Editorial Board

Journal of Contemporary Educational Research

Journal of Contemporary Educational Research

Focus and Scope

Journal of Contemporary Educational Research is an international, peer-reviewed and open access journal which is to promote the evaluative, integrative, theoretical and methodological research on contemporary education; shape a novel, broader view of issues in contemporary education; enhance the caliber of humanities research through active use of best domestic and foreign practices; and integrate the achievements of various sciences and knowledge areas with unconventional approaches.

All relevant papers are carefully considered, vetted by a distinguished team of international experts, and rapidly published. Original articles, short communications, case studies and comprehensive review articles can be submitted online via the journal's submission and peer review site.

About Publisher

Bio-Byword Scientific Publishing is a fast-growing, peer-reviewed and open access journal publisher, which is located in Sydney, Australia. As a dependable and credible corporation, it promotes and serves a broad range of subject areas for the benefit of humanity. By informing and educating a global community of scholars, practitioners, researchers and students, it endeavors to be the world's leading independent academic and professional publisher. To realize it, it keeps creative and innovative to meet the range of the authors' needs and publish the best of their work.

By cooperating with University of Sydney, University of New South Wales and other world-famous universities, Bio-Byword Scientific Publishing has established a huge publishing system based on hundreds of academic programs, and with a variety of journals in the subjects of medicine, construction, education and electronics.

Publisher Headquarter

Table of Contents

Employment and Employability of Engineering Graduates in India

Jandhyala B G Tilak[*]

Pradeep Kumar Choudhury[**]

Abstract: While higher education system in India produces the second largest number of engineering graduates in the world every year, the employability of the graduates is questioned both in the domestic and international labour markets. Many rightly observe that India is overproducing engineering graduates with poor quality, who are not suitable for changing labour markets, as a result large numbers of graduates are either unemployed or mal/under employed. Globally, the interface between technology and labour market is changing rapidly, making new demands on skills of the graduate engineers. The recent National Education Policy 2020 has clearly acknowledged this fact, and accordingly, proposes a variety of reforms for strengthening technical education in the country. In this short paper, an attempt is made to examine a few specific aspects relating to the unemployment and employability of engineering graduates, along with implications for engineering education.

Keywords: Engineering Education, Labour Market, Employment, Wages, Unemployment

1 Introduction

Engineering, science and technology have transformed the world we live in, contributing significantly to longer life expectancy and enhanced quality of life for large numbers of the world's population (UNESCO 2010). In the expanding global knowledge economy, impact of specialised human capital for rapid economic growth is being realised and therefore, the demand for engineering education has gone up rapidly across the globe (Dubey et al 2019), as engineers are considered "the backbone and … the core of a nation to enable it come a leading country in the world" (Bhargava 2001, p. 77). Given the increasing use of technology in human life, the critical role of engineering education in addressing the pressing challenges of our societies is well recognized worldwide. The importance of technical education, engineering education in particular, was well acknowledged, in fact, for a long period all over the world, including in India. The contributions of engineering education in India that started largely with building roads and bridges is currently addressing several new and emerging challenges like providing more equitable access to information for our populations, environmental protection and natural resource management, artificial intelligence,

---
[*] Editor-in-Chief, Journal of Contemporary Education Research, Former Vice Chancellor, National University of Educational Planning & Administration. Currently ICSSR National Fellow & Distinguished Professor, Council for Social Development, 53 Lodi Estate, New Delhi 100003, India. Email: Jtilak2017@gmail.com
[**] Assistant Professor of Economics, Zakir Hussain Centre for Educational Studies, Jawaharlal Nehru University, New Delhi 110067. Email: pradeep.hcu@gmail.com

natural and man-made disaster mitigation etc. Even today a large number of engineering graduates from India have made an impact in the corporate world internationally. For instance, several Indian engineering graduates are working in the Silicon Valley of the USA and the survival and growth of IT sector in this region is said to be largely dependent on them.

There were only a handful of engineering institutions in India in the 19th century; but noticeable growth has taken place only after independence. Slow and steady growth took place during the first three decades after the launching of development planning in India in 1950. The growth has picked up since the beginning of the 1990s and a phenomenal expansion has taken place during the last three decades. Today there are, in addition to 23 Indian Institutes of Technology and 31 National Institutes of Technology (earlier known as Regional Colleges of Engineering), 3124 engineering institutions offering Bachelors and above studies in engineering and 3706 polytechnics which offer diploma level in engineering education (AICTE 2020). About four million students are enrolled in engineering education for their undergraduate (and above) studies (2018-19), and about one million graduates come out of the system. However, it is argued that the expansion of engineering education in India (specifically in the private sector) has resulted in production of poor quality graduates who are not eligible to be employed in the labour market. The private sector, which accounted for just 15 percent of the enrolments in 1960, by 2019 accounted for 86 percent of admissions and around 86 percent of all engineering institutions in India (Kapur & Mehta, 2004; AICTE 2019). Unlike philanthropy-based private institutions, these self-financing private institutions exploit the weaknesses of the system, including the ineffective governance and regulation by the state, imperfections in the market, and attitudes of the gullible parents (Kirp 2003; Ley 2006; Kinser & Levy 2007; Hodgman 2010). The phenomenal growth of the engineering education in the country has raised serious concerns on the quality and employability of engineering graduates. Many employers in the labour market do not find engineering graduates worth employing. According to the All India Council for Technical Education (AICTE), in 2017-18, while 1.89 million students graduated from professional

schools, including engineering and management schools, only a little over a third of them (6,72,369) got placements (Nanda 2018). Based on National Sample Survey (NSS) data, it was estimated that graduates in technical education face the highest rate of unemployment, 37.3 percent in 2018, up from 18.8 percent in 2012 (Mehrotra & Parida 2019). Employability has received huge attention in recent years. Specifically with respect to engineering graduates, the study by NASSCOM-McKinsey (2005) reported that only 25 percent of the graduates are employable in India. Likewise, the latest Annual Employability Survey 2019 (Aspiring Minds 2019) states that 80 percent of Indian engineers are not fit for any job in the knowledge economy.

The employment/unemployment and related issues of engineering graduates are particularly important issues that need to be examined in the rapidly changing demand for engineering manpower in the dynamically changing labour market in India and abroad. Technology is advancing at an unprecedented space across the world and has transformed the global labour market. The adoption of exponential technologies is disrupting industries by creating new markets and transforming existing markets through product or business innovations. In the new age of automation and unprecedented technological advances, the nature of job market in several economies is changing rapidly. In the labour market, job-roles are being drastically modified, re-defined and changed altogether, and certain types of jobs are becoming redundant and new occupations with new roles are created. Today, we are riding a new wave of uncertainty as the pace of innovation continues to accelerate and technology influences extensively the very basic characteristics of labour market (WDR, 2019). Engineering being a technical field that produces specific human capital is affected most by the rapid technological developments. As a result, the nature and composition of skills that are required for an engineering graduate is going through a big change. Modern technology is changing the skills that employers seek, and therefore, the training imparted in the educational institutions needs to be revisited. In fact, graduates are not sure about the use of knowledge and the skills they obtained during their studies in the dynamically changing labour markets. Globally, engineering education is experiencing an increasing pressure on graduate

employability, particularly in the context of the changing environment in the labour market. The complexities found in the global engineering labour market have changed the discourse in the discipline. It is important to analyse what it means to be an engineer in the twenty-first century and how the skills and training imparted in institutions might better prepare engineers of the future (Winberg et al 2020).

With the help of secondary sources of data, in this paper a brief descriptive account is presented of a few major issues relating to employment/unemployment and employability of engineer graduates, preferences and aspirations of graduate engineers and implications for engineering education in India.

2 Unemployment among Graduate Engineers

In the fluctuating labour market conditions and unplanned growth of engineering education, mismatches arise between supply of and demand for engineering manpower. Mismatch in India can be divided into two broad categories. Firstly, there is skill deficit or skill gap, where a worker's skill is not up to the requirements of the job or employers' expectations (Blom & Saeki 2011). Secondly, there is skill underutilization (over-education or over-skilling), which arises when level of education and skill exceed those required by the job. The latter causes bumping down, low skilled jobs being offered to high skilled workers, and workers with lower skills get bumped out. But a more familiar mismatch refers to the numbers of graduates produced and hired. Sengupta (2017) estimated proportional mismatches with respect to educated manpower at all levels, using data of several rounds of NSS. In 1993-94 and 2004-5, there were actually shortages in the engineering manpower (degree level), but the quantum of shortages was very small. By 2011-12, the situation began to change, and there was a negative mismatch, the supply exceeding demand, but again by a very small proportion. We do not have such estimates for the period after 2011-12. But it is quite possible that the supply exceeds demand by increasingly larger proportions, as the available evidence on admissions versus student places available in engineering education institutions and employment and unemployment trends suggest. The latest data available from AICTE database (aicte-india.org) suggests that many engineering institutions are not in a position to fully use their intake capacity. Admission rate as a proportion of the sanctioned intake has significantly gone down in the recent past -- from 62.4 percent in 2012-13 to 51.1 percent in 2018-19. Interestingly, the decline in the student enrolment is largely in private engineering institutions, and not in public institutions. It is noticed that a large number of private engineering colleges are either closed or run the risk of being closed soon due to the low enrolments. According to AICTE data, of the 14.1 lakh BE/BTech student places available in 3124 engineering colleges across the country, close to half (53 percent in private self-financing institutions and 49 percent in all) were not taken in the academic year 2018-19; The mismatches between demand and supply of graduate manpower or disequilibrium in graduate labour market (Panchamukhi 1987) arises either due to imperfections in labour market or due to asymmetry of information or due to low/irrelevant quality of education the graduates receive.

As per data available from NSS, unemployment among the educated in India has been rather consistently rising over the years. Among the general graduates and above, the rate of unemployment increased from 16.1 percent in 1983 to 35.9 percent in 2017-18. While rate of unemployment is rising among the educated youth, the rate of growth is the highest in case of those with technical education. It was 37.9 percent in 2017-18, a sharp increase from 17.3 percent in 1983 and 19.8 percent in 1999-2000 (Khare & Arora 2021).

We do not have similar comparable data specifically for engineering graduates. We have instead, information on hiring rates and placement records available from institutions of engineering education, which help in analysing trends in employment/unemployment conditions. Then we examine employability of graduates as estimated by Aspiring Minds through the Aspiring Minds Common Aptitude Test (AMCAT).

In 2017 and 2018, not more than 50 percent of candidates got jobs from the AICTE-approved colleges: out of the 7.92 lakh graduates, only 3.52 lakh could get hold of employment through campus placements, as reported by the Minister for Human Resource Development in the Parliament (Roy

2020).[1] The rate of hiring of engineers has declined from 28 percent in 2014 to 22 percent in 2018, as shown in Figure 1. After a small increase in the following year to 23 percent, it rose by 8 points to 31 percent in 2020. According to this, nearly 70 percent of the engineers are unemployed in 2020; the figure was nearly 80 percent in 2018.
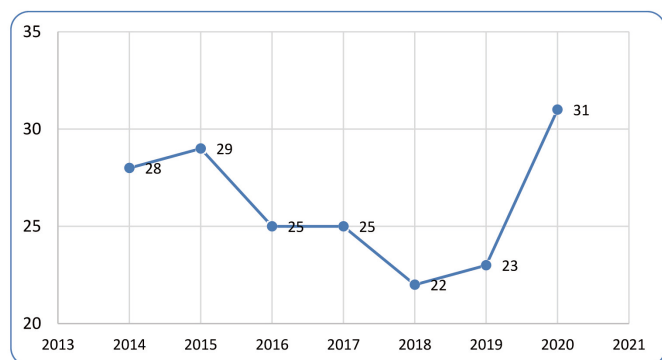
Figure 1. Fluctuating Rate of Hiring of Engineers in India (%)

Source: Statista Research Department

https://www.statista.com/statistics/1043283/india-hiring-rate-engineers/

Engineers in all branches do not face the same situation. Graduates in different streams of engineering perform differently. AICTE data on placements enables us to examine the same. The technological obsolescence in the labour market seems to have suddenly resulted a declining demand for graduates in branches like electronics & communications engineering, and computer science engineering compared to others between 2014-15 and 2017-18, except textiles engineering.   With the boom in information technology (IT) sector in the preceding period, the placement record improved between 2012-14 and 2014-15 in case of electronics & communications and computer science engineering (and also in case of electrical and mechanical engineering). The overall placement rate increased from 27.2 percent to 42.6 percent between 2012-13 and 2016-17, and then declined to 36.8 percent in 2017-18 (Table 1).

Table 1. Number of Placements as a percent of Enrolment in Engineering Education, by Select Streams of Engineering

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Average
Textile Engineering	52.9	57.3	56.5	56.4	42.9	42.9	51.5
Electronics & Communications Engg.	34.1	42.2	56.9	59.8	55.6	55.6	50.7
Computer Science & Engineering	39.7	46.6	50.0	48.0	43.0	43.0	45.1
Electrical Engineering	28.4	31.6	41.4	43.9	48.1	48.1	40.2
Mechanical Engg.	17.3	19.0	26.0	31.4	40.1	40.1	29.0
Chemical Engineering	29.7	29.5	26.5	23.6	24.7	24.7	26.4
Civil Engineering	12.1	13.0	16.5	20.4	27.3	27.3	19.4
All branches	27.2	30.4	37.4	40.4	42.6	42.6	36.8

Source: AICTE Data Base

Economic liberalisation in 1990s gave a major push to the Indian software services industry which further boosted the demand for engineers trained in electronics and IT-related disciplines of engineering such as computer science and engineering, electronics & communications, and IT. These streams were considered as more popular branches; and the traditionally popular branches such as electrical, civil, and mechanical engineering have gone considerably down in student preferences and employers' preferences as well. Graduates as degrees in electronics and IT-related degree programmes secured jobs relatively easily and quickly as compared to degrees in traditional subjects like civil and mechanical engineering.

How to explain the high rate of unemployment among the engineer graduates in India? In several cases engineering graduates in India are employed in non-engineering occupations that offers them substantially low salary. The issues of employment and unemployment of engineering graduates are coupled with the slowdown in overall employment of the India economy. The unemployment rate in India has increased significantly over the last decade and

---

[1] This is based on data available with AICTE. It is important to note that data on placements provided by AICTE or the individual institutions do not normally include data on those who secure employment later, after leaving the college.

this figure is 6.1 percent in 2017-18 (PLFS, 2019), and the graduate unemployment is 16.3 percent in 2019 (Statista Research Department, 2020). In an interview to Indian Express (December 13, 2017), Vice Chairman of NITI Aayog, Rajiv Kumar sees the decline in the demand for engineering graduates in the labour market as a sectoral shift that might be happening in the Indian economy – a shift from traditional factory manufacturing jobs to emerging sectors like e-commerce. But there are also problems with the kind and nature of graduates and the engineering education they receive. This takes us to the issue of employability.

3 Employability of Graduates

Due to weak labour market signals, even when employment is not high, many graduates still go for engineering education, and end up in unemployment – open or disguised. Graduates who are managing to get jobs are either mal-employed or employed at very low wages. That several engineer graduates are applying for posts of peon, gardener, sweeper, watchman and bailiffs is well-documented in several media and newspaper reports in India. For instance, in 2019, Gujarat High Court appointed 450 engineers as peons and bailiffs[1]. Similarly, a sizeable number of engineering graduates applied for the posts of sweepers and sanitary workers at the state assembly secretariat in Chennai in 2018[2]. These instances are indicative of the lack of employment opportunities for the engineering graduates in the country. As it is often argued, the prevailing labour market indications -- low employability of engineering graduates coupled with abysmal record of job placement, are the reflections of the poor quality of engineering education in the country. The quality attributes in terms of inter alia, skills and knowledge, with which the graduates come out of the colleges determine the employability of graduates. After all, employability is a measure of human capital – skills and knowledge, embodied in the graduates which is valued in the labour market for productive employment.

As per the India Skills Report (Wheebox 2020),

the employability of engineer graduates remain static around 50 percent with marginal fluctuations between 2014 and 2018. There has been no change in the employability prospects of Indian engineering graduates in the past nine years! Then suddenly it improved to 57 percent in 2019, after which there was a steep fall to below 50 percent (Figure 2). The fluctuating trends should indeed be a matter of serious concern, as they make any forecasting and planning difficult.
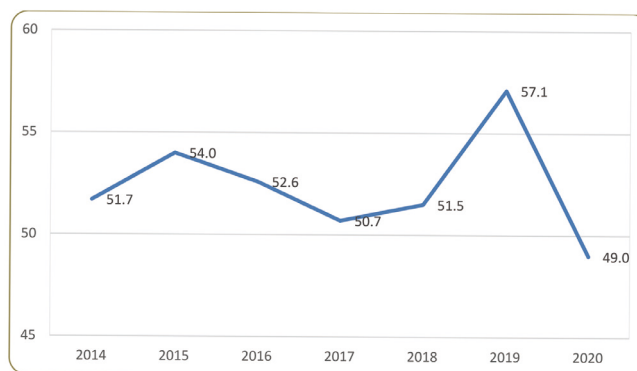
Figure 2. Employability of Engineer Graduates (B.E./B.Tech.) in India
Source: Based on Aspiring Minds (2019)

The rate of employability of graduates also differs by sub-streams of engineering. Graduates in electrical engineering and in I&T are most employable, with a rate of above 45 percent, and the employability is the least in case of civil engineering with a rate of 26 percent (Wheebox 2021). The variations between 2018, 2019 and 2020 are also wide as given in Table 2. The higher employability of IT graduates in the recent years may be due to the digitalisation and more use of IT-services in the labour market. In fact, eeconomic liberalisation in 1990s gave a major push to the Indian software services industry which further boosted the demand for engineers trained in Electronics and IT-related disciplines such as computer science and engineering, electronics and communications, and IT.

---

[1] https://www.nationalheraldindia.com/india/engineers-doctors-post-graduates-take-up-jobs-of-peons-and-bailiffs-in-gujarat-hc
[2] https://www.hindustantimes.com/education/over-4000-applicants-including-mtech-and-mba-apply-for-14-sanitary-workers-posts-in-tamil-nadu/story-vZSe3csNzzx5h3ZnsHk3gO.html

Table 2. Employability of Engineering Graduates, by Sub-Stream

	2020	**2019**	**2018**
Civil Engineering	26.50	50	44
Mechanical Engineering	34.15	53	43
Computer Science Engineering	38.43	58	44
Information & Technology	48.27	60	52
Electrical Engineering	47.35	60	50
Electronics & Communications	39.90	61	58
All Engineering branches	46.82	57	52

Aspiring Minds Team (2019) made an interesting analysis that shows that employability of graduates (in IT services) is low in those states where there are too many colleges like Tamil Nadu, Andhra Pradesh and Maharashtra and Karnataka, and it is reasonably high in those states which have fewer colleges like Delhi, Bihar, Jharkhand and Uttarakhand. Note that the former group of states also has a larger number of IT companies than the others. In fact, Aspiring Minds Team (2019) found a clear inverse relationship between the number of engineering colleges in a state and the employability of graduates, as shown in Figure 3. This clearly shows that expansion has taken place at the expense of quality of engineering education.[1]
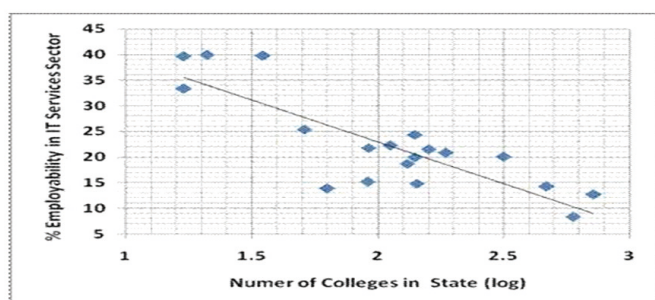
Figure 3. Employability and the Engineering Colleges in States
Source: Aspiring Minds Team (2019). (Reproduced with permission)

A large number of colleges in the states where employability is low are also private colleges. We observed a clear employability difference between elite and non-elite colleges in India. According to National Employability Report - Engineers 2016, 25 percent of engineers in tier 1 (elite) colleges are employable while this figure is 16 percent in tier 2 colleges and 13 percent in Tier 3 colleges. Further, the mean expected salary of students is Rs. 41.8 thousand (a monthly salary of Rs. 34.8 thousand), with a significant difference between elite (Rs. 42.3 thousand) and non-elite colleges (Rs. 33.4 thousand). A minority of engineering students receives high quality training in elite institutions while the majority of students receive low quality training in non-elite institutions Loyalka et al (2014). This makes it clear that expansion has taken place at the cost of quality measured in terms of employment, and private colleges have not cared much for quality. In fact, not only in terms of mere number of colleges, one also finds an inverse relationships between private dominance and employability. States are grouped into four quartile in the National Employability Reports by the level of employability of graduates. Graduates belonging to states having a high proportion of private institutions are found to be least employable, as shown in Figure 4. It obviously refers to the quality of education being provided in the private institutions. The top quartile belongs to the states where share of private sector is relatively less (around 75 percent, average of 2013, 2016 and 2019 being 77.5 percent), and the share was near above 90 percent (average 92.3 percent) in case of the bottom quartile consisting of least employables.

