



The Empirical Study on English Teaching Mode of Higher Vocational Colleges Focused on Professional English Ability Training

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Abstract. Vocational college English teaching shall focus on professional English ability training so as to comprehensively promote students' language skills, subject accomplishment and innovation ability. It is found through questionnaire made under the guidance of professional English ability contents, survey on the professional English ability of our graduates in different work posts and independent sample T test by software spss 11.0 (The software name originally stood for Statistical Package for the Social Sciences, reflecting the original market, although the software is now popular in other fields as well, including the health sciences and marketing. SPSS is a widely used program for statistical analysis in social science. It is also used by market researchers, health researchers, survey companies, government, education researchers, marketing organizations, data miners, and others.). There is no significant differences in professional English ability for gender and profession, while graduates from different majors show significant differences in professional English ability for being class leaders or not, internship experience and industries they work in. Our graduates are not confident enough on their professional English ability, not good at oral expression and they all believe professional English ability directly affect the development of their future career. Therefore, in English teaching of higher vocational colleges based on professional English ability training, we need to bring vocational education theory throughout the whole teaching process and learning content, pay attention to students' differences, improve teachers' informatization capacity and teaching effectiveness in class, adopt flexible and multiple assessment methods and create a teaching system where English could well integrate with other fields.

Keywords: Professional English · Vocational ability · Teaching mode
Empirical study

With China's implementation of "The Belt and Road", domestic enterprises, related countries, regions as well as the whole world has been highly connected, and English has become the major media for international affairs and communications. Vocational education holds the important mission of serving the regional economic development, therefore, vocational English teaching mode featured in "taking employment as the orientation, ability as the standard and having vocational characteristics" has been the inevitable requirement for the international political, economic and social development. It will be the core part for vocational colleges' talents cultivation to comprehensively promote students' language skills, subject achievement and innovation ability and foster graduates with higher vocational English ability. English teaching of higher vocational colleges focused on professional English ability training will improve the employment competitiveness of vocational college graduates and meet the increasingly internationalized post requirement. Scientific guidance is provided for the vocational English teaching reform in our college though the empirical studies on professional English ability of graduates from different majors.

1 Connotation of Professional English Ability

The connotation of professional English ability is derived from vocational ability. Both behavioristic psychology and cognitive psychology have given the explanations to professional ability, where the former emphasizes solely on the students' ability of finishing specific, operable and measurable tasks while ignoring other ability related to vocational activities that can be tested yet invisible (Ye et al. 1996); and the latter ignores the practical requirement of vocational ability that knowledge does not simply equal to ability. Some scholars hold the view that "ability includes talent, method and cognition that people shall learn and use the whole life". The vocational ability discussed now is comprehensive ability, no longer limited to work post. Ability could be classified according to the content as the following three kinds: (i) professional ability, which is professional skills and the ability the practitioner needs to fit the work post. It needs professional post knowledge, practical operating ability and the ability to use and promote new materials, processes, techniques and equipment; (ii) methodological ability, which includes the ability to collect, process and sort materials, ability of writing communication and summary, ability to make plans and organize activities as well as the reverse and conversion thinking ability; (iii) social ability (Reschly & Gresham), which needs to be summarized from others, individual and task. Jiang Dayuan, Chinese scholar, believes that vocational ability consists of the ability of profession, strategy and social contact. Ability of profession refer to the relevant professional skill, theoretical system and related skills; while ability of strategy refer to the skills of handling businesses and the attitude of drawing experience during work, and ability of social contact refer to the communication skills of participating in relevant business occasions and the combination with the public during work (Jiang 2008).

To sum up, vocational ability includes professional skills and related skills apart from professional skills. The former includes stable and unique technical ability related to major and future career, while the latter refers to all other ability for the career apart

from those skills mentioned above, which include self-learning ability, language communication skills, social communication skills, collective responsibilities and so on. Therefore, vocational English ability of vocational students include professional accomplishment skill, language ability, technical skill and innovation ability, that is to say students need to have good language skills, technical skills as well as rich professional accomplishment and could use language to solve professional problems and master technical skills.

