

An Analysis of Influencing Factors of "1+X" Certificate in Private Higher Vocational Colleges

Pu Xian¹, Geng Shuai^{2, a, *}

¹Chengdu Ginkgo Hotel Management College

¹Sichuan National College China, Sichuan, Chengdu China, Sichuan, Ganzi

^a879506799@qq.com

*Corresponding author

Keywords: Quality Colleges and Universities, "1+X" Certificate, Factor Analysis

Abstract: In January 2019, the implementation plan of the national vocational education reform proposed that higher vocational colleges launch the "1+X" certificate system trial; the implementation of the 1+X certificate system is not only an important deployment of the national vocational education reform implementation program, but also an important system innovation to implement the establishment of moral education, improve the vocational education and training system, deepen the integration of industry and education cooperation between schools and enterprises, is the internal echo and logical root of vocational education reform [11]. This paper analyzes the influencing factors of "1+ X" certificate in private vocational colleges by means of literature method, questionnaire method and mathematical statistics method, and then completes the matrix by Kaiser standardized orthogonal rotation method, classifies 35 influencing factors into 7 kinds of factors, and names them as: government factor, school factor, economic factor, teaching factor, social influence factor, off-campus environment factor and on-campus practice factor: (1) part of school leaders teach to the national duty to reform the implementation plan explanation not to be deep, with from, school own construction is blindly bad. (2) students and the guardian not too understood to the national policy that, also has not looked for the own localization. (3) teacher troops and specialized construction lag, student's ability and level and enterprise demand not symbol. (4) extracurricular training organizations are chaotic, training ability and the level are insufficient, the school inside and outside practises really teaches the base construction not to arrive, and proposed the corresponding suggestion, the aim for further consummates our country vocational education reform, the effective advancement "1+X" the certificate implementation provides the theory basis.

1. Introduction

Enters the recent development phase along with our country, the advance in technology and the industrial structure adjustment, as well as labor market change and so on factors, the industrial promotion and the readjustment of the economic structure speed up unceasingly, all the various trades and occupations are more and more urgent to the technical skill talented person's demand, the vocational education important status and the function more and more highlights. The vocational education shoulders is raising the high quality worker this arduous history heavy responsibility, is the comprehensive advancement education for all-around development, improves all the people quality to strengthen the comprehensive national strength the important strength, the vocational education is facing the stern challenge [1]. Therefore, in January, 2019, State Council about prints and distributes the national vocational education reform implementation plan the notice, the country issues the (2019) 4 number document. The our country vocational education from the consummation country vocational education institutional framework, the construction vocational education national standards, the promotion will produce teaches to fuse the school business "the binary cell" to nurture the human, the construction multi-dimensional school pattern, the consummation technical skill

talented person safeguards the policy, the enhancement vocational education school quality direction appraisal, completes the reform organization to implement works 7 aspects to carry on the comprehensive reform, the start “1+X” the certificate experiment site plan. That, how found in the implementation process each kind of influence factor, how is treating firmly deals with the issue which in the good implementation process each kind of relations and contradictory are urgently await to be solved.

2. Objects of study

Sichuan, Yunnan, Guizhou, Guangxi, Beijing, Hunan, Shandong, Henan, Guangdong and so on 9 provinces and cities 12 managed by the people professional colleges and universities.

3. Research techniques

3.1 Literature material law

First, through hundred degrees searches “national vocational education reform implementation plan”, and earnest explanation. Next, knows the net through China, take “1+X” the certificate as the key word, consults our country occupation reform about “1+X” the certificate aspect article, altogether has 201, passes through reads repeatedly and carefully examines earnestly, finally determined 12 literature materials take the reference.