---

[1] Even with respect to IITs, recent expansion is feared to cost quality and excellence that IITs are known for. The "the IIT 'system' has expanded be yond its capacity to maintain its high standards and is in danger of sinking into mediocrity" (Altbach & Mathews 2021).
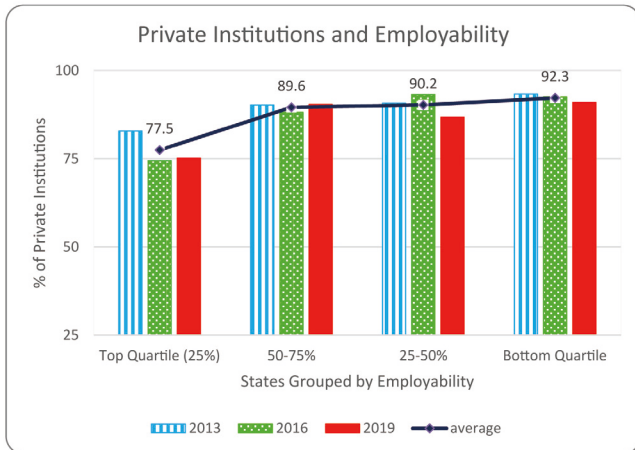
Figure 4. Private Institutions and Employability by Groups of States in India

Source: Based on Aspiring Minds and AICTE database for relevant years

In general, a large proportion of graduates receive very poor quality education. It has been found that 61 percent of the graduates did not have any internship during their engineering studies, 83 percent did not conduct any technical project, and 54 percent never attended any talk by the industry experts (Aspiring Minds 2019). In the AMCAT (conducted by Aspiring Minds AMCAT, taken by over 2 million graduates in 4000+ campuses, spread across 25 states, and used by a large number of employers for recruitment) the average score in any module crosses 50 percent. In core engineering modules, the marks were below 400 (out of 900), and in English language, logical ability and quantitative ability, it was between 400 and 500 (in 2019) (Aspiring Minds 2019), while normally 550 is considered as a minimum or a 'good' score.

What steps should be taken for improving the poor employability of engineering graduates in India? Apart from economy and structural factors, it emerges that the quality of engineering education one receives is an important factor that explains employment/ unemployment and wages in the competitive labour market.

Several studies and reports provide compelling reasons why undergraduate engineering education is in need of change to respond to the complex challenges in the labour market (Badran 2007; Sahin 2010; Adams et al 2011; Winberg et al 2020). For instance, literature on employability of engineering graduates emphasises on the curricular and pedagogical arrangements to prepare graduates

for work and also to address several other risks and uncertainties they are going to face in the changing labour market. Therefore, higher education institutions must keep pace with rapidly evolving technology, to enable individuals to be future ready and reduce their rate of obsolescence (Ernst & Young 2017).

The nature of engineering skills that a graduate need to get employment in labour market is going through a big change in India. In addition to the foundational skills gained from mathematics, physics and engineering sciences, graduates should also learn key professional skills such as communication, collaboration, team-work, project management, professional ethics, and broader environmental and societal issues.

The National Employability Report further finds that only a handful of engineering graduates possess next generation technical skills that give them better employment prospects while majority seem to have difficulty finding suitable employment. Only 2.5 percent of Indian engineers possess the skills in artificial intelligence (i.e., machine learning and data science), important skills required in the changing labour market, 1.5 percent to 4.5 percent of engineers possess the necessary skills in data engineering, and while only 2.8 percent to 5.3 percent are qualified in wireless technologies that industry requires (Aspiring Minds, 2019). According to the Aspiring Minds' National Employability Report on Engineers (2019), only 40 percent of engineering students in India get opportunities for internships and only 36 percent undertake projects outside their assigned coursework. Even today, the engineering discipline in India is very theoretical, and students learn primarily through lecture method. Similarly, the report also highlights that engineering students in India have very little industry exposure as they are trapped in a college bubble all the time. Only 47 percent of students attend industry talks, and more importantly, 60 percent of faculty do not discuss how engineering concepts apply to industry. Most talks that students attend are intra-departmental, rather than seminars, workshops, conferences or webinars that typically feature outside experts and scholars who present complementary or alternative perspectives. Providing on-the-job training to engineering graduates is also found to be quite costly and risky for many employers, and therefore, not a viable

option for many. It is argued that after getting a good on-the-job training, they bargain for higher wage and if employers do not concede to their demand, they might leave the company and join some other. Also, providing training in the job market need a threshold level of learning during the under graduate studies which is also not found among a majority of the engineering graduates. Therefore, it is important to see whether the 4-year course in engineering after senior secondary education adds any employable skills among the graduates. Students need to be better equipped with employability-enhancement skills such as critical thinking, problem-solving, teamwork, decision making and adaptability among others.

Engineering institutions should aim to develop 21st century skills (beyond core academic subjects) among youths. The engineering institutions should lead in preparing professionals in cutting-edge areas such as artificial intelligence, 3-D machining, big data analysis, machine learning, robotic process automation, cloud computing, data engineering, and data science that would create a huge wave of transformation across industries in the coming decade. But, even today the curricula and pedagogies in a majority of the engineering institutions focus on imparting traditional technical knowledge, and ignore the new skills that are demanded in the changing labour market situations; therefore, they fail to possess hard skills in a soft context.

Emphasis needs to be given to strengthen the interdependent relationship between engineering knowledge and professional skills among engineering graduates to improve their employability. It is argued that, in the changing labour market situations, apart from having a good conceptual understanding of basic science and mathematics, engineering students also need to develop generic skills, such as creative and critical thinking, problem-solving abilities, decision-making etc (Badran 2007). The new engineers need to know how to work in teams given the importance of social skills in the workplace (Sahin 2010). Also, in the changing labour market situations, there is a need for engineers to acquire soft skills like cooperative working, communication and presentation skills, business ethics, inter-personal relationships, and skills to handle contemporary societal changes (Adams et al 2011; Jha 2005). Accruing these skills (in addition to gaining technical knowledge) would prepare graduates better to compete in the new world economy and in finding gainful employment in the labour market.

As argued for long, there is a need for strategic policy interventions to strengthen the industry-academia interactions to improve the linkage between engineering education and labour market in India. However, the latest AICTE-CII survey (CII 2018) has revealed that 78 percent of the total institutes have some linkages with industry, while 22 percent have no linkages at all. Only about 7.4 percent of the engineering institutions (710 out of 9581) have received some funds from industry for setting up a department, cell or a laboratory. Out of the 710 institutions that received funds, about 419 (60 percent of the total) have received up to Rs five lakh, while only 46 institutes received Rs one crore and above. Strong linkages with industry might not only help in mobilising more financial resources, but also human resources in the form of experienced industrialists, and more importantly help in modernising the curriculum and content of engineering education. This may help in better planning of the growth of engineering education in the country. To minimise the gap between demand for and supply of engineering graduates, India should develop the mechanism that can better anticipate demand for different skills and vocation in the labour market and give that feedback to the technical education sector. This may be difficult in a fast changing dynamic environment. But some important signals can as well be drawn from such an exercise. With the policy inputs, engineering education should prepare youths to participate in the future labour market, where they will work together to address global challenges using technical and social skills. The aspirations of the 21st century engineering education require new thinking and new ways of doing, and those require engineering graduates to get advanced knowledge and skills in technical and professional areas. With globalisation, the technical education in India faces twin challenges, it has to be extremely useful for the domestic economy and at the same time made internationally relevant (Subramanian 2015, p. 118).

4 Graduates' Preferences and Aspirations

Now let us briefly examine the changing labour market aspirations of the engineering graduates produced by the universities and colleges. The

students' preferences and aspirations for and from different jobs also play an important role in explaining the phenomenon of unemployment. These are also not static; they are also rapidly getting altered over the years. Aspiring Minds (National Employability Reports for engineers 2014, 2016 and 2019) had surveyed students' preferences towards the kind of job roles, classified as software development, core engineering jobs (like mechanical, electrical, electronic or civil engineer) and management related jobs. Interestingly, majority of the engineering graduates have strong preference either for software jobs or core engineering jobs, and it is found to be true in all three points of time with small variations (Figure 5). It is noteworthy to mention that despite of the mushrooming job opportunities in managerial roles like technical sales, marketing and content development, engineers do not seem to prefer these jobs as yet, even though quite a few of them end up in those jobs. It is widely viewed that engineering graduates take up non-engineering jobs in the labour market as they don't get the suitable job of their preference in engineering, with very few exceptions.
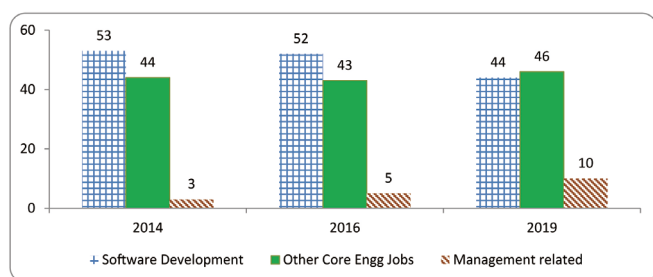
Figure 5. Job-role Preference of Engineering Graduates in India
Source: Based on Aspiring Minds' National Employability Report - Engineers 2014, 2016 and 2019

The reports by Aspiring Minds have also reported on graduates' job aspirations by their branch of study, gender, tier of college they study (ranks of the colleges based on the employability of their students[1]) and by tier of city. There are variations between them. For instance, graduates with computer/IT background are mostly interested in software jobs, while students with core engineering branches prefer equally software and core engineering jobs. Surprisingly, for management related roles, students from tier 1 colleges (colleges with higher rates of employability of students) show maximum inclination. Similarly, women in large numbers aspire to work in managerial positions, compared to men.

Obviously, students go for engineering education, considering labour market returns. Engineering being a privileged profession associated with high salaries, fresh graduates normally expect high salaries. National Employability Reports for engineers (of the Aspiring Minds) for the last three years have collected information of expectations of engineering graduates regarding their salaries in the job market. There are variations in the expected salary by branch of study, by the quality of college and by gender (Figure 6). Graduates of mechanical engineering and civil engineering aspire for higher salaries, followed by computer/IT (computer science and IT-related branches) and then circuit branches (electronics engineering, electrical engineering, and instrumentation engineering). However, this is not in-line with general perceptions, according to which graduates in computer/IT-related subjects of engineering command the highest pay due to their increasing demand in the labour market. Probably because of a recent fall in demand for IT graduates in the labour market, they tend to limit their monetary aspirations.

The salary expectations also vary by the level of college one attended and by gender. As expected, graduates from tier 1 colleges (proxy of better quality) aspire for a much higher salaries in comparison to tier 2 and tier 3 college graduates. While the difference between mean aspired salary of engineers from tier 1 colleges and tier 2 colleges is ₹ 68,000, the difference between those from tier 1 and tier 3 is ₹ 1.1 lakhs in 2019 (figure 7).

---

[1] All the colleges included in the Aspiring Minds' survey were ranked based the employability of their students. Those in the top 33 percentile were considered as tier 1 colleges, those in mid-33 percentile range were considered as tier 2 colleges while those in the bottom 33 percentile set were taken as tier 3 colleges.
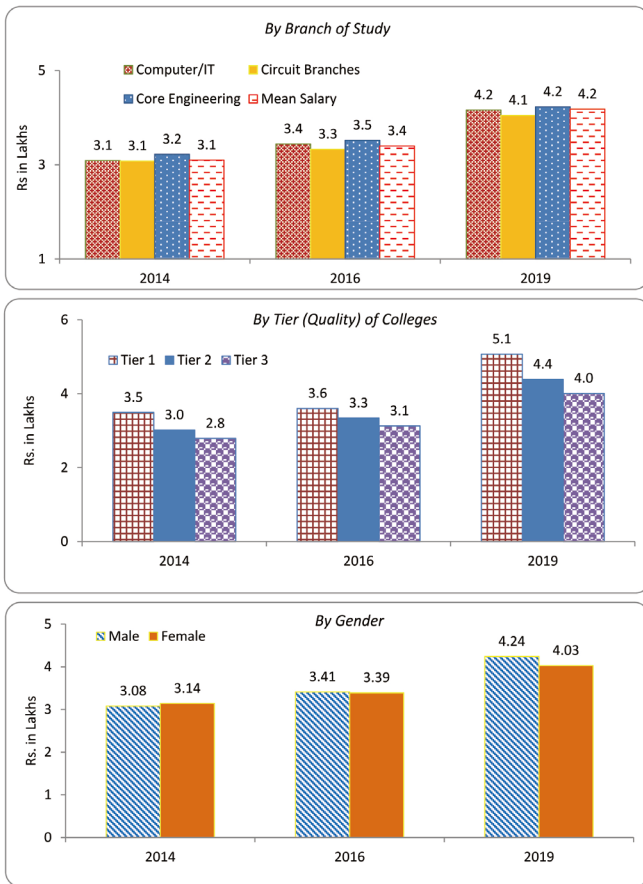
Figure 6. Graduate Engineers' Expectations on Salary (Rs in lakhs per annum)

Source: Based on Aspiring Minds' National Employability Report-Engineers 2014, 2016 and 2019

Students from poor quality engineering colleges do not get placement in large companies, also in some cases major employers in the job market do not participate in the placement exercises of these institutions. Therefore, graduates from these colleges limit their salary aspirations likewise and do not aspire for high pay. On average, women seem to aspire for a slightly lower level of salaries than male engineering graduates in 2016 and 2019, while in 2014 the salary expectations among women were higher than the expectations of men. It is also observed that women students often access tier 2 or 3 colleges, and accordingly they get offers with low salaries. On average, on the whole, the salary expectations of engineering graduates are not high: around ₹ 4 lakhs per annum. Inter-college, or inter-branch of study or by gender the variations in aspired salaries are small in a given year. They were around ₹ 3 lakhs in 2014, which increased to about ₹ 4 lakhs in 2019. Only in 2019 we find marginally higher differences

between the students of the three tiers of colleges. In 2019, graduates from tier 1 colleges expected high salaries (₹ 5.1 lakh); this is the maximum figure we find in Figure 5, and in the same year, those from tier 3 colleges expected ₹ 4 lakhs as their salary on average. Perhaps by 2019 quality differences in the graduates (identified by colleges) are being clearly noticed by the employers.

5 Summary and Concluding Observations

The massive expansion of engineering education over the last three decades provides technical training to a large-chunk of youths in India. But, understanding the impact of changing nature of job due to the the new age of automation and unprecedented technological advances on employment and employability of engineering graduates remains limited and fragmented.

Based essentially on secondary data, an attempt has been made in this paper to understand the changing labour market conditions that influence the demand for engineering education. With massive expansion of poor quality engineering education, the employability of the graduates is greatly questioned in the labour market. Several surveys have come out with the fact that only about one-fourth of the graduates are employable as the rest do not possess the required skills as per the labour market needs.It is argued that majority of the engineering graduates in India receive low quality training in non-elite institutions while very few get high quality training in elite institutions. Also, little is understood about the contours of the changing labour market in the country and its influence on the demand for and supply of engineering education. The labour market is currently witnessing new age of automation and driven by unprecedented technological advances that requires a new set of skills among the engineering graduates. How far the engineering institutions in India are fulfilling such needs? It appears there is not much emphasis on the curricular and pedagogical arrangements to prepare graduates well for work in the changing contexts. The poor academia-industry interlinkage is another grey area in the engineering education sector in India. Additionally, most of the engineering colleges in the country (including many government institutions) are facing faculty crunch, keep aside the lack of physical infrastructure and laboratories to impart quality education and training.

All this suggests that there is a need for major restructuring of the engineering education sector, specifically with a better understanding of the emerging market dynamics. Leaving the market to operate freely in engineering education (as continued for the last three decades) may lead to a great distortion in the sector which has started with the devaluation of engineering degree. Therefore, there is an urgent need to focus and discuss the critical changes the engineering education sector has experienced (and continued to be experiencing) in the recent years. These may include: understanding the changing aspirations of parents for engineering education, revisiting the role of private sector, searching for new strategies to cope up with the declining demand, and above all, effective intervention of the state (if any) to regulate and restructure the engineering education sector to address the recent changes etc. Lack of data is one of the important reasons for not addressing several of these concerns and, therefore we argue for building a strong comprehensive database that covers historical as well as current data on a large set of dimensions of engineering education that would contribute to quality research, informed and effective policy making and planning of technical higher education in the country.

Besides setting up an institutional structure that would build such a robust and comprehensive database, the study highlights a few important policy implications. First, there is a need to effectively regulate the growth of engineering education in the country. Permissions and approvals to open new institutions – public or private, and to offer new programmes need to be based on reliable and transparent and scientific data on the need for such institutions, and programmes, rather than being influenced by political and economic considerations. Leaving this to market forces results in different kinds of imbalances and chaos as we have already seen. As the AICTE (2018) committee has recommended, no new college may be allowed to be started. Permissions may be deferred for opening of new colleges for a few years. In the meanwhile; the government may have to take up consolidation of the engineering education system, adopting closures and mergers of institutions, and weeding out the substandard institutions. It is not only those where enrollments are less than intake that they need to be closed, but also in case of the institutions in

those states, where the intake is higher than national average, as argued by the U R Rao committee (AICTE 2003). As it is mandatory that all institutions and all the programmes they offer need to be subject to a national assessment, the mechanisms of assessment and accreditation need to be made robust, scientific and transparent, leaving no chance for manipulation. Several loopholes in granting permissions to open, and in assessment and accreditation of the institutions, apart from shortfall in accreditation, are highlighted often in the media. The process of approval by the AICTE for opening new institutions or new degree programmes is based on a set of criteria including the credibility of the management, teachers, assurance of compliance to AICTE norms and standards, approval by the state government, and market relevance of the curriculum, etc. In addition, there is a further process of accreditation by the NBA, which is regarded as having higher standards, relating to capability of the institution, teachers, and the programmes to adhere to strict quality criteria. But these mechanisms have been proven to be insufficient and ineffective, as many institutions are often reported to be flouting these criteria and still functioning. Several loopholes in granting permissions to open, and in assessment and accreditation of the institutions are highlighted often in the media, stressing the need for very effective regulatory mechanisms and quality assurance systems.

Second, a clear focus has to be laid on improving the quality and standards in higher education. Besides consolidating existing institutions, and regulating the future growth, special attention has to be given to the recruitment of quality faculty and the provision of a good learning environment that includes good infrastructure consisting of libraries, classrooms, laboratories and modern equipment, which will be conducive for good teaching and learning and also for research.

The Technical Education Quality Improvement Project (TEQIP) project (www.teqip.in), launched by the government of India with the assistance of the World Bank in 2003 as a 10-12 year project, for improving the quality of engineering institutions partly addresses some of the quality concerns in government and government-aided private institutions, and in phase II and III in addition, the self-financing private institutions. But is felt that "due to shortage of academic and non-academic staff and

other factors, the scheme has not been able to achieve its targets as desired" (Patel 2016). Educational institutions – either public or private, cannot be left with such high rates of vacancies as we have found. The overall research environment needs massive improvement in majority of the institutions.

There is not much emphasis on the curricular and pedagogical arrangements to prepare graduates well for work in the changing contexts. The need for major curricular reforms needs no emphasis. The curricula may have to include knowledge and skills in the core domain, but it also deeds to add many other individual traits and social, cultural, and human values. The aim in all this should be not just to improve the employability of the graduates, but also to produce holistic personalities who will be able to serve society better. Vertical linkages between high quality institutions like IITs on the one end and the under graduate institutions on the other end, as envisaged under TEQIP, and horizontal linkages between several institutions of the same level may go a long way in enhancing the standards of education in the system as a whole. Otherwise, we may continue to have a few pockets of excellence amidst a myriad of institutions characterised by mediocrity. Institutions should aim at preparing professionals in cutting-edge areas of technology which would enhance the employability of Indian graduates in professional and technical education.

The National Education Policy 2020 (Government of India 2020) has recognised the problem of poor quality of graduates of technical education and their low employability and rising unemployment. The policy document has laid out the importance of quality technical education for India's overall development. Given the changing labour market needs, and the need to produce creative individuals to cater the needs of the 21st century requirements, the Policy argued that the graduates need critical and interdisciplinary thinking, intellectual curiosity, scientific temper, and more importantly the spirit of service. Currently, the technical graduates produced from the system are mostly lacking the 21st century skills needed to build a knowledge economy and society. The existing silos between technical education and other disciplines of higher education is considered as a major hindrance for this. Despite ever-increasing influence of technology on human endeavours, technical education in India is offered with early specialisation and streamlining of students into narrow areas of study. Hence the policy insists on transforming all technical and professional institutions into multidisciplinary institutions and offering programmes that would provide opportunities to engage deeply with other disciplines. It is also noted that India must take the lead in preparing professional in cutting-edge area such as artificial intelligence, 3-D machining, big data analysis, machine learning, genomic studies, nano-technology with important applications to health, environment, and sustainable living. Imparting these new skills in a multi-disciplinary set-up may enhance the employability of technical graduates. To improve the quality in technical higher education institutions, the policy also accentuates for closer collaborations between industry and technical education institutions, an unsettled issue often discussed in the academia and policy space.

The choices of students in choosing engineering studies, the sub-stream there in, the institutions and their labour market aspirations critically depend upon labour market information. Hence regular manpower surveys and labour market surveys are needed that provide detailed information, which will be helpful to the students/graduates, to the institutions and also public authorise in planning engineering education for future. Such information will also be immensely useful for institutional planning. Though manpower planning per se, is no more found to be meaningful, manpower analyses and labour market analyses that are a part of manpower planning, would be extremely useful (Tilak 1995), particularly for specialised human capital categories like engineering manpower.

Conflict of Interest

No conflict of interest was reported by all authors.

References

[1] Adams, R., D. Evangelou; L. English; A. D. de Figueiredo; N. Mousoulides; A. L. Pawley; C. Schifellite; Reed Stevens; M. Svincki; J.M. Tenor; & D.M. Wilson (2011). Multiple Perspectives on Engaging Future Engineers, Journal of Engineering Education, 100(1): 48–88.