2 The Empirical Investigation of Our Graduates' Job Market Based on Professional English Ability

2.1 Objects, Methods and Contents

This study made sampling questionnaire survey of the graduates of 2014, 2015 and 2016 from departments of Civil Air Transportation, Tourism and Hotel, Marine Engineering and Electromechanical Engineering of our college, with the connotation of professional English ability as the survey content. The questionnaires were given to the graduation and collected for analysis through spss 11.0. 260 valid questionnaires have been collected, on which the individual information include gender, class leader or not, internship experience or not, major, industry and so on. We had a preliminary understanding of the objects by data sorting to ensure the samples are highly representative, which could reflect the actual English teaching condition of our students so as to provide references to the English teaching reform of our college.

According to the investigated data, 39.6% of the objects are male, while 60.4% are female. The number of students who are class leaders takes up about half of the objects, which is 50.8%. 93.8% of the objects are with internship experience, which takes up the largest percentage. Besides, 109 of all investigators are majoring in Civil Air Transportation, taking up 41.9% of the whole objects, while 46.5% are majoring in Tourism and Hotel, 1.2% are majoring in Electromechanical Engineering and 10.4% are others. Judging from industries we can see that 36.9% investigators work on civil air transportation, followed by those work on tourism and hotel and other industries, which takes up 36.2% and 16.5% respectively; but those work on electromechanical engineering only take up 4%. From the frequency distribution table of personal information of those investigators we can see that the samples are quite representative since they have covered classes leaders or not, internship or not, all majors and all industries.

2.2 Index Difference Analysis

Gender Difference: After comparing the professional English ability difference of male and female and making independent sample T test, the results are as in Table 1 shows that the P value of the significance testing in the first line is 0.007, less than 0.05, therefore, the variance is non-homogeneous. And the corresponding P value of t test is 0.364, above 0.05, which tells that there is no significant difference between male and female in professional English ability.

Table 1. Independent sample test of gender difference

	Variance Levene test		T-test of mean variance						
	F	Sig	t	df	Sig	Mean difference value	Standard error value	95 confidence interval of finite difference	
								Lower limit	Upper limit
Assumed equal variances assumed unequal variances	7.432	0.007	-0.956	258	0.340	-1.698	1.776	-5.196	1.800
			-0.910	181.851	0.364	-1.698	1.866	-5.380	1.984

Class leaders or not: After comparing the professional English ability difference of those who are class leaders and those who are not and making independent sample T test, the results are as in Table 2: Table 2 shows that the P value of the significance testing in the first line is 0.353, above 0.05, therefore, the variance is homogeneous. And the corresponding P value of t test is 0.001, less than 0.05, which shows that there is significant difference between those who are class leaders and those are not in terms of professional English ability.

Table 2. Independent sample test

	Variance Levene test		T-test of mean variance						
	F	Sig	t	df	Sig	Mean difference value	Standard error value	95 confidence interval of finite difference	
								Lower limit	Upper limit
Assumed equal variances assumed unequal variances	0.864	0.353	3.363	0.258	0.001	5.731	1.704	2.376	9.066
			3.369	256.643	0.001	5.731	1.701	2.381	9.081

Internship experience or not After comparing the professional English ability difference of those who have internship experience and those who have not and making independent sample T test, the results are showed as in Table 3: From Table 3 we can see that the P value of the significance testing in the first line is 0.539, above 0.05,

therefore, the variance is homogeneous. And the corresponding P value of t test is 0.038, less than 0.05, which tells that there is significant difference between those who have internship experience and those have not in terms of professional English ability.