3.2 Questionnaire survey procedures

(1) Questionnaire recovery mode: The questionnaire design content mainly is our country managed by the people quality colleges and universities “1+X” the certificate influence factor aspect questionnaire; The questionnaire relates the specially good teacher by myself or with myself, uses provides on the scene, on the scene recycles promptly the way, provides the object for Sichuan, Yunnan, Guizhou, Guangxi, Beijing, Hunan, Shandong, Henan, Guangdong and so on 9 provinces and cities 12 managed by the people professional colleges and universities leaders, the teacher, the student and various provinces and cities partial enterprises, the club and so on. Altogether provides questionnaire 220, recycles 220, the returns-ratio is 91.67%, in which effective questionnaire 200, the effective returns-ratio is 90.90%; The questionnaire design according to "Sports Survey Appraisal" the validity theory and "Society Research technique" the concept operation method, carries on the summary type to the investigation basic content to draw up with the revision, and carries on the letter and the validity examination, finally again definite summary directory lists.

(2) Questionnaire letter examination: In order to enhance the questionnaire the reliability, uses retests the law, two investigations is separated 1 is a week. Extracted part of objects from the first investigation object to carry on two times to retest, then carried on the relevant analysis to two test data result, retested correlation coefficient $R=0.856$, $P=0.000 < 0.001$, This result had achieved the sports surveying requests the standard, the questionnaire has the high reliability.

(3) Questionnaire validity examination: The questionnaire and has the many year teaching experience vice-high title above teacher after 12 school experts to verify the appraisal to implement, its result, the questionnaire design conforms to the test requirement completely. Sees the expert validity check table 1:

Table.1. Questionnaire validity examination situation table

	Title		Appraisal degree			The questionnaire receives, sends the situation	
	Professor	Associate professor	Effective	Basic effective	Invalid	Provide number of copies	Recycling number of copies
Quantity	18	12	28	2	0	30	30

3.3 Mathematical methods of average

All investigation data uses SPSS22.0, carries on the reorganization and the statistics to the data, obtains the influence “1+X” the certificate influence factor.

3.4 Logical analytic methods

Carry on the logic analysis to the consult correlation data and the statistical result principal components.

4. Results and analysis

4.1 Quality colleges and universities “1+X” certificate system connotation

“1+X” the certificate” in the system 1 and X is two relatively independent parts, both has the general character and to have its respective particularity, “1+X” the certificate system connotation is based on the quality safeguard mechanism and the achievement guidance principle, its implementation is allows temporary credit through the book card with the school grades recognized, the accumulation and the transformation realize the school record education and professional skill training recognize mutually with the engagement process. “1” is the educational certificate, in take trains the technical guidance talented person as in the standard quality colleges and universities, the educational certificate is the student accepts in the school educates and achieves the qualified standard the proof, also is the student sustainable development foundation. “X” namely each kind of type professional skill rank certificate, it is the student in the specialized scope the technical intelligence proof [4]. “1+X” the certificate is the educational certificate + certain professional skill rank certificate, the professional skill rank certificate divides into primarily, intermediate, high-level [12], is the professional skill level certificate, reflected the occupation activity and the professional profession development needs personally synthesizing capacity. Certain professional skill certificate namely X certificate, is refers to the certificate winner to have is engaged in some post (group) the ability request necessary knowledge and the skill horizontal rank proof [2].

4.2 Managed by the people quality colleges and universities “1+X” certificate influence factor

In knew in the foundation through hundred degrees with China which the net consult “1+X” the certificate correlation literature material and the partial universities and the education profession experts exchanged to determine 35 targets, like Table 2.

Table.2. Affects the managed by the people university “1+X” the certificate factor target

Serial number	Target	Serial number	Target
X1	The student accepts ability	X19	Teacher specialized ability
X2	The teacher accepts ability	X20	Student theoretical level
X3	School leader viewpoint	X21	Teacher theoretical level
X4	Various branches lead the viewpoint	X22	Specialized establishment
X5	Head of undertaking viewpoint	X23	Curriculum
X6	The enterprise is in charge of or manager the viewpoint	X24	In the school practises, really teaches the location
X7	The enterprise staffs accept ability	X25	The extracurricular practice, really teaches the location
X8	The guardian accepts ability	X26	Teacher title
X9	National policy	X27	Teacher quantity sufficient degree
X10	School condition	X28	The teacher originates the sole degree
X11	Skill training organization standard	X29	Enterprise teacher specialized ability
X12	Training expense reason	X30	Enterprise teacher theoretical level
X13	Training organization condition	X31	In school skill training
X14	Training level	X32	Extracurricular skill training
X15	Government investment	X33	School policy
X16	School investment	X34	Extracurricular teacher intelligence
X17	Teacher school record	X35	Training organization quantity approval
X18	Student specialized ability		