[2] AICTE (2003): Revitalising Technical Education: Report of the Review Committee on AICTE [Chairman: U R Rao]. New Delhi: AICTE.

[3] AICTE. (1999): Technical Education in India in Independent

India: 1947-1997. A Compendium to Commemorate the 50th Anniversary of Independence. New Delhi: All India Council for Technical Education, New Delhi.

[4] AICTE. (2015): Technical Education in India: A Futuristic Scenario (Report of the AICTE Review Committee, 2015). [Chairperson: M.K. Kaw]. New Delhi: All India Council for Technical Education.

[5] AICTE. (2018): Engineering Education in India: Short- and Medium-Term Perspectives. [Report of the Committee chaired by B V Mohan Reddy]. All India Council for Technical Education, New Delhi.

[6] AICTE. (2019, 2020). All-India Council for Technical Education. https://facilities.aicte-india.org/dashboard/pages/dashboardaicte.php (accessed 20 May 2020).

[7] Altbach, Philip G., & Mathews, Eldos (2021). Too many IITs, Unrealistic Expectations. The Hindu 20 (February).

[8] Aspiring Minds (2019). National Employability Report: Engineers. 2019. Gurugram, India.

[9] Badran, I. (2007). Enhancing Creativity and Innovation in Engineering Education, European Journal of Engineering Education, 32(5): 573–585.

[10] Bhargava, R.N. (2001): Present Engineering Education in India — An Emerging Economy — And a Glimpse of the Scenario in the 21st Century. In: Educating the Engineer for the 21st Century. (Eds.: Weichert, D., Rauhut, B., & Schmidt, R.) (pp. 77-80). Springer, Dordrecht.

[11] Blom, Andreas & Saeki, Hiroshi (2011): Employability and Skill Set of Newly Graduated Engineers in India. Policy Research Working Paper 5640. World Bank, Washington DC.

[12] Dubey, A., A. Mehndiratta, M. Sagar, & S. Kashiramka (2019). Reforms in Technical Education Sector: Evidence from World Bank-Assisted Technical Education Quality Improvement Programme in India, Higher Education 78 (2): 273-299.

[13] Ernst & Young (2017). Future of Jobs in India – A 2022 Perspective. Kolkata.

[14] Hodgman, Matthew, R. (2018): Understanding For-Profit Higher Education in the United States through History, Criticism, and Public Policy: A Brief Sector Landscape Synopsis, Journal of Educational Issues 4(2) (July): 1-14

[15] Khare, Mona & Sonam, Arora (2021) Job-less Growth in India: Employment-Unemployment of Educated Youth, In: Higher Education, Employment and Economic Development (eds. R K Mishra, S K Kujur & K Trivkram), Routledge. (in press)

[16] Kinser, Kevin, and Levy, Daniel V. (2007): For-Profit Higher Education: U.S. Tendencies, International Echoes, in: International Handbook of Higher Education (Eds.: Forest, James J. F.; & Altbach, Philp G.) (pp. 107-19). Springer, Netherlands.

[17] Kirp, David, L. (2003): Shakespeare, Einstein, and the Bottom Line: The Marketing of Higher Education. Cambridge. MA, Harvard University Press

[18] Loyalka, P., Carnoy, M., Froumin, I., Dossani, R., Tilak, J.B.G., & Yang, P. (2014). Factors Affecting the Quality of Engineering Education in the Four Largest Emerging Economies, Higher Education 68(6) (December): 977–1004.

[19] Mehrotra, Santosh & Parida, Jajati K. (2019). India's Employment Crisis: Rising Education Levels and Falling Non-agricultural Job Growth. CSE Working Paper 2019-04. Centre for Sustainable Employment, Azim Premji University, Bengaluru

[20] MHRD: Ministry of Human Resource Development (2011). All India Survey on Higher Education 2010-11. Government of India, New Delhi.

[21] MHRD (2019), All India Survey on Higher Education 2018-19. Ministry of Human Resource Development, Government of India, New Delhi.

[22] MHRD (2020). National Education Policy 2020. Government of India, New Delhi.

[23] Nanda, Prashant K. (2018). India Jobs Crisis: How Accurate is EPFO Payroll Data? Mint (31 Oct 2018).

[24] NASSCOM & McKinsey (2005): NASSCOM and McKinsey Report 2005: Extending India's Leadership of the Global IT and BPO Industries. New Delhi: NASSCOM and McKinsey.

[25] Panchamukhi, P.R. (1987). Graduates and Job Markets. Occasional Paper 74. Paris: UNESCO-IIEP.

[26] Roy, Subhashri (2020). 80 Percent of Indian Engineers Unemployed: AISHE 2019, (July 15, 2020). https://www.collegedekho.com/news/indian-engineering-graduates-employability-trends-18148/

[27] Sahin, M. (2010). The Impact of Problem-Based Learning on Engineering Students' Beliefs about Physics and Conceptual Understanding of Energy and Momentum, European Journal of Engineering Education 35 (5): 519–537.

[28] Sengupta, Aninndita (2017). Mismatch between Skills and Jobs in Indian Labour Market during the Post-Reform Era: Estimates with Unit Level Data. IARIW-ICIER Conference on Experiences and Challenges in Measuring Income, Inequality and Poverty in South Asia. New Delhi, India (November 23-25). http://www.iariw.org/India/sengupta.pdf

[29] Statista Research Department. (2020). Reports. https://www.statista.com/statistics/1043283/india-hiring-rate-engineers/

[30] Subramanian, B. (2015). Engineering Education in India: A Comprehensive Overview. In: International Perspectives on Engineering Education. Philosophy of Engineering and Technology (Eds.: Christensen S., Didier C., Jamison A., Meganck M., Mitcham C., & Newberry B.) Vol 20. (pp. 105-23). Springer, Cham.

[31] TEQIP (2020). Technical Education Quality Improvement Programme, The Government of India and the World Bank. https://www.teqip.in/ (accessed 24 February 2021)

[32] Tilak, Jandhyala B.G. (1995). Has Manpower Planning any Future in Educational Planning in a 'Marketised' Economy? In Impact of New Economic Policy on Manpower and Employment in India (eds.: K. Raghavan, K., Sharma, & Harsh Sekhar, L.) (pp. 252-70). New Delhi: Agricole for Institute of Applied Manpower Research.

[33] Tilak, Jandhyala B.G. & Choudhury, P.K. (2021). Paradoxes and Contradictions in the Growth of Engineering Education in India: Challenges and Prospects. Working Paper CSD 1/2021. New Delhi, Council for Social Development UGC.

(2018). Annual Report 2017-18. New Delhi

[34] UNESCO (2010). Engineering: Issues, Challenges and Opportunities for Development. United Nations Educational, Scientific and Cultural Organization, Paris, France. Wheebox (2020). India Skill Report 2020. Gurugram, India.

[35] Winberg, C., Bramhall, M., Greenfield, D., Johnson, P., Rowlett, P., Lewis, O., Waldock, J., & Wolff, K. (2020). Developing Employability in Engineering Education: A Systematic Review of the Literature, European Journal of Engineering Education 45 (2): 165-180.

[36] WDR: World Development Report (2019). World Development report 2019, The Changing Nature of Work. World Bank, Washington, DC.

The Current Situation and Optimization Strategy of Paper Books Utilization in University Library

Weiguo Xie

Library of Zhongyuan Institute of Technology, China

Abstract: Paper books and documents are the main media of information service in most university libraries. In order to study the main reasons for the decline of the utilization rate of paper books in university libraries, this paper takes a well-known university library in China as an example, discusses the current situation of its low utilization rate of paper books and the reasons for the problems, and puts forward relevant optimization strategies, so as to promote the improvement of the construction quality of university libraries in China.

Keywords: University library; Paper books; Utilization rate; Optimization strategy

1 Introduction

For a long period of time in the future, paper book service is still the basis of document information service of university library. Scholar Wu Juan objectively analyzed that the main reason for the increasingly low utilization rate of paper books in university libraries is that under the background of the information age, people have more abundant and convenient ways to obtain information[1]. In order to completely improve this situation, we must constantly optimize the library service mode, so that paper books resources become the main source of readers' knowledge information again; Lin Jinzhu combined with the actual survey results of some university libraries, proposed to enhance the utilization rate of paper books in the library through strengthening the construction of professional talent team, focusing on the needs of readers, optimizing the collection structure, and effective reading guidance; Lin Lijuan takes Xinjiang Tarim library as an example, expounds the current situation of the library's low utilization rate and the reasons for the problems, and puts forward corresponding optimization measures, so as to effectively improve the situation of the library's low utilization rate of paper books[2, 3]. Combined with the research results of many scholars, this study finds out the reasons for the low utilization rate of paper books in university library through the comparative analysis of the collection and borrowing amount of paper books in a university library from 2014 to 2017, and puts forward relevant optimization strategies, hoping to provide help for the construction of university library in China.

2 Analysis on the current situation of paper books utilization in university library

Through the comparative analysis of the collection and borrowing of paper libraries in domestic university libraries from 2014 to 2017, the utilization rate of books is decreasing year by year. It can be seen from table 1 that during 2014-2017, the utilization rate of paper books in the university library is low, only reaching 25.3%. There are only 8 kinds of books with large average annual borrowing volume, such as B, F, G, H, I, J, K and O. The average annual borrowing amount is less than A, C, E, N, R, etc. From the analysis of annual average circulation, most of the books with large circulation are social science books, while the circulation of science and technology books is low. This phenomenon shows that with the change of social structure and talent

structure, college students tend to pay more attention to social science than science and technology, and pay more attention to cultivation than specialty; In literature books, students tend to read recreational books, but the amount of professional books is very small. The main reason is that most students' learning attitude is still in the exam, only a small number of students can calm down to soak in the library and study professional knowledge; From the perspective of reader types, the main objects of borrowing books are still college students, accounting for about 86% of the total amount of borrowing books, and teachers only account for 8.9%; Graduate students accounted for 0.8%. Others accounted for 4.3%.

Table 1. Analysis on the current situation of paper books utilization in university library

Book classification	2014	2015	2016	2017	Total number of books on shelves	Book Utilization in 2017
A	1108	985	753	192	2826	6.8%
B	22625	12598	9872	6960	38830	17.9%
C	5998	4002	3560	2580	7560	34.1%
D	13000	8750	7970	5002	15600	32.1%
E	1030	890	750	530	1900	27.9%
F	16282	11040	7850	5005	18900	26.5%
G	11937	9980	8720	4560	16606	27.5%
H	44130	36520	24800	10220	49400	20.7%
I	78520	68985	57890	35890	89000	40.3%
J	8619	7890	6895	3001	8800	34.1%
K	17968	14200	10065	2580	28520	9.1%
N	740	685	592	338	1850	18.3%
O	12205	10052	8798	6630	24560	27.0%
P	755	668	528	338	989	34.2%
Q	6980	5560	4630	3003	17530	17.1%
R	7589	6550	5105	2895	17990	16.1%
S	14298	12280	10056	7200	25005	28.8%
T	43500	40002	38998	22405	46690	47.9%
X	855	708	501	289	29945	1.0%
Total	282669	204006	151111	119618	473550	5.3%

3 Analysis on the reasons of low utilization rate of paper books in university library

3.1 Paper library collection lacks rationality

From the current actual situation of the construction of university libraries in China, many universities only want to expand the amount of information, there is a certain blindness in the process of expanding the library collection, there is no suitable channel, especially for some unpopular books, on the basis of no certain market research to expand at will, you know, this kind of book itself has few readers, which is very important for the library Itself, no doubt increased the cost burden, but also makes the administrator's work more difficult.

3.2 The impact of e-books

Carrier is the most significant feature of paper books, which must exist in the form of books, books and frames. However, due to the limitation of working and learning time, many college teachers and students do not have too much time to read books at all, and often only get the desired knowledge and information through short time reading; In addition, it is difficult and relatively fixed to carry the paper books. For example, if a student wants to go to the library to read the historical records, he must first confirm whether the book has been returned. If there are still students reading, he will lose the reading conditions. But the increasingly convenient network terminal can avoid this problem. Students only need to download the app terminal to get the knowledge information they want anytime and anywhere. In this context, more and more readers tend to read e-books, which makes the utilization rate of paper books in the library decline rapidly.

3.3 The service management of the library can't keep up

The defect of management mode is a common problem in many university libraries in our country. Influenced by the traditional education mode, many libraries still regard themselves as the main body of management. However, with the development of

society, the development of university libraries should regard service as the main body of management. Once the management fails to keep up, readers will not be able to enjoy the services they should have. As time goes by, they will not like the library and will not be willing to go to the library again. In this way, a large number of books can only lie in the library, no one cares, and the utilization rate cannot be guaranteed.

3.4 The quality of library staff is low

Library management has certain complexity. Therefore, librarians must have high comprehensive quality to be competent for this work. However, many libraries ignore this point when hiring librarians. They often only pay attention to the management ability of candidates. In their work, such personnel can only manage the readers' borrowing situation, However, the ability of book maintenance and reader knowledge guidance is relatively lacking. Over time, the overall quality of the library is reduced, which seriously affects the utilization rate of paper books in the library.

4 Strategies for optimizing the use of paper books in university libraries

4.1 Optimize book purchasing strategy

From the analysis of the borrowing behavior characteristics of university libraries, the characteristics of books are not the same because of their different categories. Therefore, when purchasing paper books, university libraries should combine the characteristics of books of different disciplines and choose them by classification. For example, social science books generally have a strong life cycle, so when purchasing, we should combine the library collection, according to the history of academic development and academic heritage pedigree, and do a good job of leak detection and vacancy filling; For the natural science books with short life cycle, we should keep up with the development of the times, keep up with the hot topics of the subject, purchase them according to the specific research direction of our teachers and students, and pay more attention to the new works of domestic authors in the near future.

4.2 Strengthen the construction of library professional talent team

Influenced by the post establishment and salary, many university libraries are not attractive to library management talents, and even there is a phenomenon that retired staff or teachers' family members act as library management personnel. These people are neither professional library management personnel nor outstanding people. They often work with low enthusiasm in specific posts, and only want to live a comfortable life from nine to five This leads to the shortage of high-quality library management talents.

Library reading promotion, setting up high-quality library collection structure, library personalized reader service and the application and promotion of new technology all need comprehensive talents in line with the development of university library in the new era. Therefore, in order to achieve great development, university library must absorb a number of high-quality talents. Only by strengthening the construction of talent team, can university library manage. The management work was carried out in an orderly manner. In the construction of the talent team, we must strictly check the quality of the employed talents, and ensure that the employed talents are "talents" in the true sense. For the appointed talents, we should retain them by improving the welfare and other ways to prevent the loss of talents. Secondly, the school personnel department should strengthen the sincere cooperation with the library management personnel, establish a sound incentive system, through the incentive system to make each librarian's work enthusiasm and potential to give full play, and lead the library towards new vitality and new service.

4.3 Effective reading guidance to promote spiritual growth

If reading cannot occupy all the hearts of a student, then he cannot have the will to learn, his spiritual civilization will be lack, when the temptation of the virtual network world, it is often easy to be tempted. Therefore, when students sit in the library, the librarian should give them the necessary guidance, guide them to read effectively, and promote their spiritual growth. From this point of view, the librarian must be full of poetry and books, with rich books in mind, which can not only help students find their own books, but also guide students to explore their own interests through reading, thinking and exploring in[4]. For college students, the librarian is their closest partner. They get along with each other day and night in their four-year learning career. Therefore, they know the students' thoughts, life and learning

situation best. Based on this, we can recommend excellent and suitable books according to the different learning stages of students.

When recommending books to readers, librarians should make full use of big data analysis technology, apply personalized search on the basis of understanding readers' reading habits and preferences, and recommend the most suitable books for readers. When readers can roam in the "sea of books", many problems about students will be solved.

4.4 Creating a good reading environment

Marx, a great thinker, thinks that "People can create environment, and the same environment can create people.". For the university library , in order to make the library play its due role, the hardware facilities must be complete, such as the desks and chairs in the reading room should be clean and tidy, the space area and height should be moderate, and the software facilities also need to meet the needs of readers, such as the indoor light is bright and soft, the interior decoration color and layout have style, which can fully reflect the cultural atmosphere of the library. In addition, the lockers in front of the reading room should be sufficient, convenient and safe to use. Because the reading time of different groups of people is different, in order to ensure that every reader has a book to read, the library should adjust the service time reasonably according to the reading needs of different groups of people, especially the opening work on holidays. As the third largest space for students in addition to classrooms and dormitories, the library should not be too monotonous and rigid for the decoration of the reading room at the beginning of the construction, but should give students a warm feeling, such as planting green plants and matching with micro artificial gardens. In order to meet the diverse needs of readers, the library can also open reading bar, discussion corner and other activities, so that readers can learn in a pleasant atmosphere, so as to achieve the purpose of improving the utilization rate of the library.

5 Conclusion

Although the utilization rate of paper books in university library is declining year by year, for a long time in the future, paper books will still be the main collection of university library and the mainstream borrowing choice of teachers and students. Therefore, in the face of the plight of low utilization rate of paper books, the library should face the dilemma, find out the reasons for the low utilization rate of paper books, and make corresponding adjustments, so as to effectively improve the number of books borrowed, and better play the important role of paper book resources.

References

[1]   Wu J. The problem of low utilization rate of paper books in Library and its solution [J]. Modern Economic Information, 2016(7): 05.

[2]   Lin JZ. Research on the strategy of improving the utilization rate of paper books in Independent College Library [J]. China Management Informatization, 2018(8): 1.

[3]   Lin LJ. Investigation and analysis on the utilization of paper books in newly upgraded university library -- Taking Wuyi university library as an example [J]. Journal of Wenshan University, 2015(9): 7.

[4]   Zhang L, Chen X. Survey and analysis on the utilization rate of college library books [J]. Agricultural Network Information, 2013(5): 26.

Thoughts on the Management of Personnel Files in Higher Vocational Colleges in the Context of "Double High Plan"

Litao Cui

Zibo Vocational Institute, Zibo 255300, Shandong Province, China

Abstract: Starting from the background of the "Double High Plan" in conjunction with the role of personnel file management in advancing the "Double High Plan", this paper analyzes the current status of personnel file management in higher vocational colleges and the necessity of personnel management in higher vocational colleges, and explores the effective measures to strengthen the informatization of personnel files management to make it more reasonable, standardized and informatized.

Keywords: Double High Plan; Personnel File Management in Higher Vocational Colleges; Strategy Research

1 Introduction

In April 2019, the Chinese government launched the "High-level Higher Vocational Schools and Professional Construction Plans with Chinese Characteristics" (referred to as the "Double High Plan"), which is another major strategic move after the building of national exemplary higher vocational colleges. The "Double High Plan" aims to create a highland for training technical talents and a technical innovation service platform, guiding vocational education to serve the national strategy, integrating regional development, and promoting industrial upgrading. Personnel file management is an important foundation for the personnel work in higher vocational colleges. In the service of "Double High Plan", the archives department plays an important role due to its abundant resources. Starting with the ten tasks of the "Double High Plan", Wang Shuxian analyzed the new requirements of the Double High Plan for the archives department, in conjunction with the role of file management in advancing the "Double High Plan" and the current status of file management in higher vocational colleges, further sorted out the research ideas for the paths of innovative archives management, and proposed to strengthen the top-level design of the archives department of higher vocational colleges in the context of the "Double High Plan" and the building of the institutional system etc[1]. Song Yanyu pointed out in the "Inquiry into the Construction of Personnel File Management in Higher Vocational Colleges" that: As an important part of higher vocational college management, personnel file management needs to adapt to the requirements of modernization and informatization[2]. Based on the analysis of the current status and necessity of personnel file management informatization, effective measures for personnel file management informatization were put forward; regarding the standardized management of personnel files in higher vocational colleges, scholar Yu Fengxian proposed that personnel file management is an important part of the personnel work in higher vocational colleges. With the implementation of personnel management reforms in recent years, there are higher requirements for the management of personnel files in higher vocational colleges[3]. There are still some problems in personnel file management, among which the lack of standardization is rather obvious. Therefore, in the process of file management, reasonable methods should be used to promote the realization of standardization.

2　Current status of personnel file management in higher vocational colleges

In order to better explore the management of personnel files in higher vocational colleges in the context of the "Double High Plan", this paper analyzes the current status of file management in higher vocational colleges.

(1) Not paying attention to the management of personnel files. Personnel file management plays an important role in the management of higher vocational colleges. Many people have biases in their understanding of file management and ignore its importance. Meanwhile, the administrator's own awareness in file management is weak, and it is difficult to achieve the goal of improving the standard of personnel file management.

(2) The archive service lacks initiative. Currently, many archivists in higher vocational colleges are not motivated to work, and their departments are not concerned about their work. Meanwhile, they will not take the initiative to inquire other relevant departments about their needs. If archival staff can actively search and integrate data during the work process, establish a relevant resource library, and then screen and check, the information sorted out will be more comprehensive.

(3) The level of personnel file management is not high. Due to the continuous expansion of higher vocational colleges, the management of personnel files has been left out and the internal management level is poor. Although they have begun to realize the importance of file management and have taken corresponding countermeasures to improve the quality of file management, they still face some difficulties. For example, the staffs are not flexible in the process of collecting and organizing daily archives, not using high-efficiency technical means to assist the work, the overall job quality is poor, and there is no in-depth research and analysis on the file information, all of which will reduce the level of personnel file management.

(4) The lack of integration of archive data resources. In the context of the "Double High Plan", informatized file management is an important part of archival work. Data show that most of the informatized file management work in higher vocational colleges is in a weak phase, especially in terms of data governance, and the information service capabilities are not convenient enough. Data compatibility and integration are difficult to achieve with many systems in the schools (such as office OA, scientific research system, educational administration system, file system, etc.), resulting in a lot of data that is difficult to use efficiently, and the decision-making support function of files is ineffective.