Table 3. Independent sample test

	Variance Levene test		T-test of mean variance						
	F	Sig	t	df	Sig	Mean difference value	Standard error value	95 confidence interval of finite difference	
								Lower limit	Upper limit
Assumed equal variances	0.379	0.539	2.090	258	0.038	7.504	3.591	0.432	14.576
			1.931	16.686	0.071	7.504	3.887	-0.708	15.716
assumed unequal variances									

Major difference: Table 4 gives the N, Mean, Std Deviation, Std. Error, 95% confidence interval, Minimum value and Maximum value of all majors in professional Englishability.

Table 4. Description of mean

	N	Mean	Std. Deviation	Std. Error	95% confidence interval of mean		Minimum value	Maximum value
					Lower limit	Upper limit		
Civil air transportation	109	43.46	13.986	1.340	40.80	46.11	15	70
Tourism and hotel	121	47.00	13.589	1.235	44.55	49.25	15	75
Marine engineering	3	38.33	17.954	10.366	-6.27	82.93	18	52
Electromechanical engineering	0	0	0	0	0	0	0	0
Others	27	50.63	14.289	2.750	44.98	56.28	15	75
Total	260	45.79	14.006	0.869	44.08	47.50	15	75

Table 5 is the result of homogeneity test of variance. From the aspect of significance rate we can see that $p > 0.05$, showing the variances of each group have no significant difference at the level of $\alpha = 0.05$, which mean the variance has homogeneity.

Table 5. Compared homogeneity test of variance

Levene statistics	df1	df2	saliency
0.357	3	256	.784

Table 6 is the analysis of variance, where the corresponding probability value of F value under the assumption of HO shows there is no significant difference for mean values between groups (i.e. there is no difference of professional English ability in majors). While after calculation, F value is 2.719, and the corresponding probability value is 0.045, less than 0.05, rejecting the original assumption, which shows there is significant difference of professional English ability for different majors.

Table 6. Analysis of variance

	Quadratic sum	df	Mean square	F	Saliency
Between groups	1566.757	3	522.919	2.719	0.045
Within group	49238.027	256	192.336		
Total	50806.785	259			

The descriptive of Table 7 gives the N, Mean, Std Deviation, Std. Error, 95% confidence interval, Minimum value and Maximum value of professional English ability in different industries.

Table 7. Description of mean

	N	Mean	Standard Deviation	SE	95% confidence interval of mean		Minimum value	Maximum value
					Lower limit	Upper limit		
Civil air transportation	96	45.79	13.161	1.343	43.12	48.46	15	73
Tourism and hotel	94	46.11	12.519	1.231	43.54	48.67	15	75
Marine engineering	1	18.00					18	18
Others	69	45.77	16.713	2.012	41.75	49.78	15	75
Total	260	45.79	14.006	0.869	44.08	47.50	15	75

Table 8 is the result of homogeneity test of variance. From the aspect of significance rate we can see that $p > 0.05$, showing the variances of each group have no significant difference at the level of $\alpha = 0.05$, which mean the variance has homogeneity.

Table 8. Compared homogeneity test of variance

Levene statistics	df1	df2	Saliency
4.624	2	256	.054

Table 9 is the analysis of variance, where the corresponding probability value of F value under the assumption of HO shows there is significant difference for mean values between groups (i.e. there is difference of professional English ability in different industries). While after calculation, F value is 1.333, and the corresponding probability value is 0.264, above 0.05, echoing the original assumption, which shows there is significant difference of professional English ability for different industries.

Table 9. Difference analysis

	Quadratic sum	df	Mean square	F	Saliency
Between group	781.725	3	260.575	1.333	0.264
Within group	50025.059	256	195.410		
Total	50806.785	259			

2.3 Frequency Analysis of Key Issues

We made a survey on the issues of “chances of using English” and “situation of being rejected for poor English” during graduates’ work and the results are as follows (Table 10):

Table 10. Statistics of issues

Statistics of issues	Frequency	Statistics of issues	Frequency
Chances of using English		Be rejected for poor English	
Very frequent	25 (9.6%)	Often	31 (11.9%)
Comparatively frequent	71 (27.3%)	Occasionally	87 (33.5)
Less frequent	116 (44.6%)	Non	100 (38.5%)
Almost not use	48 (18.5%)	No idea	42 (16.2%)