Carries on five levels of grading to the questionnaire with the sports survey appraisal theory, uses MIXIM the LIKELI-HOOD law to carry on KMO and the Bartlett ball examination to the data, its result like table 3.

Table.3. KMO and Bartlett ball examination

Target	Value
Kaiser-Meyer-Olkin Examination	0.868
Bartlett Sphericity examination	9004.677
df	595
sig	0.000

KMO value available in sample enough measure, according to statistics request, the KMO value is closer 1, more has the significance, the factor analysis effect is better. When KMO value as slightly as certain value, in statistics was considered may not accept. This research KMO value is 0.868, explained the sample enough is big, the examination significance probability is 0.000, therefore, suits completely in the factor analysis.

Through to 35 target correlation analyses, has obtained between various targets correlation coefficient and the correlation matrix and by the characteristic value, the technical progress factor and the accumulation technical progress factor in the factor analysis foundation. If Table 4.

Table.4. Explanation population variance

Ingredient	Initial characteristic value ^a			The extraction sum of squares writes down			Rotation squared and loading		
	Sum total	Technical progress factor	Accumulation technical progress factor	Sum total	Technical progress factor	Accumulation technical progress factor	Total	% of the variance	Cumulative %
1	14.305	42.699	42.699	14.305	42.699	42.699	10.872	32.454	32.454
2	3.753	11.203	53.902	3.753	11.203	53.902	5.468	16.321	48.774
3	3.268	9.755	63.657	3.268	9.755	63.657	2.865	8.553	57.327
4	2.416	7.211	70.869	2.416	7.211	70.869	2.877	8.587	65.914
5	1.539	4.593	75.462	1.539	4.593	75.462	2.453	7.321	73.235
6	1.514	4.519	79.981	1.514	4.519	79.981	1.782	5.319	78.554
7	1.147	3.424	83.404	1.147	3.424	83.404	1.625	4.85	83.404

May see from Table 4, when covariance matrix, initial characteristic value in entire primitive Xie Hezhong in sign scale division solution same, the showing characteristic value quite is stable, the analysis effect is good. Withdraws with the principal components analytic method 35 factors 7 ingredients, again completes the matrix through the Kaiser standardization orthogonal rotation method, like Table 5.

Table.5. Ingredient transformation matrix

Ingredient	1	2	3	4	5	6	7
1	.835	.488	.025	.085	.233	-.009	.053
2	-.051	-.179	.686	.606	.306	.008	-.183
3	-.501	.705	-.213	.307	.228	.240	.056
4	-.058	.150	.551	-.557	.025	.580	.155
5	-.165	-.012	.018	-.425	.759	-.463	-.030
6	.017	-.246	-.068	.193	.183	.060	.927
7	-.136	.387	.418	-.059	-.436	-.623	.274

Extraction method: Principal components analytic method.

Rotation method: Has the Kaiser standardization orthogonal rotation method.

Table.6. Affects the managed by the people university “1+X” the certificate factor factor analysis orthogonal array

	C1	C2	C3	C4	C5	C6	C7
X19	.927						
X34	.904						
X11	.895						
X18	.831						
X35	.818						
X14	.802						
X25	.790						
X20	.776						
X29	.769						
X23	.759						
X30	.718						
X26	.636						
X27	.632						
X22	.592						
X12	.559						
X21	.404						
X16		.840					
X13		.826					
X24		.660					
X28		.634					
X33		.622					
X6		.442					
X3			.947				
X10			.626				
X8			.567				
X31			.492				
X4				.871			
X5				.832			
X17				.460			
X9				.433			
X7					.850		
X15					.370		
X2						.800	
X32						.469	
X1							.866

According to Table 4 and Table 6, obtains the influence “1+X” the certificate 7 main factors, the basis intrinsic characteristic carries on the factor heavy naming (to see Table 7).