(5) The personnel file management facilities are backward. With the expansion of the operating scale of college education, the internal structure has also changed. In the management of personnel files, it is bound to use the corresponding hardware facilities to improve the level of file management. However, the actual situation is different, especially the hardware facilities in the management of personnel files in higher vocational colleges are in a backward state, the facilities are outdated and damaged, the internal environment is poor, and the overall quality of personnel file management is low.

(6) Lack of training for archive staff. In the context of big data, various systems overlap in application, and there are certain requirements for file data resource archiving and data integration. Archival staffs need to regularly improve their professional skills, scientifically archive data resources, and use IT technology to promote the reasonable use of compiled research results.

(7) Lack of personnel file management system. In the management of personnel files in higher vocational colleges, not only is skills training needed, but also a well-established system is needed to improve the entire personnel file management system, which is the basis for improving the level and quality of file management. According to survey data, the personnel file management system in higher vocational colleges is not perfect, and the corresponding system is not established according to the current status. There are loopholes in the entire management system and it is difficult to meet the needs of file management. The management system established is superficial and has difficulty playing its roles.

2　The necessity of personnel file management in higher vocational colleges

(1) Conducive to the reform and development of the personnel system in higher vocational colleges. The previous personnel file management system is

relatively outdated, and the manual management model can no longer adapt to the development of the times. The informatization and standardization of personnel file management is an innovation to the traditional system of personnel file management. With the development of higher vocational education, the demand for skilled talents in higher vocational colleges continues to increase. The turnover of personnel in higher vocational colleges requires the personnel management department to update talent information in a timely manner so as to adapt to the development of higher vocational education.

(2) Conducive to improving the efficiency of personnel file management. The informatization and institutionalization of personnel file management makes the efficiency of archival work more convenient. The informatized management of files is the top priority of archival work, optimize and upgrade file management to make data compatible and integrated.

(3) Conducive to playing the roles of talent database. In the process of institutional reform and the rapid development of higher education, colleges urgently need excellent teachers, and the advantages of personnel departments in colleges and universities have been demonstrated. Talent training, talent allocation, and talent discovery should be the focus, and talents should be recruited into educational positions. In the process of talent recruitment, personnel files can provide information and data for many colleges.

(4) Conducive to better safeguarding the rights and interests of faculty and staff. As historical evidence, the personnel file has obvious legal effects. The personnel file plays a very important role in the process of job title conferment, retirement, and salary promotion, etc. In addition, the personnel file plays an active role in policy implementation and resolution of historical issues by providing effective clues.

3 Measures for standardization and informationization of personnel file management in higher vocational colleges

(1) Strengthen the top-level design and build an institutional system. The top-level design plays a guiding role. The school incorporates archival work into the school's annual planning and assessment, and the work responsibilities are clearly defined in the work plan. The archives department improves various rules and regulations, formulates work plans, strictly implements reward and punishment measures, reflects the school's connotation construction in the system, and builds a well-established institutional system.

(2) Establish a database and promote the process of high-level faculty building. Higher vocational education cultivates skilled talents, each with its own characteristics in professional settings. Therefore, the building of a scientific and characteristic faculty database is an important part of the archives information resources in higher vocational colleges. Relevant archive resources are of great value for high-level faculty building. The personnel files department must fully understand this importance, establish a characteristic resource library scientifically and reasonably, actively serve the "Double High Plan", and provide characteristic professional resources and technical support for the precise building of high-level professional groups.

(3) Speed up the level of file informatization, promote data governance, and improve information service capabilities. With the country's strong push for digital archives, some progress has been made in the digitalization of archives in some higher vocational colleges, but it still needs to be accelerated. With the file data characteristics becoming increasingly obvious, file data is in urgent need of integration, especially under the "Double High Plan", it is necessary to strengthen the modernization of university governance and improve information service capabilities.

(4) Strengthen team building, improve comprehensive literacy, and comprehensively serve various tasks. As the subject of file management, archives staff must strengthen training regularly to keep pace with the times. In conjunction with the practical work, the author believes that due to the particularity of their work, the archivists in higher vocational colleges should have certain ideological and political education skills on top of the basic literacy of archivists.

(5) Focus on the implementation of the right-to-know of the files. In the context of the "Double High Plan", personnel files have been transmitted more frequently, and higher vocational colleges have gradually realized the importance of right-to-know of the files. In the management of personnel files, higher vocational colleges should pay attention to the implementation of the right-to-know of the files

and establish a modern management concept so that the subject of the personnel files have more right-to-know. In addition, it is necessary to stipulate the scope of personal inspection on personnel files and implement confidentiality work. Non-authorized inspections should be prohibited.

4 Conclusions

The launch of the "Double High Plan" puts forward new standards for the educational development of higher vocational colleges and aims to strengthen the schools' connotation building. Starting from the background of the "Double High Plan" in conjunction with the role of personnel file management in advancing the "Double High Plan", the current status of personnel file management in higher vocational colleges and the necessity of personnel management in higher vocational colleges were analyzed, and explored the effective measures to strengthen the informatization of personnel files management to make it more reasonable, standardized and informatized while modernizing the building of higher vocational colleges.

References

[1] Wang SX. Research on the innovation of file management in higher vocational colleges under the background of "Double high plan" [J]. Inside and Outside Lantai, 2020(34): 16-18.

[2] Song YY. Exploration on the information construction of personnel file management in higher vocational colleges [J]. Shipbuilding Vocational Education, 2020, 8(06): 67-69.

[3] Yu FX. Thoughts on the standardized management of university personnel file [J]. Inside and Outside Lantai, 2020(25): 28-30.

The Embodiment and Analysis of Feminism in Literature Translation

Yuan Xing

Autonomous University of Barcelona, Barcelona 08193, Spain

Abstract: Chinese culture has been accumulated for five thousand years, and with the development of social civilization, the door of literature has opened to the world. In recent years, feminism has been extremely prominent in literature, and it has been welcomed and respected by the majority of people. In addition, under the influence of various cultural factors, translation has become an indispensable way of writing. The so-called feminism refers to women's social rights and their opinions in society. With the advancement of science, feminism has been widely used by many countries in the world. In the last century, feminist translation theory was regarded as the mainstream translation at that time. It provided room for translation work. At the same time, it also had a certain impact on traditional translation theories. Nowadays, the development of science has entered a new era of information network. Feminist translation theory has become an important basis for translation work. At the same time, the application of feminist theory in literary works is systematically analyzed to enable women's social status and personality values been enhanced in literary works, thus highlighting the positive image of women.

Keywords: Feminism; Translation theory; Literary works

Chinese Library Classification Number: H315.9
Document Identification Code: B

1 Characteristics

Feminist translation theory originated from the Western women's liberation movement, and its formation was based on the duality of men and women. The content not only denies the existence of gender differences, but also transforms and improves traditional translation tremendously, and attaches great importance to the subjectivity of translators.

2 Gender in Translation

According to what the "Bible" says, it is more often translated from the male perspective such as masculine language, masculine images, and masculine metaphors [1]. In the Bible, God is originally a genderless role, but in the eyes of all living beings, God often represents the image of the father. Doesn't this reflect the supremacy of male power, and the power of women is mostly attached to men, even being ignored. In addition, it is said in the "Bible" that the fall of mankind was caused by Eve. Because of Eve's gluttony of the forbidden fruit, it has become the clue of evil since then, and it has also become the fuse of discrimination against women.

Of course, the interpretation of different dimensions is also very different. In translation theory, because the manifestation of gender differences between men and women is universal in society, the status of female interpreters and women tends to be weak. In fact, gender itself is neutral, however, gender is distinguished because of the difference in the physiological structure of men and women. In today's society, the gender of men and women is a way of maintaining social balance and a manifestation of cultural symbols. Although people

are in different cultural education, their image will change differently on different occasions. In addition, in both China and the West, the power-subordination relationship between women and men has been deeply rooted in people's hearts. China's long-term feudal social system has thoroughly proved this point. Under the feudal system, women have been completely restricted, causing thousands of innocent women being treated with injustice and humiliation for a century. In fact, the independent existence of physical gender separated from power is a fair and just common social gender concept endowed with cultural symbols[2].

Although the difference in physical sex is difficult to be completely eliminated, the society is still absorbing justice from backwardness and gradually improving. The status of women has also been paid more attention. In the contrast, in feminist theories, traditional translations are often feminized, and women are the subject of translation, which means that the translator is subordinate to the author and the translation should also be subordinate to the original text. As far as the work itself is concerned, when society is embodied in the construction of male subjective consciousness, men can control the power to create language and are its owners, while women only have the right to use it, so is translation, nothing more. In fact, translation and women are one body, it is an imitation that is not real, there is no creation at all. In addition, the existence of objective differences in literary translation work is unavoidable. No matter how excellent and talented the translator is, he can only get close to the original text as much as he can. It is impossible to be equal to the original text. Feminist translation theorists believe that if translation is limited to this, Then translation theory must be re-interpreted.

3 Feminist translation view and literary translation

3.1 Feminist translation view

With the infiltration of traditional literary views, most translators believe that writing books is a male career and that women have no early days in the cultural field. This has formed the pattern of "male superior to female inferior" in traditional society, while in patriarchal society, the status of women is very low. However, with the rise of the feminist movement, feminism gradually awakened, and at the same time, feminism was finally released under the long-term suppression of the traditional patriarchal society. This is a subversion of the status of women and a turning point in ending discrimination against women, which in turn promotes the harmony of the relationship between the sexes and the development of the entire society to a large extent. In addition, with the continuous rise of the women's liberation movement, feminist thought has gradually become the focus of literary works[3]. With the improvement of women's status, their rights in society are also increasing. At present, more and more writers are beginning to be interested in literary creation with feminism as the theme. Therefore, feminist literature is expanding in people's field of vision. In addition, in the field of literature, women often play the role of translators. Therefore, translation has gradually become a stepping stone for women to gain a foothold in the field of literature, and at the same time they have written a new chapter for the improvement of feminist status. With the passage of time, the process of translation has become more and more skilled, which has formed a new feminist translation view.

3.2 Literary translation from the perspective of feminism

For the translation of literary works, no matter any language, it is the translation of the culture and connotation of literary works. For women, the translation of literary works is actually a new understanding of themselves, and it is also the spread of the value of feminism in the field of literature. In addition, when translating, it is necessary to take into account its form and charm, and retain its rich cultural connotation, so that the translation can be both form and spirit, and the interpretation is easy to understand. At the same time, in the translation process, the following basic principles need to be followed: First, the target group needs to be regarded as the main body, considering its habits in the translation process of literary works, and mastering its writing subject, so as to achieve more accurate translation to reflect the true value of the text. In addition, when translating, it is necessary to take into account its form and charm, and retain its rich cultural connotation, so that the translation can be both form and spirit, and the interpretation is easy to understand. Further more, in the theory of women's translation, women's translation

behavior not only greatly improves their status in the literary field, but also enables the interpreters to have a newer understanding of feminism in literary works. At the same time, it is necessary to fully understand the content described in the literary works and choose a suitable method to translate them. In this way, the discrimination against women in traditional literature will be completely eliminated, so that more women can devote themselves to literary career. Second, the subjectivity of the translator must be highly valued. Because in literary creation, not only the author's rich thoughts and emotions are infiltrated, but also the profound cultural background. Therefore, there must be no content equivalence in the translated works. In addition, when translating, the reader's reading habits should be combined to master the translator's subjectivity[4]. In feminist translation theory, the translation of the original text cannot be limited to the translation of the language, but must be based on the original text and re-created in combination with its grammatical structure, in order to have a deeper understanding of the importance of feminism in literary translation.

4 The transformation of feminist subjects

The contribution of feminist translation theory lies in its emphasis on changing the subordinate position of the translator in the translation process. Feminism believes that "translation" is the main way for women to enter the field of literature, and women should give full play to their translation privileges as a weapon for power fight. Because women are not born weak, but grow up strong. In addition, the social concept of women's empowerment is the chief culprit of women's power inequality, and it is also a symbolic cultural behavior. Further more, the re-understanding of women has created the formation of feminist translation theory. At the same time, gender differences are also affected by social factors such as different social culture, religious beliefs, and educational differences. In addition, as far as translation is concerned, in order to completely change the dominant position of women, it is necessary to re-establish the feminist translation concept and eliminate the neglect and uncertainty of female consciousness in translation works. It should be known that translation is not only a kind of language decoding, it is also a broad

cultural dimension. In traditional culture, ideology and language images, it is not difficult to see that the creation of feminism in literature is actually a criticism of neglect of women's power. Therefore, the change of the feminist subject reflects the literary value of women to a certain extent.

5 The influence of feminism

5.1 Impact on text cognition

The reader's own cognitive transformation of the text is also the key to feminism's influence on literary translation. For women, refuting male critical standards is not the ultimate goal of feminism, but to deconstruct traditional prejudices and construct a reasonable female reading cognition. From the perspective of human acceptance and understanding of themselves, it is impossible to achieve complete objectivity in the process of understanding, because they cannot resist the limitations of historical time and space and their own reality[5]. However, there is still a big problem in the understanding of translation. Therefore, when translating the text, the translator needs to interpret the text according to the changes in history and culture and the accumulation of life experience. In addition, because of the interactive relationship between translators and cultural traditions, women's translation creations are unique. All in all, translation also needs to consider the time and location, and it will start to understand the original meaning of the text, and then expand, innovate and break through.

5.2 Influence on literary style

In traditional translation, feminism pays more attention to the relationship between literature and reality. At the same time, feminism also criticizes traditional text analysis methods. In addition, in the traditional translation view, literature is regarded as a true portrayal of reality, and feminism has a great influence on the style of literature under the domination of a specific ideology. Not only that, the shaping of men and women is more prominent. Besides, the author's creation is not based on imagination, but on the basis of being affected by a specific ideology and combining actual conditions to expose social relations. Therefore, translators need to understand the author's historical background and combine with the historical environment in

which they are located to reflect their own initiative. Moreover, social context and culture are also crucial to translators. Only by establishing literary creation in a specific ideological field and closely following the mainstream literary trend of thought can the extension and breakthrough of translation be realized.

6 Conclusion

Through the above analysis, we can understand that different translators often have a latent feminist consciousness when translating different works. However, the manifestation of female consciousness does not entirely depend on the translator's gender, but on the translator's educational and social cultural background. The manifestation of feminism in literary creation overturned the restriction of women's social status under feudal socialism, making feminism embark on a higher peak of literature.

References

[1] Wang YP, Shi CL. Interpretation of "Pride and Prejudice" from the perspective of feminist translation [J]. Chinese Construction, 2016(17): 95-96.

[2] Zhang Y, Dong LL. Re-discussion on the embodiment of feminist translation theory in literary works [J]. Journal of Jilin Radio and Television University, 2016(04): 27-28.

[3] Pi XH. Feminist translation theory and literary exploration and analysis [J]. Shan Hua, 2014(20): 163-164.

[4] Zhang W, Lin F. Literary translation practice from the perspective of feminism: Taking the Chinese translation of "Snowflakes and the Secret Fan" as an example[J]. Journal of Beijing International Studies University, 2012, 34(04):1-5+27.

[5] Chen B. Re-discussion on the embodiment of feminist translation theory in literary works: Taking the two Chinese translations of "Wuthering Heights" as an example[J]. Writer, 2010(16): 163-164.

The Level of Accuracy and Grammatical Complexity in Written Texts by Chinese Students

Ling Yu

College of Foreign Languages, Chengdu University, Chengdu 610000, Sichuan Province, China

Abstract: The influence of the first language (L1) on the acquisition of a second language (L2) is inevitable. In addition, when L1 and L2 do not belong to the same language family, a negative influence, i.e., an interference, will occur. The current study aims to investigate the level of accuracy and grammar complexity in texts written by Chinese upper secondary school students from the perspective of language transfer. It involves an analysis of a small corpus comprising 54 texts with the use of the terminable unit (T-unit) measure. The finding shows that the Chinese writers produced a text with only a few error-free T-units largely due to the syntactical transfer from Chinese to English. With regard to grammatical complexity, subordinate clauses are frequent in the corpus but relative clauses are rare.

Keywords: Chinese; English; Writing, Language

1 Introduction

In China, both teachers and their students value the three basic skills of English language, namely, listening, reading, and writing, over speaking, which is normally excluded from school assessment. Among the three examined skills, writing is considered to be the most difficult for second language and foreign language learners (Richard and Renandya, 2002). Chinese learners of English find it a particular struggle because of the linguistic distance between their first language (L1), Chinese, and the target language or second language (L2), that is, English.

Such distance can be defined through measuring the differences in, for example, lexical and morphological structures (Schepens, 2016). It can lead to a negative transfer in the form of errors or avoidance of complex grammatical structures (see Qi, 2009; Zhao, 2011; Huang, 2001). Thus, many Chinese learners often produce English texts consisting of numerous sentences that are erroneous. In addition, their texts are grammatically simple due to lack of an intuitive ability to deal with grammar when writing (Hyland, 2003).

The current study aims to the English texts written by this under-researched population by investigating how frequently they produce errors, what types of errors they tend to commit, and to what extent they are able to vary their word choices and grammatical structures. Put simply, the current study will address the following research questions:

(1) What is the frequency and distribution of the different categories of errors in English texts by average Chinese students?

(2) What is the level of grammatical complexity in English texts by average Chinese students?

From the author's personal experience as an English teacher working in a Chinese upper secondary school, he hypothesizes that there will be a large number of errors in the texts produced by the students because many students, in his experience, have reported difficulties in grasping the grammatical rules of English.

2 Related literature

2.1 The Chinese L1 interference in English writing

The fundamental theory of the psychological

aspect of contrastive analysis (CA), known as the contrastive analysis hypothesis (CAH), indicates that there is a higher chance of success in L2 acquisition or learning if the L1 and L2 are genetically related, i.e., are members of the same language family. On the other hand, if the two languages are contrastively different, for example, English and Chinese, the acquisition of the target language could be expected to be difficult. The CAH also claims that the extent to which the L1 is similar to or different from the L2 determines the degree of difficulty that the learner might experience. Since the difficulty normally takes the form of errors, the greater the difficulty is, the more errors are likely to occur (Lado, 1957, cited in Ellis, 1985). CA, however, was challenged and subsequently revised with regard to the potential to predict errors, the feasibility and necessity of making comparisons between languages, and the applicability to L2 teaching. According to Ellis (1985,), the revised CAH reveals the following:

(1) The difficulty that CA predicts might take the form of avoidance rather than errors.

(2) The interference is more likely to occur when there are some similarities between L1 and L2 rather than when they are totally different from one another. According to the CAH, the Chinese L1 is believed to exert a negative impact on the acquisition of the English L2, as the two languages do not belong to the same language family. The negative transfer could be reflected in pronunciation, vocabulary, semantics, syntax, and culture. However, the current study is concerned only with the syntactical and lexical transfer, as the former may account for the grammatical errors, and the latter may provide an explanation for the lexical errors. It is when the L2 learners encounter difficulties in applying the rules of L2, or lack sufficient knowledge about the rules of the target language that a syntactical transfer from L1 to L2 is likely to occur. Generally, the syntactical features of English differ from those of Chinese; for example, the concept of time is not achieved through the use of different tenses and verb forms, as it is in English. However, the two languages also have certain shared or similar syntactical features, e.g., the subject-verb-object structure (SVO). The similarities can also lead to certain negative transfers from Chinese to English, according to the revised CAH (Ellis, 1985).

2.1.1 The theory of language transfer

Based on the theory of language transfer, there can be numerous types of errors among Chinese learners resulting from the negative transfer of syntax. First, errors in the use of noun phrases are largely concerned with the use of articles. Chinese learners of English frequently encounter considerable difficulty in using articles properly; for example, they may use the indefinite article 'a' to modify 'apple' or omit the article altogether. This is because articles do not exist in Chinese, and there are rules to observe regarding the usage of English articles. Second, the difference in the use of verb phrases between English and Chinese leads to errors because English verb phrases often combine a verb and a preposition while Chinese verb phrases often exclude the preposition. As a result, Chinese learners of English L2 tend to omit the preposition that must follow a prepositional verb, for example the 'in' in the sentence 'participate in the school's activities'. Third, although Chinese and English share the basic SVO typology, Chinese learners of English still produce errors related to sentence structure. They frequently omit words or constituents that are unnecessary or redundant in Chinese when producing an English sentence. For example, when the predicative in Chinese is an adjective, they often unconsciously omit the copular verb (e.g., 'Jack is very honest.', which can be literally translated into the erroneous English sentence 'Jack_very honest', a sentence which is acceptable in Chinese).

In addition, as Chinese and English languages are very distant from each other, it seems impossible to find an English equivalent for each Chinese character in terms of the formality of the language use. Normally, a Chinese character, if translated literally, could correspond to several English words; for example, the character 'buy' could correspond to 'buy' or 'purchase'. But for Chinese ESL learners, it is difficult for them to know that 'purchase' is a formal word while 'buy' is a less formal word. As a result, a Chinese learner of English may say to his friend 'Let me purchase you a meal'. Furthermore, learners often translate Chinese expressions literally into English, for example, 'Good study, day up' is the literal translation of the Chinese expression 'Study well and make progress every day', which means if you study hard, you will make progress every day. The word-

for-word translation of Chinese L1 expressions is normally misunderstood by or incomprehensible to speakers of other languages. In short, these examples show a wide variety of errors that Chinese-speaking learners of English produce which are attributed to their L1 interference.