The table shows that the number of graduates using English very frequently during work takes up 9.6%, and of those almost not using English takes up 18.5%, which means that more than 80% of the graduates would use English for communication during work. The number of graduates often being rejected for poor English takes up 11.9%, and of those who are never confronted with this situation takes up 38.5%. According to the employment feedback, the graduates from our college mainly take the grass-root posts, while the work involving advanced English is often charged by those higher-lever personnel, so there is few chances left for our graduates.

We also made a survey on questions such as “overall evaluation of your own English ability”, “What aspect do you think you are lack of the most during English learning?” and “How does English influence your future employment or career”? And the results are as follows (Table 11):

In terms of “self-evaluation of English ability”, the number of graduates that are very confident only takes up 3.1%, while of those that are very unconfident takes up 14.2%, which shows a large gap. Besides, 45.4% of the graduates think oral

Table 11. Statistics of questions

Statistics of questions	Frequency	Statistics of questions	Frequency	Statistics of questions	Frequency
Self-evaluation of English ability		The most needing aspect		The influence of English for career	
Very confident	8 (3.1%)	Listening competence	40 (15.4%)	Great	166 (63.8%)
Comparatively confident	71 (27.3%)	Oral competence	118 (45.4%)	Average	53 (20.4%)
Uncertain	64 (24.6%)	Reading competence	23 (8.8%)	Not sure	34 (13.1%)
Comparatively unconfident	80 (30.8%)	Writing competence	41 (15.8%)	Non	7 (2.7%)
Very unconfident	37 (14.2%)	Translation competence	38 (14.6%)		

competence is what they lack the most, followed by writing competence, listening competence, translation competence and reading competence. So, being unconfident about their English ability is the leading factor that they cannot speak English; in addition, most of their work just needs basic oral communication instead of advanced translation and reading. As for “the influence English has for career”, 63.8% of the graduates believe English has great impact for the development of their future career, while those who think English has no influence for career just takes up 2.7%, which shows that with the increasing number of international enterprises, more and more graduates begin to aware the great influence English has for career development and they begin to have the sense of occupational crisis.

2.4 Cultivation of Graduates’ Professional English Ability

It is found through investing and interviewing the actual work situation of the sample graduates that the major problem of English learning the vocational college students are now facing is that they are weak in basic English knowledge and lost studying interest and confidence, then, they have less chances to practice English so their language communication ability cannot be improved. The most important part of college English teaching is to strengthen students’ oral training, make plans to improve student’ daily English communication skills, consolidate their language foundation and cultivate their constant English leaning ability and autonomous learning ability. The most effective approach to promote college students’ professional English ability is to reform teaching system, which need to increase the proportion of practical training such as English practice class, set ability training as the objective of running school, conduct occupational career planning of college students designedly and establish industry-college alliance and set up training base with enterprises.

3 Conclusion

The design of this questionnaire survey includes four dimensions which are professional accomplishment skill, language ability, technical skill and innovation ability to study whether graduates from our college could use English to complete post communication, and use vocational English ability mastered to constantly improve their English therefore to expand their career planning. The data of using software spss 11.0 for independent sample T test on graduates from all majors and employment fields shows that there is no significant difference of professional English ability between male and female and among graduates from different majors; however, the professional English ability are quite different for those graduates with and without class leader experience and internship experience as well as their employment fields. More importantly, our graduates are not confident enough on their professional English ability. Besides, with low English using frequency in work, most of them believe they are not good at oral expression but they are convinced that professional English ability directly affect the development of their future career. Therefore, in order to improve their professional English ability, students are highly suggested to strengthen oral English during their study in college, while teachers need to update teaching methods and approaches to create more chances for students to practice English and the college shall cooperate with enterprises to speed up the building of practical teaching base.

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