Table.7. Factor naming detailed listing table

Factor name	Referring to Sign
C1 Government factor	X9 National policy
	X15 Government investment
	X11 Skill training organization standard
	X12 Training expense reason
	X10 School condition

	X13 Training organization condition
	X14 Training level
	X35 Training organization quantity approval
C2 School factor	X3 School leader viewpoint
	X4 Various branches lead the viewpoint
	X16 School investment
	X22 Specialized establishment
	X23 Curriculum
	X33 School policy
	X27 Teacher quantity sufficient degree
	X28 The teacher originates the sole degree
	X31 In school skill training
C3 Economical factor	X1 The student accepts ability (economy)
	X2 The teacher accepts ability (economy)
	X5 Head of undertaking viewpoint (economy)
	X6 The enterprise is in charge of or manager the viewpoint (economy)
	X7 The enterprise staffs accept ability (economy)
	X8 The guardian accepts ability (economy)
C4 Teaching factor	X17 Teacher school record
	X19 Teacher specialized ability
	X21 Teacher theoretical level
	X26 Teacher title
	X30 Enterprise teacher theoretical level
	X29 Enterprise teacher specialized ability
C5 Social influence factor	X34 Extracurricular teacher intelligence
	X18 Student specialized ability
	X20 Student theoretical level
C6 Extracurricular environment factor	X25 The extracurricular practice, really teaches the location
	X32 Extracurricular skill training
C7 In the school practices the factor	X24 In the school practises, really teaches the location

Table 7 demonstrations, after the process factor analysis, 35 influence factor target is converged 7 kind of factors, through the factor naming, the C1-C7 factor distinction naming is: The government factor, the school factor, the economical factor, the teaching factor, in the social influence factor, the extracurricular environment factor and the school practice the factor.

The factor analysis result showed that, the government factor mainly is in February, 2019, the State Council prints and distributes "National Vocational education Reform Implementation Plan", each managed by the people colleges and universities have referred to the execution one after another, and started "1+X" the certificate system. "1+X" the certificate system work is a systems engineering, including cultivation training appraisal organization, the development professional skill rank certificate, integrates the professional to raise, to implement high grade occupation training, the strict professional skill equal inspection and the certificate provide, the exploration vocational

education country “the school grades bank”, the establishment perfect management by supervision and serves contents and so on mechanism [13]. The reform is in the experiment site and the exploration stage, the government to the managed by the people colleges and universities investment relative few; The investigation discovered, while “plan” the implementation, one has the minority school school condition to be crude, cannot first complete the school record education truly, but is blindly with from; Two is the skill training organization is chaotic, trains not standard, the certificate and the skill symbol, the charge is not disorderly, the training level misses extremely simply does not even train sells phenomena directly and so on card, the training organization misses extremely in society influence, taught to our country duty to reform has had the serious influence.

May see from the school factor, the managed by the people colleges and universities trustee, carries out chief to various medium echelon cadre, right “plan” the realization appears extremely positively. But in the implementation, as a result of each kind of factor, adds it the understanding not to arrive to “the plan”, in turn has hindered “the plan” smooth implementation. The trustee and chief for guarantee certain benefit, the school have not accounted for the very great proportion for the policy to the investment, the specialized construction and the curriculum cannot follow, teacher quantity, the quality and study the reason structure is bad; Is not willing to put in X certificate the society to train the organization, but is trains the organization please to enter the campus, by the school unification management or the control, guaranteed the school the income, has created certain difficulty for X certificate gain. Therefore, the school must transform the idea, the enlarge investment, the change method, promotes the teacher to implement the high gold content certificate training teaching ability. The compaction training curriculum development and the implementation responsibility, “X” the certificate training curriculum must invest the special fund to carry on the key development, regarding undertakes “X” the certificate training teaching teacher to have to implement the level-to-level administration and the necessary reward, the certificate system experiment site unifies the teacher individual development with “1+X”, opens new channel which the teacher promotes [9].