2.2 Studies on accuracy

The current study adopts the measure of the terminable unit (T-unit), which was invented by Hunt (1965), to analyze the accuracy of written texts. It was defined as one main clause plus the subordinate clauses that are attached to or embedded within it (Hunt, 1965), and it is widely used by many researchers studying language accuracy and complexity (see Scott and Tucker 1974; Larsen-Freeman and Strom, 1997; Nygaard, 2010; Homburg, 1984; Pekins and Leahy, 1980). Similarly, the T-unit has been widely used in second language studies of writing for the purpose of examining second language learners' ability to the utilize the embedding process available in the target language (Sharama, 1980). The number of error-free T-units, i.e., when a main clause, along with its subclauses, does not contain any error, is particularly related to the holistic assessment of written texts (Wolfe-Quintero et al., 1998).

Many studies utilizing the T-unit measure (see Scott and Tucker 1974; Larsen-Freeman and Strom, 1997; Nygaard, 2010; Homburg, 1984; Pekins and Leahy, 1980) are conducted on learners whose first language is close to English, such as Germans, Norwegians, and Swedes. Only a few studies in the China National Knowledge Infrastructure, the most comprehensive gateway of knowledge of academic studies in China, are concerned with Chinese learners using the T-unit measure to examine written accuracy, and even fewer are focused on Chinese upper secondary school students.

2.3 Studies on grammatical complexity

Studies in complexity tend to focus on grammatical or lexical complexity. Wolfe-Quintero et al. (1998) stated that grammatical complexity can be reflected in writing primarily through grammatical variation and sophistication. More specifically, grammatical complexity means there exist various basic and sophisticated grammatical structures in written production. Therefore, the level of grammatical complexity of a written text is not related to the quantities of production units but to how varied or

sophisticated the production units are. Studies of grammatical complexity have involved measures such as the frequency and types of subordinate clauses and the frequency with which the passive voice is used. Kameen (1979) counted the number of adverbial clauses, adjective clauses, and nominal clauses in the compositions produced by two groups of writers within a time framework. He found that these measures were not highly associated with the holistic ratings of the writers, but that 'good' writers tend to produce more clauses of each type than 'poor' writers. Drew (2010) investigated the grammatical complexity of a corpus of texts written at the end of each grade level by a group of Norwegian learners of English during their progression from the 4th to 6th grades. He found that the pupils used noun types most frequently and adjective types least commonly. In addition, the study showed that there was a marked increase in the average number per text of the three word types as the writers became more mature, that is, as they progressed from the 4th to the 6th grade.

3 Materials and methods

3.1 Analysis of the written Texts

The written texts collected for the current study were produced by students in the third and final year from a Chinese upper secondary school (n=800). The writing task was a classroom test, the time limit of which was 30 minutes. The topic was 'Writing About Your Personal Study Habits'. The prompts were presented in Chinese and were required to be included in the written text (e.g., 'Please explain the relationship between study habits and academic performance', which was translated into English as 'illustrate the relationship between study habits and learning outcomes'). After the class, the texts were collected and were divided into nine categories based on their scores awarded by markers, and then six texts were randomly chosen from each category of the nine, constituting a corpus of 54 texts.

Hunt's (1945) T-unit was utilized to measure the accuracy and complexity of the students' writing. This measure was chosen because it can avoid the potential lack of terminal punctuation (see Hunt, 1945 & Drew, 2010). In terms of measuring the accuracy level, the number of errors in the text was counted and related to the total number of words. In addition, the number of error-free T-units and the average number of errors

per T-unit were calculated. The errors were also classified as spelling errors, grammatical errors (e.g., 'good habits is beneficial to us'), and lexical errors (e.g., 'We should work harder and then we can day up'). All these measurements using the T-unit can help address the first research question, that is, 'What is the frequency and distribution of the different categories of errors in English texts by average Chinese students.

Regarding complexity measures, the level of grammatical complexity was measured by counting the number of subordinate clauses and working out the distribution of different subordinate clauses (nominal, adverbial, and relative clauses) (Wolfe-Quintero, 1998). To measure the level of lexical complexity, the numbers of noun types, verb types, and adjective types and their tokens were calculated respectively and compared. The term type refers to the number of unique words in a text or corpus, while the term token refers to the total number of words in a text or corpus, regardless of how often they are repeated. For example, the sentence "By reading we enrich the mind, and by conversation we polish it" contains 12 tokens, but only 10 types, as "we" and "by" are repeated. The more types there are in comparison to the number of tokens, then the more varied is the vocabulary, i.e., there is greater lexical variety (Harrington, 2018). All these measurements using the T-unit can help address the second research question, that is, 'What is the level of grammatical and lexical complexity in English texts by average Chinese students?'

In short, the following measures were adopted to investigate the level of accuracy, and grammatical complexity in the corpus of texts:

Are these the nine categories you mentioned earlier? If yes, it would be better that you make it clear from the beginning rather than introducing them later with no clear indication.

i)The total number of words in a text
ii)The number of T-units
iii)The average length of T-units
iv)The number and type of errors
v)The ratio of the overall numbers of errors to the overall number of T-units
vi)The number and type of subordinate clauses

To ensure the reliability of the measurement, a British professor in the field of applied linguistics was requested to check the measures for a random sample of the texts.

3.2 The Writing task

The writing task was originally in Chinese as follows (the author's translation):

An English newspaper has added a column recently based on the discussion of study habits. Please write an essay in English for the column by using your own experience
(1) Illustrate the relationship between study habits and learning outcomes
(2) Introduce a good study habit and propose suggestions for developing beneficial study habits.
(3) Specify one of your problems with study and present the way for improvement

Attention:

1. The words of the essay should be around 100.

4 Findings

The Chinese L1 exerted an impact on the level of accuracy and grammatical complexity of the 54 texts. The Chinese 12th graders involved in the current study produced T-units that were shorter than those produced by the 12th graders that Hunt (1965) studied. They produced fewer errors than expected but only more than a quarter of T-units are error-free, which indicates the relatively low accuracy level of the texts when compared to those written by students whose L1 is close to English (see Scott and Tucker 1974; Larsen-Freeman and Strom, 1997; Nygaard, 2010; Homburg, 1984; Pekins and Leahy, 1980). They frequently used subordinate clauses, which outnumbered those in the texts produced by Norwegian 10th graders and Dutch 10th graders (Vigrestad, 2010). However, they seldom used relative clauses, which are nonexistent in their L1.

4.1 The length of the texts and T-units in the corpus

Table 1 shows the mean length of the students' essays and T-units in the written corpus.

Table 1. Mean length of student essays and T-units

Unite(*n*=54)	Mean score	Minimum	Maximum
Number of words	133.6	100	171
Number of T-units	13	8	23
T-unit Length	10.3	7.1	15.5

The average length of the 54 texts is 133.6 words, and the average number of T-units per text is 13. Thus, the T-units of the texts average at 10.3 words in length. Hunt (1965) analyzed the written texts produced by the 4th, 8th and 12th graders he chose as subjects. He found that the mean T-unit length of the texts was closely related to the grades. Specifically, the 12th graders on average produced longer T-units of 14.4 words than the 8th graders and the 4th graders, who produced T-units of 11.5 words and of 8.6 words respectively. To conclude, the Chinese learners produced shorter T-units than their western counterparts, which indicates their lower level of writing skills.

4.2 Accuracy

4.2.1 Level of accuracy

Table 2. Average number of T-units, ratio of error-free T-units and average number of errors in the texts

Unite (*n*=54)	Mean score	Minimum	Maximum
Error-free T-units	4.9	0	11
Ratio of error-free T-units	35%	-	-
Average number of errors per T-unit	0.7	-	-

Table 2 shows the error-free T-units, ratio of error-free T-units and average number of errors per T-unit in the texts.

The measure of errors per T-unit (E/T) is one of the most frequently used accuracy measures by scholars investigating the accuracy level of written texts, and it was also employed by the author for the same purpose. The average number of errors per T-unit of the 54 texts was 0.7, that is, each T-unit, whose average length was 10.3 words, contained on average 0.7 errors; this is lower than expected given the significant language distance between English and Chinese, which is normally believed to result in a high occurrence of formal written errors. However, the students' success in 'controlling' or 'reducing' errors might be largely attributable to the fact that they made every effort to avoid errors, as their written texts would be scored on grammatical correctness. Therefore, the unexpectedly low figure for errors per T-unit might be the result of the avoidance of complex structures (Ellis, 1985) and sophisticated vocabulary, which could, in turn, influence the level of accuracy of their written texts.

4.2.2 Classification of errors

Table 3 shows the classification of the errors produced by the students in question.

Table 3. C($\bar{x} \pm s$)

Unite(n=54)	Mean score	Minimum	Maximum
Number of errors	10	2	20
Grammatical errors	6.2	0	16
Lexical errors	3.1	0	7
Spelling errors	0.7	0	4

The errors identified in the present corpus were categorized into grammatical errors, lexical errors, and spelling errors. Of the three types of errors, grammar errors were the most frequent, accounting for 63 per cent of the overall number of errors. The distance between English and Chinese may account for such a high occurrence, as it is so great that there exist few shared grammatical features. In order to internalize the knowledge of English grammar that needs to be mastered, the Chinese students needto overcome the effects of their L1 grammatical knowledge on their L2, or?the students may fail to acquire the target grammatical structures despite making a significant effort. To illustrate, many grammatical errors identified in the corpus could reflect the interference of Chinese grammatical

rules. For example, prepositional verbs missed the preposition, e.g., 'Good study habits can lead good results.'

Lexical errors accounted for the second largest proportion of the errors in the corpus. Lexical errors are those that cause misunderstanding or that are regarded as Chinese-English expressions, most of which were incomprehensible to native speakers of English. The non-target-like written forms seemed to be largely attributable to the negative transfer of L1 expressions or thinking patterns (Ellis, 1985). When the learners identified that English shared a meaning with Chinese, they might have transferred the meaning as if the two languages expressed the meaning in the same way, even though they do not. For example, Good study habits help us to gain great study results, which is the direct translation of the Chinese 'Good study habits help us get good study results', which means 'good study habits can help us to achieve better performance in our studies'.

Spelling errors were the least frequent type of error. This finding was hardly surprising because the students practiced dictation of new vocabulary items on a daily basis in order to avoid spelling errors in writing.

4.3 Grammatical complexity of the texts

The study also seeks to investigate the extent to which the students are able to vary the grammatical structures in their writing assignments/tasks. Wolfe-Quintero (1998) claimed that grammatical complexity can be reflected in writing primarily through grammatical variation and sophistication. He argued that grammatical complexity means that a wide variety of both basic and sophisticated structures are available. The current study measures the level of grammatical complexity by counting the number of subordinate clauses and the distribution of the types of subordinate clauses: nominal, adverbial, and relative clauses.

Table 4. Subordinate clauses in the texts

Unite(n=54)	Mean score	Minimum	Maximum
Number per text	7.6	4	15
Nominal	5.5	2	13
Adverbial	1.6	0	5
Relative	0.5	0	3

The average number of subordinate clauses in the analyzed texts was 7.6, and the average number of T-units was 10.3, which means the T-units contained on average 0.6 subordinate clauses. The average number of subordinate clauses per T-unit for the texts (0.6) analyzed by the current author compared favorably with that in the corpora of texts produced by Norwegian 10th graders (0.48) and Dutch 10th graders (0.48) (Vigrestad, 2010). However, it should be noted that the Norwegian and Dutch 10th graders may have produced more subordinate clauses per T-unit than the Chinese learners in question when they progressed to the 12th grade, since a number of empirical studies (see Drew, 2010) have shown that there exists a linear relationship between the increasing frequency of subordinate clauses and the progression through school levels. Furthermore, Norwegian and Dutch learners are assumed to acquire the English language more smoothly and rapidly than their Chinese counterparts due to the fact that the Norwegian and Dutch languages come from the same language family as English, which could facilitate the

acquisition in EFL writing.

It is noticeable that relative clauses accounted for only 6 per cent of the total number of subordinate clauses, while nominal clauses made up 72 per cent, followed by adverbial clauses with 21 per cent. The distribution of subordinate clauses in this corpus is consistent with that of the corpora analyzed by other researchers, for example, Drew (2010) and Vigrestad (2006), but the occurrence of relative clauses is extremely low in the 54 texts. One interpretation of this could be due to the fact relative clauses do not exist in the Chinese language, while other types of subordinate clauses do. Therefore, the students were less likely to use relative clauses in English writing as a result of avoidance (Ellis, 1994: 304). these writers might have not fully acquired the knowledge of English relative clauses and thus may have deliberately avoided using the clauses in order not to produce errors that would result in the loss of marks. The students were, however, expected to produce English-like relative clauses, which are often regarded as an indicator of the maturity of writers

because many researchers (e.g., Hunt, 1966) reported that learners are likely to produce more relative clauses as they progress through the levels of school. Thus, this might explain the reason for fewer use of relative clauses in their texts. Another explanation for the scarcity of relative clauses could be that relative clauses are the least frequent of the three subordinate clause types among native speakers as well (Drew, 1998).

5 Conclusion

This study has analyzed the accuracy and complexity in written English in a group of of Chinese upper secondary students. The subject for the thesis was of great interest to the author, who had been an English teacher in a Chinese upper-secondary school. The study aimed to find out the frequency and distribution of the different categories of errors produced by the students, and the level of grammatical in their texts.

The 54 analyzed written texts were produced by 54 student writers under an exam condition. The essay topic was 'personal study habits' and the minimum length requirement was 100 words. One of the aims was to measure the distribution and frequency of grammatical, lexical and spelling errors. The methods applied included counting the T-units and the mistakes in each text to work out the ratio of error-free T-units to T-units. It also included counting the three categories of mistakes to work out the ratio of the categories to each other. Another aim was to measure the distribution and frequency of nominal, adverbial and relative clauses. The method employed was to identify and count three categories of subordinate clauses (nominal, adverbial and relative) and work out the ratio of the categories to each other. The result of the distribution of the three categories of errors was as expected. The grammatical errors were most frequent. This was probably because English grammar is difficult for Chinese-speaking learners to learn due to the differences in structures and because the students were unable to apply the consciously learned, although not acquired, grammatical rules in a timed exam. In contrast, the spelling errors were the least frequent. This might be largely due to the fact that the students practiced dictation of new vocabulary items almost every day and had got accustomed to memorizing learning materials because

of the Chinese tradition of studying ancient prose, which requires learning by rote.

The Chinese students also produced more subordinate clauses than the author expected based on his experience as an English teacher. The students might have been instructed to use subordinate clauses to impress the markers to get higher scores. The result showed that nominal clauses were most common, which was consistent with the finding of the studies conducted by other researchers (e.g. Drew, 2010). What was surprising was the rarity of relative clauses, which accounted for 6 per cent of subordinate clauses in the collected texts, although relative clauses had been reported as the least frequent types of subordinate clauses by other researchers (e.g. Vigrestad, 2006). This extremely low occurrence of relative clauses might be largely because relative clauses do not exist in Chinese and partly because the students tried to avoid using relative clauses in order to not run the risk of committing mistakes.

References

[1] Drew, I. 1998. Future Teachers of English: A Study of Competence in the Teaching of Writing. Kristiansand: Høyskoleforlaget.

[2] Drew, I. 2010. 'A longitudinal study of young language learners' development in written English'. Norsk Lingvistisk Tidsskrift, 28, 193-226.

[3] Ellis, R. 1985.Understanding Second Language Acquisition. Oxford: Oxford University Press.

[4] Hirano, K. 1991. 'The effect of audience on the efficacy of objective measures of EFL proficiency in Japanese university students'. Annual Review of English Language Education in Japan, 2, 21-30.

[5] Ellis, R. 1985.Understanding Second Language Acquisition. Oxford: Oxford University Press.

[6] Homburg, T. J. 1984. 'Holistic evaluation of ESL compositions: Can it be validated objectively?' TESOL Quarterly, 18, 87-107.

[7] Hyland, K. 2003. Second Language Writing. Cambridge: Cambridge University Press.

[8] Lado, R. 1957. Linguistics Across Cultures: Applied Linguistics for Language Teachers. Ann Arbor, Michigan: University of Michigan.

[9] Larsen-Freeman, D. and V. Strom. 1977. 'The construction of a second language acquisition index of development'. Language Learning, 27, 123-34.

[10] Nygaard, A. M. 2010. An Investigation of Accuracy in the Written English of Upper Secondary Vocational School

Students. Master's Thesis: University of Stavanger.

[11] Perkins, K. and R. Leahy. 1980. 'Using objective measures of composition to compare native and non-native compositions'. In R. Silverstein (Ed.), Occasional Papers in Linguistics, No.6, 306-316. Carbondale: Southern Illinois University.

[12] Scott, M.S and G.R. 'Tucker. 1974. Error analysis and English-language strategies of Arab students'. Language learning, 24, 69-97.

[13] Sharma, A. 1980. 'Syntactic maturity: Assessing writing proficiency in a second language'. In R. Silverstein (Ed.), Occasional Papers in Linguistics, No. 6, 318-325.

[14] Silva, T. 1993. 'Toward an Understanding of the Distinct Nature of L2 Writing: The ESL Research and Its Implications. TESOL Quarterly 27, 657-77.

[15] Vigrestad, A. 2006. Complexity and Fluency in the Written English of Norwegian and Dutch 7th and 10th Graders. Master's Thesis: University of Stavanger.

[16] Wolfe-Quintero, K., S. Inagaki and H.Kim.1998. Second Language Development in Writing: Measures of Fluency, Accuracy and Complexity. Honolulu: University of Hawaii Press.

An Analysis of the Linguistic Characteristics of Singlish

Zhuoyang Li

Shaanxi Xueqian Normal University, Xi'an 710100, Shaanxi Province, China

Abstract: Influenced by social contexts and multilingualism, Singlish has developed into its own linguistic features, especially in its pronunciation, lexicon, and syntax. This paper gives an overall analysis of linguistic feature of Singlish followed by examples, presenting how Singlish is different from Standard English.

Keywords: Singlish; Example; Singapore

1 Introduction

English in Singapore, also known as Singapore English, has developed into Singlish as its own English variety influenced by multiple factors. Singapore is a multiethnic country, in which there are four official languages. English as one of the important languages in Singapore has its own linguistic features as it was affected by other varieties. English in Singapore gradually developed into a localized and nativized variety of English. Singlish, also known as Singapore Colloquial English (Pakir&Anna,1991), has its own characteristics according to some descriptive findings. Within Singapore English, both standard and localized varieties exist in social contexts. The status and function of Singlish has been controversial and heatedly debated for many years. Gupta (1994) expressed that linguistic features of Singlish are considered problematic. Leimgruber (2011) analyzed the differences of Singlish from the perspective of grammar and pronunciation.

Gupta (2006) summarized some linguistics feature of Singlish on the web. The linguistic features of Singlish one the web are related to the features of attested and literary Singlish.

Practically, approaches to Singapore English have supportive rationale. Every variety has its own contexts, which cannot be replaced by others. Singlish, as a localized Singaporean form, has been criticized by its problems on affecting people's learning of standard English. It is also acknowledged that Singlish is to be considered as a demonstration of relatively low social status and less educated. However, from the perspective of its social significance and World English awareness. Singlish is unquestionably of great necessity in Singapore society and education, which represents the solidarity of Singaporeans and considered to be a more comfortable variety in daily conversations. Therefore, Singlish cannot be eliminated since these facts cannot be ignored. Singlish, as a variety of English from Outer Circle, should be respected and accepted as other varieties of English, which is the trend of the development of World Englishes.

2 Methods, findings and discussion

The data are collected from relevant research articles. Most examples are sentences from daily conversations, which have been categorized into phonology, lexicon, syntax, semantics and pragmatics. According to the data from research articles, I summarized the linguistic features of Singlish from different linguistic categories. The following data of Singlish are either from other researchers' studies. One of the most common features in Singlish is the

frequent use of obscure metalanguage, also known as particles, such as la, aha, wut, leh. This phenomenon can be analyzed from more than one aspects: lexicon, syntax, semantic and pragmatics. The following part is the categorization of linguistic features of Singlish.

2.1 Phonetics and phonology

From the perspective of pronunciation, Singlish has some unique phonetic and phonological characteristics. First, two vowels tend to merge into a single phoneme. For example, bit and beat are both pronounced as /bit/ without distinguishing the short or long vowels. (Leimgruber, 2011). From the perspective of morphology, there are different interpretation of Singlish according to the descriptive data. For example, Singlish often misuses past tense and present tense. "my brother one went there and he took the budget airline and then he come back with the normal airline". There are different voices of the analysis of this sentence. The verb come in the present, marking a current relevant state (Deterding, 2003). Gupta (1994) thought this sentence contains code-switching from High variety past tense went and took, which is Standard English, to Low variety come, Singlish.

Moreover, Singlish has been found to have specific lexical tones, especially for those particles. Ah, Beng, Kiasu, and the reduplication for Chinese names are all pronounced with lexical tones by Singapore English speakers. Thus, they are pronounced as in the same way in Singlish as they are in their origins. The particle wut can only be pronounced with the low-level pitch. It cannot be pronounced as a high-failing pitch like la can.

2.2 Lexicon

From the perspective of lexicon, Singlish adds particles in their language, especially in daily conversation. Singaporeans pick up some words like "ah" "lah" "leh", etc at the end of their sentences. And these functional words are derived from English, Mandarin, Chinese dialect, and Malay.

For example,
Hey, this does't taste good.
-eh, this one not good leh.
She's decided to stay at home and sleep.
-she stay at home and sleep lof.
Oh no! why was it done that way?
Moreover, there are often some random unfamiliar words in English. For example, "Please liaise with me regarding payment." In this example above, the use 'liaise' is uncommon in International Standard English. Besides, it is also common that third-person singular forms of verb will be omitted. The above sentence can also be considered as an omission of the form of third-person singular present.

