The two main challenges for accounting students in applied undergraduate programmes to participate in the 1+X examination are "lack of competence" and "lack of interest". To improve this situation, we must start from various aspects. Applied undergraduate colleges and universities can consider implementing targeted preparation modules to address students' basic knowledge gaps and provide them with a strong platform to improve their competence. In addition, infusing the exams with real-world relevance and making them more relevant to students' professional aspirations can re-energise their interest and motivation. Ultimately, the synergy between enhanced teaching and learning strategies in applied undergraduate colleges and universities and a more relevant exam framework has the potential to remedy existing engagement challenges and create a more favourable environment for applied undergraduate accounting students.

The main reasons for students' willingness to participate in the 1+X examination are "to enhance their competitiveness in employment" and "to improve their ability to apply knowledge". The first factor that drives students to participate in the 1+X examination is the deep understanding of the competitive nature of the contemporary job market. In a world characterised by rapid technological advancement and globalisation, companies are looking for applied accountants who can combine theoretical knowledge with practical skills. An academic degree alone is no longer enough to stand out in the competitive employment environment. The 1+X examination not only certifies students' professional skills, but also helps them to enhance their practical ability to apply their knowledge of accounting in an integrated manner in the workplace. The certificate not only increases employment prospects, but also improves students' ability to integrate accounting theory with practice, helping to cultivate applied accounting talents.

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