The economical factor indicated, all head of undertaking, in order to obtain the achievement, creates a higher economic efficiency for the enterprise, to the enterprise, professional skill certificate training is a very good platform; Say to the general salariat and the student and the guardian, not only X certificate had the tremendous economical pressure to them, the society has trained the organization each kind of chaotic elephant is for needs to gain the skill rank certificate student, the guardian and the social personnel has created the economical pressure, simultaneously returned to give back to them to increase the pressure, the skill certificate has been unworthy of the name.

The teaching factor demonstrated that, the managed by the people quality colleges and universities teacher's title is generally low, mostly is the graduate student school record, the youth oriented, the theoretical level is low, lacks the teaching experience and really holds ability, double Shi Xing the teacher are few; Enterprise teachers or coach actual operation ability compared to school teacher, but other various aspects compare the school teacher to be bad. “1+X” the certificate system biggest luminescent spot lies in “X” the diversities of possibility, can adapt the different level demand quality student, simultaneously meets the different profession choosing a person for a job need multi-level, the educational certificate is the skill certificate foundation, rams the sustainable development foundation at the same time, was admitted to a school positively many kind of professional skill rank certificate, can develop the student to get employed truly the imbark ability [3].

The social influence factor, the extracurricular teacher intelligence is refers to the skill rank training organization teacher's school record, the title, the specialty and the theoretical level and so on, the investigation indicated that, the society trains the organization teacher besides the specialized ability strong, other aspects quite are all bad, student's specialized ability and the skill level cannot obtain the guarantee, this gave the skill certificate the gold content to give the very big discount; The 1+X certificate system implementation needs to carry out the method coordination correspondingly, specially course content and certificate engagement [4].

The extracurricular environment factor including extracurricular really teaches, the practice and the extracurricular skill trains two factors, the investigation result indicated that, can receive extracurricularly really teaches the practice enterprise to be many, but the insufficient standard, can unify the board and lodging the enterprise to be few, can give really teaches the practice student the treatment to be irregular, each province all appears has the student to appeal the education department because of the treatment question the phenomenon; The skill training organization condition, the quality are generally bad, the inadequate system, collects fees the phenomenon to be serious randomly.

Trains the factor from the school to be possible to see, the school trustee, chief or some functional departments, for the school through student skill training, gain certain economic efficiency, the request all training project, must through the school unification management, train the enterprise the personnel please to enter the school, by the school unification control funds and the management, trains the personnel not to be willing with the school coordination, in the school to train the teacher extremely to be quite scarce, even school basic on non-training intelligence and ability; The student gains the professional skill certificate way to receive limits, difficulty increase.

5. Conclusions and suggestion

5.1 Conclusions

(1) Part of school leaders teach to the national duty to reform the implementation plan explanation not to be deep, with from, school own construction is blindly bad.

(2) Students and the guardian not too understood to the national policy that, also has not looked for the own localization.

(3) Teacher troops and specialized construction lag, student's ability and level and enterprise demand not symbol.

(4) Extracurricular training organizations are chaotic, training ability and the level are insufficient, the school inside and outside practises really teaches the base construction not to arrive.

5.2 Suggestions

(1) Various professional university must strengthen the infrastructure construction, the thorough explanation “the implementation plan”, the formulation consummation correlation mechanism, the realization correlation policy, the construction new personnel training system, the enhancement “versatile” the teacher troop constructs, and in the enhancement school record and in the rank test content research foundation, guides the teacher to pay attention highly gives the curriculum the profession trend of development, thus for curriculum validity and usable promotion ramming foundation; Establishes the corresponding training base, promotes student's practice ability, enables its to adapt the market and the profession need as soon as possible, lays the solid foundation for the more skilled craftsman's appearance [5].