2.3 Syntax

From the perspective of syntax, one of the apparent feature in syntactical level is code-switching within sentence. Since there are four official languages spoken in Singapore, it is inevitable that code-switching will be the consequence of Singapore multilingulism. This may be seen as a problem of the education system (Leimgruber, 2012). For example, "Yong tea wash it off lah." In this sentence, Yong 'to use' is Mandarin, and lah is prototypical Singlish. This sentence that mixed Mandarin and English is also seen in Singapore. Second, there is addition of negative word after modal verb must. For example, "and we mustn't forget Mr. Manmatan". This sentence contains both code-switching and its own syntactic feature. Mt. Manmatan means 'good-looking man'. It is Tamil, which is another official language in Singapore.Second, it is often to see a deletion in Singlish. The deletion includes dropping off subjects, objects, prepositions.

Another example is the adding negative word after modal verb, for example mustn't forget, which do not show in prescriptive Standard English. One more syntactic feature of Singlish is that people often omit some prepositions or simplify verb forms. For example, "are you going to school today?" Becomes you going school today not?

2.4 Semantics

The particles in Singlish constitute one of the most distinctive features of this variety. The semantic investigation of these particles reflects the cultural characteristics of the variety. the following examples analyzed the meanings of these three particles. The following three particles are studies to be the high frequency of use and they are motivated by a cultural norm of interaction. The three particles are: the particle la, which come in different lexical tones; wut, which commonly spelt as what; meh, within the Natural Semantic Metalanguage framework.

One of the most common semantic features of Singlish is the use of obscure metalanguage. La, often seen in Singlish at the end of a sentence, can be

considered as a code marker which identifies "rapport, solidarity, familiarity and informality" between participants in the speech event (Richards and Tay, 1997: 146). The version with la suggests a certain 'explanatory nuance', a certain 'softness of attitudes', reflecting that the speaker 'amenable' to discussion (Kwan-Terry, 1978:24).

Another interesting feature is the use of one in Singlish which has cultural and semantic meanings. For example:

You don't know how to go there one.

I very fast one.

I get nothing but rubbish one, you know.

Actually, it can be shown that many Singlish sentences containing one can be directly translated into Singapore Mandarin or other variety. in many of such sentences, Singlish seem to be literal translations from other varieties spoken in Singapore.

2.5 Pragmatics

Such particles also have pragmatic meanings behind their expressions. The pragmatic meaning of la include code-marking, emotive-marking, contrastive marking (Pakir, 1992:149). Among the particles in Singapore English, it has been noted that some are used more frequently than others. these include particle la and particle wut. Meh is also used but not as frequent as the other two. These particles are used to perform mental act,

First, La is to be discussed as the most frequently used particles in Singlish. It is used in a variety of contexts. The following examples are from Wong (2004;2005). For instance: Come on la, nice already la, OK la , etc.

a. Come on la.

In this sentence, supposing A wants B to stop pretending to be someone else.

b. Nice already la.

B grooms himself meticulously before the mirror for quite some time and someone is teasing him.

c. Ok la, ok la. It infers that someone gives in to the other.

In the above contexts, the particles are used to perform a mental act on the addressee. It can be considered as a gentle persuasion to the utterance to make the addressee fell less about being forcing to so something. For example, in the following conversion, B use la to try to persuade A by using such particles but make it sounds gentler.

A: go to gym at 9 am tomorrow?

B: 9:30 la. Don't be so unearthly la.

3 Results and Conclusion

The linguistic features of Singlish involves broad categories phonology, morphology, syntax, semantics and pragmatics. One of the most common linguistic feature of Singlish is the use of obscure particles like la, aha, leh, etc. The words come from other varieties spoken in Singapore and appear in sentence in the contexts of either Singapore English or code-switching sentences. The use of them also have multiple functions such as reduce the mood or trying to be polite. All in all, the characteristics of Singlish are largely influenced by its social multilingual contexts and some local expression are frequently used in that they need to work for the bulk of Singaporeans.

On the other hand, the research into Singlish has undergone many shifts in the past decades. Due to the social stereotype and language policy of Singlish, whether Singlish should be used or even taught in the classroom is still in question. There are different voices towards this issue. Many support that teachers are models and are not supposed to speak or teach Singlish in the class. there are also a few voices claiming that by teaching Singlish can make students realize the errors and differences from standard English so that they can avoid. But this kind of idea has been negated by quite a few empirical studies, in which on matter students or people from other fields expressed through questionnaire and interviews that Singlish should not be taught in the classroom.

References

[1]   Deterding, David (2003) Tenses and will/would in a corpus of Singapore English. In David Deterding, Low Ee Ling, and Adam Brown (eds.) English in Singapore: Research on Grammar (pp. 31–38). Singapore: McGraw-Hill.

[2]   Gupta A. F. (1994) . The Step-Tongue: Children's English in Singapore . Clevedon : Multilingual Matters .

[3]   Gupta, A.F. (2006). Singlish on the web. In Azirah Hashim & Norizah Hassan (eds) Varieties of English in Southeast Asia and Beyond. Kuala Lumpur: University of Malaya Press, 19-35.

[4]   Kwan-Terry, Anna (1978). The meaning and the source of the "la" and the "what" particles in Singapore English. RELC Journal 9(2):22–36.

[5] Leimgruber, J. R. E. (2011;). Singapore English. Language and Linguistics Compass, 5(1), 47-62.

[6] Leimgruber, J. (2012). Singapore English: An indexical approach. World Englishes, 31(1), 1-14.

[7] Pakir, Anne (1991) The range and depth of English-knowing bilinguals in Singapore. World Englishes 10, 167–179.

[8] Richards, Jack C., & Tay, Mary W. J. (1977). The la particle in Singapore English. In William Crewe (ed.), The English language in Singapore, 141-56. Singapore: Eastern Universities Press.

[9] Wong, J. (2004). The particles of Singapore English: A semantic and cultural interpretation. Journal of Pragmatics, 36(4), 739-793.

[10] Wong, J. (2005). "Why you so Singlish one?" A semantic and cultural interpretation of the Singapore English particle one. Language in Society, 34(2), 239-275.

The Study of Solitary Soul of Women in *Winesburg, Ohio*

Jun Song

Shanxi Normal University, Linfen 041004, Shanxi Province, China

Abstract: *Winesburg, Ohio* depicts a group of grotesques who are weird and cannot be understood by common people in the small town during the industrial period. This paper takes three women for example, analyses the reasons for the loneliness of women.

Keywords: *Winesburg, Ohio*; Grotesques; Women

1 Introduction

Sherwood Anderson is one of the most important writers in American short story in the 20th century. Although he has gone through various kinds of tribulations in the course of his lifetime, he succeeds in creating *Winesburg, Ohio*, which wins a national reputation for him. Sherwood Anderson lives in an transitional era. So he experienced the great impacts that the Machine Age brings on human beings[1].

Winesburg, Ohio, written in 1919 in America, describes various grotesques[2]. This paper mainly takes the female characters for example and analyzes the reasons of the women's solitariness by the way of textual analysis.

2 Literature review

Winesburg, Ohio, is seen as Anderson's most significant novel. As a masterpiece, more attention has been paid to studying *Winesburg, Ohio* by many scholars at home and abroad. At abroad, some pay attention to the characters of *Winesburg, Ohio*. Take Malcolm Cowley for example, he gives those grotesques a name as "emotional cripples" since they cannot truly communicate with others[3]. At home, more attention is given to *Winesburg, Ohio*. Zou Tianyu elaborates the reasons of the generation of alienation, analyzes the inner worlds of the grotesques[5]. Zhang Han states that *Winesburg, Ohio's* structure seems loose, it is unified in time, place, character, theme, style, and form to greater extent than any of his later connections[6]. Based on the former surveys, a deeper understanding about Sherwood Anderson and his literary works can be got. This paper aims to explore the inner world of women and discuss what leads to women's isolation and seek for the instructive meaning to contemporary women.

3 A world of loneliness

All stories in *Winesburg, Ohio* took place in the background of the Industrial Revolution. Almost all the western countries were involved in this big event. There was no exception for America. With the coming of this historical event, great changes had been taken place[7].

3.1 Booming industrial revolution

Since the Industrial Revolution had swept across the western countries, America was also involved inevitably in the process of the Industrial Revolution. As the scientific technology goes on, the development of the industrialization has strong effect on the traditional American life. Large industries and factories developed rapidly in cities, and new machines were used in agricultural production. Although the Industrial Revolution facilitated the developments of science and technology, it also indeed brought many social problems, including the excessive pursuit of material fortune and indifferent interpersonal relationships. *Winesburg, Ohio* was

written under the context.

Apart from that, the American Civil war between the North and the South broke out in 1861, which also accelerated the expansion of industry. During the early years before the Civil War, the United States was a country which primarily depended upon agriculture. However, after the Civil War, such a traditional agricultural life disappeared in *Winesburg, Ohio*, and Industrialization began to play a dominate role in the whole society. People took advantage of the forest and iron ore and coal mines to develop industry. Meanwhile, an increasingly number of machinery was applied on the farm. By the foregoing discussion, a conclusion that the previous traditional life ultimately fades away in the process of American Industrialization can be drawn.

3.2 Winesburg town: A lonely place

Winesburg was a small town which located in the Midwest of the United States. 50 years ago, Winesburg town was a pastoral village which was the typical model of American small towns. However, with the coming of the industrialization, great changes took place in the Winesburg town. Some newly-born achievements such as trains, railroads and cars appeared in people's life and they indeed changed the life of inhabitants in Winesburg. People's life also went through great changes. People in Winesburg couldn't adapt to the new lifestyle. Moreover, new ideas and values conflict with traditional ones, which caused the isolation of people inner heart. Anderson described the situation where the farmland varied from agricultural society to industrial society in the story of Godliness. The Bentley family owned a large farm. Prior to the Industrialization, Jesse Bentley's father and brothers worked on the farm in old traditions like animals day by day. When Jesse took over the farm, it was a period of great prosperity of industrialization. Jesse then began to use machinery in harvesting and hire laborers to work for him. Thus, the traditional farming life in the time of Jesse's father was totally replaced by the mechanized production. Such changes exerted a great impact on the traditional lives of farming people.

Undoubtedly, the development of industrialization brought new inventions to inhabitant in the small town. But the appearance of new inventions also brought about a series of social problems, such as isolation, indifference and numbness. This feeling could be found everywhere. There was no exception for women.

4 Analysis of images of three women

The introduction on background gives reader a clear situation where the story happened. The following part will analyze the images of the three main women and explore what caused their isolation.

4.1 Images of the three women

In order to well understand what caused three women's isolation, the top priority is to learn and analyze the character of the three women.

4.1.1 Elizabeth Willards in Mother

In the story Mother, the character Elizabeth Willards is described as a woman who is the mother of George Willard and the wife of Tom Willard. Elizabeth was an almost 45-year-old woman and she lacked in vitality while his husband was a slender and graceful man and he was full of interest in politics. When it came to her wife, Tom regarded Elizabeth as a ghost and he was even full of hatred. It is obvious that Elizabeth couldn't be understood by his husband. As for the relationship with her son, there is no doubt that she loved her own child. But every time she wanted to talk with her son, she was always keeping silent instead of talking. As a mother, it was absurd that Elizabeth did not know how to communicate with her son. In the story, Elizabeth's mother had died when she was five years old and she grew up in her father's complaint. So her life was filled with misfortune. In her girlhood, she had obtained a strange reputation because she worn men's clothes and rode a bike on Main Street. She liked adventures in life and dreamed of becoming an actor one day. But her dream was destroyed when people in the theatrical company told her that "it's as dull and uninteresting as here." So she tried to fulfill her dreams by dating with men at night, which could not be accepted by traditional society.

Actually, through this way, Elizabeth wanted to search for the meaning of her life and love. But she still felt lonely and repressed for these adventures did not change her life in essence. After she met Tom, she thought that she could get warmth and love again. But to her disappointment, Tom can't understand her and even attributed his failure in politics to his ghostly wife. As husband, Tom didn't give enough love to Elizabeth and even was shamed of his wife,

which was doomed to the failure of their marriage. Disappointed at marriage, she placed all her love and hope on her son George Willard. Though Elizabeth was full of hope and love towards her son, she did not know how to express her love and hope. Anderson has given the following description in his book *Winesburg, Ohio*, "In the son's presence she was timid and reserved." The above illustration showed that Elizabeth didn't know how to communicate with her son and how to express her love to her son. In the end, George Willard told her mother that he wanted to go out and look at people outside and think what he should do. When Elizabeth heard these words, she knew her hope dashed. In fact, the family should have brought her happiness but brought her hurt. The failure of Elizabeth's marriage was an epitome of the families in Winesburg.

4.1.2 Lousie Bentley in Godliness

In the story Godliness, Lousie Bentley was the figure who was the daughter of a rich farmer of Jesse Bentley. And her husband was John Hardy who was a banker in Winesburg town. However, Lousie and John led an unhappy couple life. On the one hand, Lousie had weird tempers and sometimes she did many strange behaviors. In her childhood, she was often prone to get angry groundlessly. After she got married, her husband did his utmost to make her happy and "she flew into half insane fits of temper during which she was sometimes silent, sometimes noisy and quarrelsome." Usually she hid herself in her own room for many days, and sometimes she would drive her carriage out at a terrible speed in the town's streets. Lousie's heart was full of repression, but she failed to find a proper way to give vent to her discontent. On the other hand, Louise also hated her husband and even wanted to kill her husband with a knife. It seems that Louise's queer behaviors are difficult to understand. However, it is very necessary to find out the reason why her queer personality is.

When Lousie was born, her mother died. Her father did not welcome her coming into the world and gave less love to her, because he expected that his wife could bear a boy to realize his dreams. Thus, in her childhood on the Bentley farm, Lousie was lonely and unhappy. Then she went to the Winesburg town to go to high school. There she lived with the family of Albert Hardy, a friend of her father. To begin with, Louise thought that she could get away from her former lonely and unhappy life and would begin a new and happy life in Winesburg.

But to her disappointment, life in Winesburg was as unpleasant as that on the Bentley farm. In Hardy's house, the two daughters of Albert Hardy were not friendly to her. And her classmates were indifferent to her because she did well in her study. Therefore, she became upset and disappointed and longed for getting love and warmth from others. Then Louise discovered that John was kind to her, so she started to make friends with John Hardy. At first, Louise believed that John could give her love that she desired. After they got married, John couldn't understand what she really wanted and misunderstood her wife's spiritual needs just for sexual desires. In fact, what Louise really wanted was understanding, care and love from her husband.

4.1.3 Alice Hindman in Adventure

In the story Adventure, Alice Hindman, a 27-year-old woman, was tall and thin. It seemed that she had a quiet personality. In fact, she was full of passion for life. When Alice was sixteen, she was a very beautiful girl and drew Ned Currie's attention. Ned Currie was a report and worked on Winesburg Eagle and made an appointment with Alice. After that, she fell in love with Ned Currie. Then Ned left Winesburg town for Cleveland to look for a better job. And he made his promise that he would come back as soon as he found a good job. In the end, he broke his promise and never returned again. Alice was reluctant to accept the fact that she was abandoned by Ned, for she strongly believed that Ned would come back. The process of waiting for Ned was tortured. In the daytime, Alice tried to make herself busy with her jobs in the store. While at night she usually knelt on the floor and said prayers which she wanted to talk to Ned. As time went by, the endless waiting increased her loneliness. She knew that Ned never came back and she was unwilling to lead an isolated life. Eventually, on one rainy night, Alice could not stand inner repression and had an adventure in the rain.

Actually, Alice's emotional repression mainly came from her inner desire for love in her solitary life. For one thing, due to her father's death and her mother's second marriage, Alice led a rather lonely life. For another thing, when she went to work in the dry good store, her boss hardly had any talk with her. So Alice felt isolated both at home and at work. When Ned appeared, Alice gave all her hope to Ned

and hoped to get love from him.

4.2 Reasons of the three women's solitariness

Everything has its own reason. The reason why three women felt isolation are as follows.

4.2.1 Social reasons

Environment plays an important role in society and has a great influence on personal character. The stories in *Wineburg, Ohio* happened in America in the later years of nineteenth century when Industrial Revolution boomed. The rapid development of Industrialization has brought new inventions to American and also brought some social problems, such as the expansion of material wealth and indifferent interpersonal relationships. Facing the expansion of material wealth, people felt empty in their inner heart.

4.2.2 Psychological reasons

As a humanistic writer, Anderson perceived people's isolation and repression. It is clear that people in Winesburg were going through one or more psychological problems. There are two kinds of psychological problems being discussed. The first one is about communication. Women hid their real feeling and didn't know how to communicate with their families. The second one is that women lived in their imaginary world.

In fact, the obstacle of communication is the most severe psychological problem. In *Winesburg, Ohio*, people were under a strong despair to express themselves and communicate with each other. "All men lead their lives behind a wall of misunderstanding they have themselves built, and most men die in silence and unnoticed behind the walls". The "walls" is a symbol that stands for an obstacle of communication between human beings.

Besides the above, the second psychological problem is that the women couldn't tell illusion from reality. The examples are as follows.

Elizabeth failed to realize her dream, which gave her a strong shock. Eventually, the loss of love between Elizabeth and her husband caused her unlucky marriage and the lack of communication between Elizabeth and her son resulted in her twisted life.

Louise is a miserable girl. In her early years, she failed to get maternal love and her father

didn't welcome her coming. She felt herself almost surrounded by loneliness and repression on the Bentley farm. When she had a chance to attend high school in Winesburg, she thought that she could get rid of previous lonely life. Nevertheless, life was not going as she expected. Moreover, she couldn't be understood by her husband. All of these doubled her inner loneliness.

In the story Adventure, Alice Hindman was unwilling to accept the fact that she was deserted by Ned and lived in her own imagination. As time went on, Alice realized Ned couldn't come back and she felt deeply lonely and terrified. Then, she locked herself in her own world and never communicated with others.

5 Conclusion

In *Winesburg, Ohio*, Anderson explores human beings inner world through people's weird behaviors which are not understood by common people in Winesburg town. This paper focus on the analysis of the images of women. In fact, these women have dreams and desires and they never give up the pursuit for love. They are unable to be understood by their families and their friends, so they usually do some unusual and odd behavior to express their real feelings and thoughts. In fact, *Winesburg, Ohio* cannot be explained as merely an exposition of the theme of human isolation. By writing this paper, it tells people what is love and understanding and it helps people establish the true values in human life.

References

[1] Chang YX. A Survey of American Literature(the 3rd edition) [M]. Tianjin: Nankai University Press, 2008.

[2] Sherwood A. Winesburg, Ohio [M]. Shanghai: Shanghai Foreign Language Education Press, 2001.

[3] Malcolm C. Introduction to Winesburg, Ohio [M]. London: Pan Books Ltd., 1998.

[4] Zou TY. The Images of the Grotesques in Winesburg, Ohio in the Light of "the Three Orders" [D]. Hubei: Central China Normal University, 2014.

[5] Zhang H. The same story told by different freaks: Study on Winesburg, Ohio by Sherwood Anderson [D]. Beijing: Beijing Jiaotong University, 2009.

[6] Sherwood. Poor White [M]. New York: B.W. Huebsch, 1920.

An Analysis of American Multiculturalism

Lanxi Chen

School of English Studies, Shanghai International Studies University, China

Abstract: Multiculturalism has received fierce controversy and discussion upon its proposal for its complexity in definition and in practice. This research discusses the definition of multiculturalism focusing on the comparison between the term "cultural pluralism" and "multiculturalism", its influence on American society and its distinct characteristics, which is the claims of equality and identification between different cultures. It is argued that multiculturalism is not only a cultural ideology and a cultural war between the WASP-based mainstream culture and the cultures of the disadvantaged groups, but also a political and economic movement. The research also analyzes the practice of multiculturalism in the fields of political participation, education, race, media and the practice of multiculturalism that targets the disabled people and women. Moreover, the problems arise during the proposal and practice of multiculturalism are presented in the research. It is argued that the relationship between multiculturalism and homogeneous culture is not contradictory but united. A mature, sustainable and energetic national culture needs to seek common ground while recognizing and reserving the differences.

Keywords: American multiculturalism; National identification; Equality; Ethnic minorities

1 Introduction

Contemporary America is a huge immigrant nation with immigrants from almost every region and culture around the world. During the founding stage of the country, more than 60% of the population were Anglo-Saxons from England. This situation only lasted by the end of the 18th century. Since 1790, the constitution of the United States has provided for a census every ten years. According to the U.S. Census, the proportion of white people in the total population of the United States decreased from 69.1% in 2000 to 63.7% in 2010, while proportion of the ethnic minorities increased from 30.9% in 2000 to 36.3% in 2010. (U. S. Census Bureau 2) Among the ethnic minorities, Hispanics make up 16% of the country's population. Among the top 50 cities in the United States, in 32 cities, ethnic minorities are the majority of the population. The increasing number of immigrants and the diversity of their ethnics ultimately promote the development of the diversity of American culture. The crisis arises in the meantime revolving around how immigrants, established ethnic groups and aboriginal peoples accommodate to, and are accommodated by the majority groups in society. Confronted with the diversity of American culture, American newspapers expressed concerns that white people would become new "minorities" in 40 years after the 2010 census results were released. In the past three decades, multiculturalism has aroused fierce repercussions and debates in the fields of education, culture and ideology. (Wang Enming 113)

Researchers home and abroad have made lots of researches on multiculturalism. The analyses of multiculturalism in domestic researches are mainly concerned about the definition, the origin and formation, the representation and influence of multiculturalism, the understanding of the multiculturalism theory, the limitation of multiculturalism, etc. Among the researches about multiculturalism from all kinds of perspectives, the articles from Wang Xi and Wang Enming are the most impressive and enlightened ones. In The Origin,

Practice and Limitation of Multiculturalism, Wang Xi outlines the evolution of the ideology and practice of multiculturalism since the 1960s, analyzes the usage and connotation of multiculturalism in different fields and discusses the limitations of multiculturalism. (Wang Xi 44) In On American Multiculturalism, Wang Enming analyses multiculturalism in American education though the investigation of multiculturalism theory and its main arguments to reveal its fundamental purpose of grasping the discourse power of cultural values and reestablishing American national character. Compared with the domestic researches which analyzes multiculturalism in qualitative method, more overseas researches use quantitative analysis. For example, In The Meaning of Multiculturalism in a Culturally Diverse Urban America Area, ANOVA and t-test are calculated to investigate to what extent ethnic groups should keep up their own ways of life and to what extent they should take on the American way of life. (Taylor ed. 727)

2 The connotation of multiculturalism

Upon its proposal in the late 1980s and early 1990s in American society, multiculturalism has received fierce controversy and discussion as it is closely connected with the fundamental issues such as education, race, gender, class, etc.. The understanding of multiculturalism differs as it is not a mere cultural phenomenon, but also political movement and it is applied in many fields. The definition of multiculturalism is therefore quite complex. Moreover, as the phenomenon develops and strengthens, more disadvantaged groups such as homosexuals and feminists joins the multiculturalists to jointly challenge the patriarchal discourse system, which makes the cultural term harder to define. This research tries to explore the connotation of multiculturalism through its core characteristics and its influence on the American society.

As America is a nation of immigrants, multiculturalism is presented in the 1980s in American society to respond to the challenges associated with cultural diversity. Compared with the "melting pot" view that immigrants should assimilate to the mainstream American culture—the WASP(White Anglo-Saxon Protestant)-based mainstream culture—by abandoning their own cultures,

languages, and other traditions and different from the "cultural pluralism" which only states the harmonious coexistence between different culture, multiculturalism stresses more than the coexistence, but also the equality among different culture and ethnic groups. (Wang Enming 113) Equality is one striking feature of multiculturalism.

According to Henry Louis Gates Jr., chairman of the Department of African American Studies at Harvard University, the core of multiculturalism is to recognize the diversity of culture, the equality and mutual influence between cultures, and break the monopoly position of Western civilization in thoughts and languages. (Henry 720) The equality that the advocates seek is the thorough change in values and policies, but not just superficial oral promises. They seek identification and acknowledgement from the mainstream culture and they seek equal rights in social and political activities and equal discourse power. The advocates of multiculturalism believes that multiculturalism is a pursuit of democratic ideals. They think the issues that multiculturalism raises is the problems of the democracy in America. Since democracy is enthroned in America, the culture in America should also be democratic instead of homogeneous and authoritative. Besides, as multiculturalism resorts to the change of values and thoughts, it can be considered as a kind of ideology.

As the seek of the equality and the changes in values would change the way in which social activities in many fields are conducted, multiculturalism is not just a cultural phenomenon, but also a kind of political movement. In the view of the advocates of multiculturalism, "culture" is a representation of power relations in political society and cultural inequality is mainly due to political inequality. To establish cultural equality, the existing unreasonable political and economic power structure need to be changed. Therefore, the ultimate goal of multiculturalism is not to pursue "cultural equality", but to pursue "social equity", which means to strive for the equality of different groups (especially those who have been discriminated against and oppressed for a long time in history) in sharing the political, economic and cultural resources in the American society. (Wang Xi 51) The battle between cultural pluralism and multiculturalism is actually a battle between the two forces to vie for more political power in the society.

3 The practice of multiculturalism in America

The claims of multiculturalism are not just resorts in words, but resorts in practice. It is not only a claim of identification, but also a matter of economic interests and political power: it includes demands for remedying economic and political disadvantages that people suffer as a result of their marginalized group identities. The advocates of multiculturalism seek down to earth changes involving changes in religion, language, ethnicity, gender, race, class, education, sexual orientation and disabled people in order to get rid of the predicament of being oppressed and discriminated and fully enjoy the equal rights and resources in the democratic society.

For the practice of multiculturalism in the rights of political participation, the two major political parties (especially the Democratic Party) implement the "affirmative action" in order to win the votes of ethnic minorities and women. The "affirmative action" ensures a certain proportion of ethnic minorities and women's representatives in the allocation of delegates of the National Congress. The supporters of the "affirmative action" believe that in the past, the privileged class has always been partial to white Protestants and urban middle class, and the implementation of affirmative action plan is to correct the prejudice in the past and make up for the crimes of racial discrimination and gender discrimination in the past.

For the practice of multiculturalism in education, although the United States has not issued a special policy on multicultural education, support has been directly or indirectly demonstrated in the legislation of government departments. The Civil Rights Act presented in 1964, for example, prohibits racial discrimination in public schools. The Economic Opportunity Law passed in the same year provides $300 million a year to support the poor students. According to the records, there are 39 policies related to multicultural education, most of which are state-level decisions. 34 states have formulated relevant legislation, rules, guidelines or policies to promote multicultural education. (Grant 245) More women and black people are granted opportunities to go to the college. Research and courses in school are reformed and involves a more wider range including African American Studies, Native American Studies, Latino American Studies, gender studies, Asian American Studies, etc..

For the practice of multiculturalism that targets the disabled people, the Americans with Disabilities Act of 1990 obliges all public and educational institutions to provide more convenience for the disabled to use social service facilities, access to public places and employment, which marks that the career of helping disabled people in the United States has truly entered the "barrier free era". The Education for All Handicapped children Act issued in 1975 prohibits the exclusion of disabled children from general education, provides free education and individualized education program for the designated disabled children. Multiculturalism strives for the equal rights of disabled people in both social and educational field.

For the practice of multiculturalism in race, the U.S. federal government also influences state governments through legislation such as stop praying before class, and deal with racial segregation in schools.

For the practice of multiculturalism that targets women, after the civil rights movement and the women's rights movement, women gradually have more opportunities to serve in the government departments, corporate enterprises and other social institutions, and a considerable part of them began to work in the jobs that they could not get involved in before, including some important positions.

4 The significance of multiculturalism and the coexistence between multiculturalism and homogeneous culture

The recognition of cultural diversity and the equality in different cultures enriches and promote the development of culture in America. The essence of various cultures inject more vitality into the culture of America and in turn the culture of America would gain more acknowledgement by not only the mainstream cultural group but also the disadvantaged groups. The proposal of multiculturalism is not only significant to American culture, but also to the society. Multiculturalism promotes mutual understanding and respect among races and genders. As various groups joins in the political decision-making process, the implement of economic and political policies becomes more effective and democratic. The improvement of the education level of ethnic minorities and disadvantaged groups is conducive

to the development of the overall education level of the country. As the the ethnic minorities learn more knowledge and skills in university, the ethnic minorities with different cultural backgrounds would bring their distinct talents into play, and establish a more complete social mechanism.

The relationship between multiculturalism and homogeneous culture arouses heated discussion among scholars. Multiculturalism puts forward a new method to explain the American culture, but while emphasizing the cultural diversity of different groups, multiculturalism does not provide a satisfactory answer to how to unify the traditions of different groups with different culture. It seems that multiculturalists try to achieve cultural variety at the expense of the unity and by getting rid of the influence of the thoughts about homogeneous culture. It is hard for the multiculturalists to deal with the relationship between multiculturalism and homogeneous culture. The problem is that the overstatement of and excessive attention paid to multiculturalism would lead to the loss of national identification of its own culture. Multiculturalists have to face the problems. Otherwise, multiculturalism will not only be continuously opposed by the cultural conservatives, but also make the supporters of multiculturalism feel at a loss in their political and cultural identity in the end.

Therefore, the research argues that multiculturalism and homogeneous culture are not contradictory, but unified. Instead, the thoughts of multiculturalism and homogeneous culture needs to form a unity and coexist and complement each other. Multi-ethnic immigrants have created the hybrid American culture, which is manifested in two forms: homogenization and mixture. (Li Qirong 152) The formation of homogenization is a qualitative change, which forms the mainstream and the core of American culture; the latter is a quantitative change, which forms a variety of subcultures. They are mutually infiltrated and interdependent. The cultural diversity that multiculturalism demands and the identification that homogeneous culture requires are actually a complementary unity.

5 Conclusion

Multiculturalism is a complex cultural term. Its complexity lies in the complex groups of supporters including not only minority ethic groups but also other disadvantaged people such as women, the disabled, and LGBT people and also lies in its close association with the society. Granted the social attributes, it is not only a cultural ideology that the minority cultures seek the changes of values in people's mind in order to gain identification, or a cultural war between the WASP-based mainstream culture and the minority ethnic groups and other disadvantaged groups, but also a political and economic movement that the disadvantaged group seeks real policies taken place in order to gain equal social resources and politic rights. The research probes into the definition of multiculturalism through the comparison between the term "cultural pluralism" and "multiculturalism", its influence on American society and its distinct characteristics. The advocates of multiculturalism seek down to earth changes involving changes in religion, language, ethnicity, gender, race, class, education, sexual orientation and disabled people. Because of the length of the article, the research mainly analyzes the practice of multiculturalism in the fields of political participation, education, race, media and the practice of multiculturalism that targets the disabled people and women. At last, this research also elicit the problems that arise in the process of the practice of multiculturalism, which is multiculturalists try to achieve the diversity neglecting or at the expense of the unity. It is argued that the relationship between multiculturalism and homogeneous culture should be united but not contradictory. The unity and coherence of national culture are the basis of the cultural diversity, while the diversity brings vitality and mature for the national culture. A mature, sustainable and energetic culture should always seek common ground while accepting and reserving the differences.

References

[1] Grant C.A. Research and Multicultural Education[M]. London: Falmer Press, 1992.

[2] Henry Louis Gates, Jr. "Good-Bye, Columbus? Notes on the Culture of Criticism"[J]. American Literary History, 1991, 3(4):711-727.

[3] Taylor, Donald M., and Wallace E. Lambert. "The Meaning of Multiculturalism in a Culturally Diverse Urban American Area"[J]. Journal of Social Psychology, 1996, 136(6):727-740.

[4] U.S. Census Bureau, Overview of Race and Hispanic Origin: 2010, 2010 Census Briefs, March 2011, at http:// www.

Census. gov/ prod/ cen2010/ briefs/c2010br- 02. pdf.

[5]   Li QR. Historic Changing from Unicity to Pluralism[J]. Journal of South-Central University for Nationalities, 2005(4):148-152.

[6]   Wang EM. American Pluralism and Politics[J]. Journal of PLA Foreign Language University, 2009(5):113-119.

[7]   Wang X. The Origin, Practice and Limitation of Multiculturalism[J]. American Studies, 2000(2):44-80.

Research on Liquor Storage Based on Statistical Analysis Model

Xuhua Xu

Sichuan University Jinjiang College, Chengdu 620860, Sichuan Province, China

Abstract: According to the physical and chemical indexes of different periods, different storage containers and different storage sites, a two overall T test was used to show that there were significant differences in physical and chemical indexes of liquor body in different detection sites. Correlation analysis of wine storage in different storage methods by Spearman correlation coefficient. By using the principal component analysis method, the comprehensive evaluation index system of the quality of the wine body was constructed, and the classification model of the detection location based on the comprehensive evaluation was established by using the index system. The detection sites were classified, and the results showed that the detection sites were divided into four grades.

Keywords: Normal; Standardization; Correlation coefficient; Principal component analysis.

1 Introduction

Climate, wine storage conditions, storage location, time and other factors have great influence on the quality of finished liquor[1]. Sichuan Guchuan Liquor Co., Ltd. divided the detection sites into ground, bamboo forest, underground (divided into Longchang, Yixing), unglazed 6 Jin, osmanthus forest, glaze 1 jin, glaze 5 jin, open-air stainless steel and thatched grass. The physical and chemical indexes of the wine body of different detection points were detected after a quarter of brewing. There are many factors affecting the physical and chemical indexes. In the case of wine, the physical and chemical indexes and

the aroma components of the wine depend mainly on the grape variety, the ecological conditions of the grape producing area, and the factors of the wine brewing technology and the year[2,3,4]. Multivariate statistical analysis has many important applications in the analysis of wine body change and detection. Based on statistical analysis, Huo Dan Qun put forward a method for distinguishing liquor based on gas chromatography[5]. Qian Chong combined with cluster analysis (CA) and principal component analysis (PCA) to analyze the flavor groups of several flavor liquors[6].

2 On the collection and processing of data

2.1 Dealing with missing data

For missing data, the mean shift method is applied to deal with the missing data. The mean substitution method is to replace the missing data with the average value of the residual data after removing the abnormal data[7].

$$x^* = \frac{1}{N} \sum_{m=1}^{N} x_m$$

x^* is the default value, and   is the valid sample number of the group.

2.2 Normality test of data

The statistical law shows that the normal distribution has an extremely broad practical background. The probability distribution of many random variables in the production and scientific experiments can be described approximately by the normal distribution[9,10]. Therefore, the normality test of the physical and chemical index data of the original wine and the eight generation liquor is helpful to verify the rationality of the analysis results. In statistics,

Shapiro-Wilk test, Kolmogorov-Smirnov test, P-P map and other methods are used to test the normal hypothesis of the data. The first two tests have high requirements for the sample. When the sample is too few, the test results are not sensitive, and the test results are too sensitive when the sample is too many. Therefore, we use data skewness and kurtosis coefficient to detect the normality of data.

If the distribution of a set of data is symmetrical, then the partial state coefficient $SK=0$, if $0.5<SK<1$ or $-1<SK<-0.5$, can be called the medium partial distribution, the closer the SK is to 0, the lower the skew degree.

$$SK = \frac{n \sum (x_i - \bar{x})^3}{(n-1)(n-2)s^3} \quad (1)$$

Where $\bar{x}$ is the sample mean, s is the standard deviation, and is the sample number.

The kurtosis is usually compared with the standard normal distribution. If a group of data obeys the standard normal distribution, the peak state coefficient $K=0$. it is the peak distribution when $K>0$ and is the flat distribution when $K<0$.

$$K = \frac{n(n+1) \sum (x_i - \bar{x})^4 - 3\left[\sum (x_i - \bar{x})^2\right]^2 (n-1)}{(n-1)(n-2)(n-3)s^4} \quad (2)$$

Substituting the processed data into (1), (2) or using spss20.0 software, the corresponding skewness and kurtosis values can be calculated, The above table shows that $0.5<SK<1$ or $-1<SK<-0.5$, $-1<K<-1$, except isobutanol and ethyl hexanoate are not too conforming to normal distribution, and the physical and chemical indexes of other components conform to the normal distribution hypothesis.

3 Saliency test

The above test shows that the physical and chemical indexes of each component belong to the normal population. In order to further say the quality of the original wine and the eight generation wine and the reliability of various storage methods, it is necessary to examine whether there is a significant difference between the physical and chemical indexes of the original wine and the eight generation of wine. That is the significant test of the data, the commonly used t test, the F test, and the χ^2 test, The use and use conditions of the three methods are different, but the basic principles are the same. According to

the situation, the use of t test is more appropriate. As the experimental group is divided into two groups of original wine and eight generation wine, a double general t test can be used, that is, whether the difference between the average number of the sample of the physical and chemical indexes and the overall difference between the two sets of physical and chemical indexes is obvious.

Step1.suggest a hypothesis: $H_0: \mu_1 = \mu_2$, there was no significant difference in the physical and chemical indexes between the original liquor and the eight generation liquor;

$H1: \mu_1 \neq \mu_2$, there are significant differences in physical and chemical indexes between the original wine and the eight generation of wine.

Step2. Selected level of significance $a=0.05$, $n_1=n_2=n=17$

Step3. Calculating the t value, where

$$t = \frac{\bar{x}_1 - \bar{x}_2}{S_{\bar{x}_1 - \bar{x}_2}} \qquad S_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{\sum (x_1 - \bar{x}_1)^2 + (x_2 - \bar{x}_2)^2}{n(n-1)}}$$

Among them, $\bar{x}_1 - \bar{x}_2$ was the mean standard error. $\bar{x}_1$ and $\bar{x}_2$ were the average of physicochemical indexes of the two groups respectively, and n was the sample content and the degree of freedom $df=2(n-1)$. Check the critical value: $t_{0.05}$, $t_{0.01}$, compare the absolute value of the calculated t value with the inference.In fact, after the normal analysis of the data, a paired t test, a Matlab programming solution or a spss20.0 software for calculating the p value can solve the above problems.its p value is distributed between the interval [0.029, 0.043] and obviously $P<0.05$. Under the premise of the confidence level of , there is a significant difference between the physical and chemical indexes of the original wine and the eight generation of wine.

4 Correlation analysis (spearman correlation coefficient)

Pearson Correlation Coefficient and Spearman Correlation Coefficient can be used to indicate the direction and degree of the change trend between two variables. The value range is -1 to +1, and the 0 indicates that two variables are unrelated, positive value means positive correlation, negative value means negative correlation, the greater the absolute value is, the stronger the correlation is. The Pearson

correlation coefficient has a high requirement for the data. The experimental data is usually assumed to be a pair from the population of normal distribution, which is influenced by the abnormal value, because the detection methods of all kinds of data are not linear, with the interference of the experimental error, the detection error and so on, the correlation of Pearson's correlation may fall. And Spearman level correlation can make up the above defects, it is based on the order of the original data to solve the problem. This paper uses the Spearman correlation coefficient to analyze.

Spearman hierarchy correlation formula

$$r_s = 1 - \frac{6 \sum d_i^2}{N(N^2 - 1)}$$

Among them, d_i is the difference between the grades of physical and chemical indicators. N is the effective sample number of the group. Taking the Osmanthus fragrans as an example, the specific indexes of the original liquor and the eight generation liquor are shown in Table 1(Table 1).

Table 1. Spearman grades

Physicochemic-al index	Score		ranking		Grade differenced	d²
	Osmanthus 1	Osmanthus 2	Osmanthus 1	Osmanthus 2		
Ethyl hexanoate	440.3	138.4	1	1	0	0
ethyl acetate	293.0	40.9	2	4	-2	4
Ethyl lactate	218.2	87.8	3	2	1	1
Ethyl butyrate	77.3	12.1	4	8	-4	16
Acetal	49.8	15.4	5	7	-2	4
N-butanol	47.4	7.4	6	10	-4	16
Propanol	44.8	43.6	7	3	4	16
acetaldehyde	26.5	18.8	8	6	2	4
Isoamyl alcohol	24.6	19.2	9	5	4	16
Ethyl valerate	21.5	5.1	10	13	-3	9
methanol	17.8	7.8	11	9	2	4
SEC butanol	17.3	5.4	12	12	0	0
Isobutanol	12.3	7.3	13	11	2	4
Hexanol	10.3	3.2	14	14	0	0

Substituting the specific data in Table 1 into the Spearman rank correlation formula. The calculation shows that 75.8% $\leq r_s \leq$ 1($\leq$ s $\leq$ 196), It can be seen there has a strong correlation between the physical and chemical indexes. Under the condition of confidence (bilateral) , the correlation between them can be considered significant by testing the hypothesis, thus it can be seen that various storage methods are brewing. The main components of liquor are highly correlated, and the data detected by experimental liquor are relatively accurate.

5 Principal component analysis

In the storage process of wine body, different storage methods will produce different physical and chemical indexes of liquor body. There are 17 indexes such as ethyl acetate in this paper. Through the above analysis, we can see that there is a certain correlation between the 17 indexes. If the whole index is considered as a whole, it will not only increase the complexity of the analysis problem, but also appear to overlap the information and cause information inaccuracy. In this paper, the principal component analysis (PCA) is used to recombine the numerous physical and chemical indexes with a certain correlation into a new group of independent variables, and can represent the vast majority of the information of the original variable.

5.1 Data standardization processing

Suppose the sample observation data matrix is as follows

$$X = \begin{bmatrix} x_{11} & x_{12} & ... & x_{1p} \\ x_{21} & x_{22} & ... & x_{2p} \\ ... & ... & ... & ... \\ x_{n1} & x_{n2} & ... & x_{np} \end{bmatrix}$$

The raw data can be standardized according to the following methods

$$x_{ij}^* = \frac{x_{ij} - \overline{x_j}}{\sqrt{Var(x_j)}} (i = 1, 2..., n; j = 1, 2, ...p) \quad (3)$$

Where $\overline{x_j} = \frac{1}{n}\sum_{i=1}^{n} x_{ij}; Var(x_j) = \frac{1}{n-1}\sum_{i=1}^{n}(x_{ij} - \overline{x_j})^2.$

the standardized data can be obtained by substituting the sample data into (3) formula

5.2 Calculation of sample correlation coefficient matrix

The correlation coefficient matrix of data after standardization is shown below.

$$R = \begin{bmatrix} r_{11} & r_{12} & ... & r_{1p} \\ r_{21} & r_{22} & ... & r_{2p} \\ ... & ... & ... & ... \\ r_{n1} & r_{n2} & ... & r_{np} \end{bmatrix}$$

where

$$r_{ij} = \text{cov}(x_i, x_j) = \frac{\sum_{k=1}^{k=n}(x_i - \overline{x_i})(x_j - \overline{x_j})}{n-1}, n > 1 \quad (4)$$

Replace the sample data into (4) form to get normalized correlation coefficient

5.3 Calculate the eigenvalues and corresponding eigenvectors of the correlation coefficient matrix R.

Through simple mathematical knowledge, we can find the eigenvalues and corresponding eigenvectors of , or use the spss20.0 software to carry out the principal component analysis on the standardized physical and chemical indexes after the standardization, and also find out the corresponding solutions.