(2) Our country occupation training organization quite many, but carries out training generally primarily, little involves the standard making and the management; The related government department should enlarge to the society trains the organization management dynamics, carries on the standard from the training quality and the expense, the strict terminal surveillance law enforcement, controls quantity strictly, helps the object of special care, holds big, holds, the guarantee training quality and the student ability level [6];

(3) Strengthens the teacher troop to construct, enhances double Shi Xing the teacher proportion, the enhancement curriculum system reform, the perfect personnel training plan, sets up one batch of high level specialized training teacher team [11]; The correct advancement “1+X” the certificate system, pays great attention to the student synthesizing capacity the raise, causes the student during gain educational certificate, positively studies, was admitted to a school each kind of professional skill rank certificate, the foothold “1” the school record foundation, the prompt supplement, develops the student “X” the skill, the desired effect which the realization quality student raises [7].

(4) Establishments reasonable “1+X” the certificate system, inside and outside the enhancement school practises really teaches the base to construct [8], constructs one batch to conform to the professional qualifications authentication requirement to imitate high really teaches the base, develops one batch of high grade training curriculum teaching resources [11]. Positively with the enterprise and the extracurricular training organization sychromesh, the bridge which the construction theory and the practice unifies, lets the student internalize truly with the grasping knowledge [10].

References

- [1] State Council about prints and distributes the national vocational education reform implementation plan the notice, the country sends the (2019) 4 number.
- [2] Chu Yijing. The vocational education “the 1+X certificate” the system implementation way studies [the J]. Wuhan Transportation Professional Institute journal, 2019, 2103: 42-45.
- [3] Mao Shaohua. The professional colleges and universities implementation “1+X” the certificate system realistic difficult position and should to the strategy [J/OL]. Present age vocational education: 1-7 [2020-02-01]. <https://doi.org/10.16851/j.cnki.51-1728/g4.20200115.013>.
- [4] Feng Songsong. The quality colleges and universities implement the 1+X certificate system the significance, the question and the strategy search analyze [the J]. Henan to educate (duty to become teach), 2019, 12: 53-54+57.
- [5] Chen Chunlin. Discussed shallowly the managed by the people quality colleges and universities “1+X” certificate system implementation strategy [J]. Hubei opens the professional institute journal, 2019, 3224: 57-58.
- [6] Zeng Hui Ting, Xie Guangyuan. The quality “1+X” the certificate system superiority studies [the J]. Taiyuan City Professional Technology Institute journal, 2019, 10: 101-103.
- [7] Qiu under the mist. 1+X certificate system the student synthesizes the quality promotion way to search analyzes [the J]. Taiyuan City Professional Technology Institute journal, 2019, 10: 106-108.
- [8] Sun Shanxue. Several know the J. China [vocational-technical education] to the 1+X certificate system, 2019, 07: 72-76.
- [9] Wears bravely, opens zheng, Guo fine jade. The professional colleges and universities implement the 1+X certificate system the mentality and the action [J]. China vocational-technical education, 2019, 10: 29-32.
- [10] Tan Joy. “1+X” the certificate system influence analyzes [the J]. Science and technology economy to lead the publication, 2019, 2717: 178+155.
- [11] Divination natural, Huang Fei. The professional colleges and universities advance the 1+X certificate system experiment site work effectively the mentality and the way [J/OL]. Anhui business professional technology institute journal (the social sciences version): 1-3 [2020-02-01]. <https://doi.org/10.13685/j.cnki.abc.000448>.
- [12] Qin Yadong. “Teaches 20 based on the duty” certificate system ponder J. Heilongjiang to educate (theory and practice) to “1+X”, 2019, 09: 34-36.
- [13] Cheng Shutong. 1+X certificate system work idea, mentality, difficult and countermeasure [J]. education and occupation, 2019, 22: 25-30.