We know the eigenvalues λ_1=15.519, λ_2=1.136, $P(P>0)$ principal components can be obtained by principal component analysis. As the variance of each principal component is diminishing, the amount of information contained is also diminishing, in actual analysis, the P principal components are generally not taken, but the former K principal components are taken according to the size of the cumulative contribution rate Q of each principal component. where

$$Q = \frac{\lambda_i}{\sum_{i=1}^{p}\lambda_i}$$

The larger the Q, the more information of the original variables included in the principal component, the selection of the number of principal components is mainly determined by the cumulative contribution rate of the principal component. In order to ensure that the comprehensive variable can maintain the vast majority of the information of the original variable, the cumulative contribution rate of the principal component is generally above . From table 7, we can see that the contribution rate of the cumulative variance of the first two principal components is , that is, covering most of the information. This indicates that the first two principal components can represent the initial 17 indicators to analyze the liquor index level of different storage points of wine body, so the first two indicators can be extracted. The principal components are recorded as F_1, F_2 and L_1, L_2 are their coefficients, respectively, of which $L_1 = \frac{\lambda_1}{\lambda_1 + \lambda_2}, L_2 = \frac{\lambda_2}{\lambda_1 + \lambda_2}$ or the percentage of the respective variances divided by the percentage of the cumulative variance, where

$$L_1 = \frac{0.91288}{0.97971}, L_2 = \frac{0.06683}{0.97971}$$

So we have

$$F = L_1 F_1 + L_2 F_2 = 0.9318 F_1 + 0.6821 F_2 \quad (5)$$

5.4 Calculation of principal component score

According to the standardized original data, according to each index, the principal component expression can be replaced respectively, and the new data of each index under each principal component can be obtained, that is, the main component score, the specific form is as follows:

$$F = \begin{bmatrix} F_{11} & F_{12} & ... & F_{1k} \\ F_{21} & F_{22} & ... & F_{2k} \\ ... & ... & ... & ... \\ F_{n1} & F_{n2} & ... & F_{nk} \end{bmatrix}$$

where
$$F_{ij} = a_{j1}X_{i1} + a_{j2}X_{i2} + ... + a_{jp}X_{ip}, i = 1, 2....n; j = 1, 2...k \quad (6)$$

a_{jp} is the component score coefficient, which can be defined as the square root of the eigenvalue of the principal component loa d matrix by the principal component, and the component score coefficient of each variable can be obtained by calculation.then the function expression of F_1, F_2 can be obtained.

$F_1 = 0.062x_1 + 0.064x_2 + 0.064x_3 + 0.002x_4 + 0.064x_5 + 0.064x_6 + 0.064x_7 + 0.064x_8 + 0.064x_9 + 0.063x_{10} + 0.058x_{11} + 0.064x_{12} + 0.063x_{13} + 0.064x_{14} + 0.064x_{15} + 0.064x_{16} + 0.063x_{17}$

$F_2 = 0.142x_1 + 0.028x_2 - 0.056x_3 + 0.877x_4 - 0.045x_5 - 0.036x_6 + 0.019x_7 - 0.016x_8 - 0.073x_9 + 0.139x_{10} + 0.156x_{11} + 0.059x_{12} - 0.009x_{13} - 0.020x_{14} - 0.098x_{15} - 0.095x_{16} + 0.107x_{17}$

From a statistical standpoint, date shows the ranking of liquor quality in different storage locations. Compared with the eight generation liquor,

the original wine can be seen from various indicators. Besides the underground Yixing 1 and thatched grass 1, the original liquor body is obviously superior to the eight generation liquor.

6 Conclusion

In order to compare the influence of different wine spots on the quality of liquor quality, the same hidden wine spots has original wine and eight generation of wine. The Ranking of different hidden wine spots can be obtained by calculating the weighted average of the score of the original wine and the eight generation of wine. In general, the collection points are divided into four grades, the first grade is underground Longchang and Glaze 1 jin, second grade for full buried, bamboo forest, unglazed 6 Jin, third grade of Osmanthus forest, underground Yixing, fourth grades of glaze 5 jin, thatch.

Taking underground wine as an example, the eight generation of wine has the highest score in the underground Yixing, while the original wine has a third score in the underground Longchang. This shows that the quality of the underground storage is higher, which can be seen from the key indicators, such as the underground Longchang 1. After storage for one quarter, the key index is that the content of ethyl hexanoate is up, only slightly below ground and buried in bamboo forest, the content of ethyl butyrate is only below ground, the content of ethyl lactate is only lower than that of bamboo forest, the content of ethyl acetate is the highest, the content of ethyl valerate is the highest, the content of total ester is the highest, the content of hexanol (fruit aroma) is the highest and isobutanol(special aroma) is the highest content, n-butanol (smell bad) moderate content. From the wine body sense impression, the original wine: the colorless transparent, the grain fragrance, the aldehyde taste, the cellar fragrance is more prominent, the wine body is full and full, the sweet and clean, Long aftertaste, typical style.

The eight generation of wine: colorless, transparent, elegant, alcohol and alcohol, soft and refreshing, long aftertaste, outstanding style. Considering the taste and flavor characteristics, the storage quality of underground Longchang 1 is better than that of other storage wine.

References

[1] Zhang J H. Using environmental factors to optimize liquor quality[J]. Wine Making, 2010, 37 (6):52-54.

[2] Ribereau-Gayon P, Glories Y, Maujean A, et al. Handbook of Enology,The Chemistry of Wine: Stabilization and Treatments[M]. Hoboken: John Wiley & Sons, 2000.

[3] Rodriíguez-Bencomo J J, Conde J E, Rodrıguez-Delgado M A,et al. Determination of esters in dry and sweet white wines by headspace solid-phase micro-extraction and gas chromatography[J]. Journal of Chromatography A, 2002, 963(1):213-223.

[4] Salinas M R, Garijo J, Pardo F, et al. Color, polyphenol, and aroma compounds in rosé wines after prefermentative maceration and enzymatic treatments[J]. American Journal of Enology and Viticulture, 2003, 54(3):195-202.

[5] Huo D Q,Zhang M M, Hou C J. Based on principal component analysis and discriminant analysis of liquor brand identification method[J]. Agricultural Engineering Journal, 2011, 27 (2):297-301.

[6] Qian C, Liao Y H, Liu M Y. Cluster analysis and principal component analysis of different flavor liquor[J]. Chinese Journal of Food Science, 2017:243-255.

[7] Li Y, Li J M, Jiang Z J. Application of Statistical Analysis in Wine Quality Evaluation[J]. Brewing Technology, 2009, 178 (4):79-82.

[8] Zhao H, Shao S H, Xie D P. Method of Handling Outliers in Analytical Data[J]. Journal of Zhoukou Normal University, 2004, 21(5):70-72.

[9] Jia J P, He X Q, Jin Y J. Statistics (Fifth Edition)[M]. Beijing: Renmin University of China Press, 2012:57-58.

[10] Sheng J,Xie S Q, Pan C Y. Probability Theory and Mathematical Statistics (Third Edition)[M]. Beijing: Higher Education Press, 2001:144-153.

An Overview of Main Theories in Cognitive Linguistics

Na Li

Chengdu University of Technology, Luzhou, Sichuan Province, China

Abstract: Cognitive linguistics is an emerging language discipline that studies language based on new philosophical and cognitive views and people's experience of the world and the perception and conceptualization of the world. This paper mainly introduces main theories of Cognitive Linguistics that aims to provide some reference for language beginners and help them to fully understand Cognitive Linguistics.

Keywords: Cognitive Linguistics; Main Theories; Categories

1 Introduction

Cognitive linguistics is a new paradigm in linguistic research, with broad and narrow meanings. Cognitive Linguistics began in the late 1970s and early 1980s in America, and its mature was the establishment of the first International Cognitive Linguistics Association in the spring of 1989 in Duisburg, Germany and the Journal of Cognitive Linguistics. Geeraerts divided the development of Cognitive Linguistics into three decades[1].

The first decade is the germination stage.The most famous masterpiece is the Metaphor We Live By by Lakoff and Johnson in this period.

The second decade was roughly between 1986 and 1995, and the status of Cognitive Linguistics as an independent school was established. The main symbol is the publication of the corner stone works in the field of cognitive linguistics.

The third decade is from around 1996 to 2006, during which the important original work was Talmy's two-volume masterpiece Toward a Cognitive Semantics (2000), whose publication has made Cognitive Semantics systematic. The most important development of the decade was the rapid expansion of Cognitive Linguistic research around the world and Cognitive Linguistics Associations have been established all over the world.

2 Main Theories

2.1 Prototype categorization

The prototype theory is a cognitive science theory developed by Eleanor Rosch in the early 1970s, with the help of other experts in the field of cognitive psychology. In Rosch's theory, people categorize items and concepts based on a prototype or ideal representation of that category. According to the prototype theory, certain features of a category have equal status, and examples that represent all or most of those features become the prototype for that category. Items that do not share the majority of these features may still belong to that category, but do not represent the prototype.

How each person applies prototype theory to categorizing concepts and language varies based on experience and cognitive development, although many individuals share similar categorizations.

Primarily, the prototype theory studies how individuals categorize and stereotype certain items in language, which help psychologists understand and study the acquisition of vocabulary, individual mental lexicons, and the development of linguistic skills in individuals. Teaching environments benefit from such research and understanding when developing curricula for students. Understanding how the mind categorizes and classifies information and how that process is affected by cognitive development, culture, and early learning experiences, aids in helping

students gain vocabulary and develop more advanced language skills.

In short, experts believe that a person's first experience with a particular stimulus later defines the prototype associated with that category of stimuli. As experiences are gained and a person is more exposed to a particular category, the prototype evolves into a central representation for that category.

2.2 Conceptual metaphor

In cognitive linguistics, metaphor is defined as understanding one conceptual domain in terms of another conceptual domain; for example, using one person's life experience to understand a different person's experience.This idea was first extensively explored by George Lakoff and Mark Johnson in Metaphors We Live By. Cognitive scientists often study subjects similar to conceptual metaphor under the label of "analogy."

There are two main types of conceptual domains used in conceptual metaphors: the first one is source domain - the conceptual domain from which we draw metaphorical expressions; The another one is target domain - the conceptual domain that we try to understand.To know a conceptual metaphor is to know the set of mappings that applied to given source-target paring.All in all, different conceptual metaphors tend to be invoked when the speaker is trying to make a case for a certain point of view or course of action.

2.3 The affective filter hypothesis

According to Krashen one obstacle that manifests itself during language acquisition is the affective filter; that is a 'screen' that is influenced by emotional variables that can prevent learning. This hypothetical filter does not impact acquisition directly but rather prevents input from reaching the language acquisition part of the brain. According to Krashen the affective filter can be prompted by many different variables including anxiety, self-confidence, motivation and stress.

In any aspect of education it is always important to create a safe, welcoming environment in which students can learn. In language education this may be especially important since in order to take in and produce language, learners need to feel that they are able to make mistakes and take risks. This relates to directly to Krashen's hypothesis of the affective filter. Teachers are encouraged to help students to overcome

affective filters by motivating students, removing stress from environments, and by improving learners' self-esteem.

2.4 The input hypothesis

This hypothesis suggests that language acquisition occurs when learners receive messages that they can understand. It is a concept also known as comprehensible input. However, Krashen also suggests that this comprehensible input should be one step beyond the learner's current language ability, represented as i + 1, in order to allow learners to continue to progress with their language development. This hypothesis highlights the importance of using the Target Language in the classroom. The goal of any language program is for learners to be able to communicate effectively. By providing as much comprehensible input as possible, especially in situations when learners are not exposed to the TL outside of the classroom, the teacher is able to create a more effective opportunity for language acquisition[2].

2.5 The figure-ground theory

Figure-ground perception refers to the tendency of the visual system to simplify a scene into the main object that we are looking at the figure and everything else that forms the background or ground. The concept of figure-ground perception is often illustrated with the classic "faces or vases" illusion, also known as the Rubin vase. Depending on whether you see the black or the white as the figure, you may see either two faces in profile, meaning you perceive the dark color as the figure, or a vase in the center, meaning you see the white color as the figure.

The concept of figure-ground perception emerged out of the field of Gestalt psychology. According to the Gestalt approach, the whole is more than the sum of its parts. The term Gestalt itself comes from the German word meaning "form" or "shape".

2.6 The theory of memetics

Memetics is the study of information and culture based on an analogy with Darwinian evolution. Proponents describe memetics as an approach to evolutionary models of cultural information transfer. Memetics describes how an idea can propagate successfully, but doesn't necessarily imply a concept is factual.

The term meme was coined in Richard Dawkins'

1976 book The Selfish Gene, but Dawkins later distanced himself from the resulting field of study. The meme was conceived as a "unit of culture" which is "hosted" in the minds of one or more individuals, and which can reproduce itself in the sense of jumping from the mind of one person to the mind of another[3]. Thus what would otherwise be regarded as one individual influencing another to adopt a belief is seen as an idea-replicator reproducing itself in a new host.

2.7 Framing theory

The concept of framing is related to the agenda-setting tradition but expands the research by focusing on the essence of the issues at hand rather than on a particular topic. The basis of Framing Theory is that the media focuses on certain events and then places them within a field of meaning. In essence, Framing Theory suggests that how something is presented to the audience influences the choices people make about how to process that information. Frames are abstractions that work to organize or structure message meaning.

The theory was first put forth by Goffman under the title of Frame Analysis. He thought that people interpret what is going on around their world through their primary framework. Goffman states that there are two distinctions within primary frameworks: natural frameworks and social frameworks. Both play the role of helping individuals interpret data. The difference between the two is functional.

Natural frameworks identify events as physical occurrences taking natural quote literally and not attributing any social forces to the causation of events. Social frameworks view events as socially driven occurrences, due to the whims, goals, and manipulations on the part of other social players. Framing is very closely to Agenda Setting Theory. Both focus on how media draws the public's eye to specific topics – setting the agenda. But Framing studies further the way in which the news is presented creates a frame for that information.

2.8 Family resemblance

Family Resemblance is a philosophical idea proposed by Ludwig Wittgenstein in the most well-known posthumously published book Philosophical Investigations (1953). The term is taken from Wittgenstein's metaphorical description of a type of relationship he argued was exhibited by language.

Wittgenstein's point was that things which may be thought to be connected by one essential common feature may in fact be connected by a series of overlapping similarities, where no one feature is common to all[4]. Games have become the paradigmatic example of a group that is related by Family Resemblances.

It features widely in Wittgenstein's later work, and the notion is introduced in the Investigations in response to questions about the general form of propositions and the essence of language. This suggests that Family Resemblance was of prime importance for Wittgenstein's later philosophy.

Since the publication of the Investigations, Family Resemblance has been discussed extensively not only in the philosophical literature, but also in works dealing with classification where the approach is described as 'polythetic', distinguishing it from the traditional approach known now as 'monothetic'. Prototype Theory is a recent development in cognitive science where this idea has also been explored.

2.9 Embodied cognition

Embodied Cognition is a growing research program in cognitive science that emphasizes the formative role the environment plays in the development of cognitive processes. The general theory contends that cognitive processes develop when a tightly coupled system emerges from real-time, goal-directed interactions between organisms and their environment; the nature of these interactions influences the formation and further specifies the nature of the developing cognitive capacities.

Since embodied accounts of cognition have been formulated in a variety of different ways in each of the sub-fields comprising cognitive science, a rich interdisciplinary research program continues to emerge. Empirical research on embodied cognition has exploded in the past 10 years. Embodied Cognition encompasses a loose-knit family of research programs in the cognitive sciences that often share a commitment to critiquing and even replacing traditional approaches to cognition and cognitive processing.

2.10 Tolerance of ambiguity

Tolerance of Ambiguity is a psychological construct that describes the relationship which individuals have with ambiguous stimuli or events. Individuals view these stimuli in a neutral and open way or

as a threat. It was first introduced in 1949 by Else Frenkel Brunswik while researching ethnocentrism in children and was perpetuated by her research of ambiguity intolerance in connection to authoritarian personality. It serves to define and measure how well an individual responds when presented with an event that results in ambiguous stimuli or situations.

In her study, she tested the notion that children who are ethnically prejudiced also tend to reject ambiguity more so than their peers. A study by Kenny and Ginsberg (1958) retested Frenkel Brunswik's original connection of ambiguity intolerance to ethnocentrism and authoritarian personality. Most of the research on this subject was completed in the two decades after the publication of The Authoritarian Personality, however the construct is still studied in psychological research today.

3 Conclusion

This paper introduces almost relevant theories in Cognitive Linguistics which would provide some reference for language beginners and help them to fully understand Cognitive Linguistics. This paper could give readers an overall visions of Cognitive Linguistics, and it is easy for newcomers to read.

References

[1] F.Ungerer, H.J.Schmid. An Introduction to Cognitive Linguistic, 2nd ed[M]. Beijing: Foreign Language Teaching and Research Press, 2008(10).

[2] S.Shwetlena, K.E.David, & M.Anastasia. The Permanent Input Hypothesis: The Case of Textbooks and (no) Student Learning in Sierra Leone[M]. Policy Research Working Papers, 2014(9).

[3] E.Vyvyan, G.Melanie. Cognitive Linguistics: an Introduction[M]. Taylor and Francis, 2018(10).

[4] Leunbach Daniel. Entrepreneurship as a Family Resemblance Concept: A Wittgensteinian Approach to the Problem of Defining Entrepreneurship[J]. Scandinavian Journal of Management, 2021(37).

Teaching Reform of Database Course based on the Concept of Outcome-based Education

Yang Shi

School of Mathematics and Statistics, Qilu University of Technology (Shandong Academy of Sciences), Jinan, China

Abstract: Outcome-based Education is a kind of ability-oriented education mode, which is oriented by social needs and focuses on cultivating students' ability to solve practical problems. All aspects of this education mode are designed and implemented closely around students. Taking the teaching of database principle and application course as an example, aiming at a series of problems existing in the current course teaching, taking OBE education concept as the main teaching reform guiding strategy, this paper puts forward a series of reform measures and solutions from the aspects of teaching goal formulation, teaching content optimization, teaching methods innovation, experimental design optimization, evaluation system innovation, etc.

Keywords: OBE; Flipped classroom; Task-driven; Database course; Blended teaching

OBE (outcome-based education) is a structural model that organizes, implements and evaluates education with the expected learning output as the center[1]. The connotation of this concept mainly includes output orientation, student-centered, and continuous improvement[2]. OBE concept is oriented by social needs and focuses on cultivating students' ability to solve practical problems. All aspects of education are designed and implemented closely around students. This concept is an important theoretical basis of engineering education quality certification index.

Database principle and application is a basic course for undergraduate computer related majors. It is a technical science based on database design theory, which uses programming, data manipulation language and other technologies to solve the problems of database application system design and implementation. Through the study of this course, students should be able to deeply understand and systematically master the basic principles and technologies of database system. The ultimate goal is to cultivate students' ability to use database technology to solve practical problems, and stimulate students' desire to continue learning and research in this field.

In order to improve the teaching quality of database course and the learning effect of students, it is of great practical significance to develop more effective teaching objectives and innovate teaching mode under the guidance of OBE concept in teaching, so as to improve students' engineering practice ability, cultivate students' autonomous learning consciousness and innovation ability.

1 The current situation and problems of database course teaching

First, the theoretical content of database course is complex, some of which are difficult, so students often feel boring in the learning process. Most of the teaching models still stay in the traditional teaching model, the teaching method is relatively single, lack of flexibility, cannot effectively mobilize the enthusiasm of students. Students' mastery of knowledge is low, and the learning effect is generally not ideal. In addition, the content of teaching materials is relatively backward, lacking the introduction of new database technology, which is not conducive to the cultivation of students' knowledge

and innovation ability.

Second, the teaching content of database course experiment mainly depends on the unit practice of specific knowledge points, and lacks the application of complete practical cases, which leads to the students' lack of the exercise of the overall comprehensive application ability of the project in the experiment. Therefore, the interest in database experiment is reduced and the learning effect is poor. In addition, in the course of experiment, students mainly rely on the guidance of teachers to complete related tasks step by step, lack of independent thinking and mutual discussion process, which will lead to the decline of students' autonomous learning ability.

Third, the traditional teaching method is mainly classroom teaching. In the teaching process, teachers are the center, while students are in a passive state. Therefore, students lack the process of active thinking and exploring knowledge. In the passive state, students often adopt a negative attitude, so that the teaching objectives cannot be effectively achieved. In addition, the teaching method is relatively single, which cannot fully mobilize students' interest in learning.

Fourth, learning evaluation mechanism is relatively old. The traditional assessment method is to combine the final paper score with the usual score composed of attendance, homework and experimental report, and convert the final score of the course according to the corresponding proportion. This single assessment mechanism ignores the objective evaluation of students' learning attitude, teamwork ability and expression ability. So that we can't evaluate the students' learning state and learning effect comprehensively, objectively and fairly.

2 Teaching reform design based on OBE

In order to solve the problems existing in the course teaching and realize the requirements of reverse design of teaching objectives in the OBE concept of student-centered and learning achievement oriented. In order to realize the fundamental change from teacher centered to student-centered education mode, the following reform measures are put forward.

2.1 Establishing reasonable training objectives and optimizing teaching content

Training objectives are the basis and premise of

teaching activities, and are the necessary measures to ensure the quality of teaching. Therefore, in formulating the training objectives of the course, we must fully consider various factors, not only to meet the current needs, but also need to take into account the long-term needs, as well as the social needs of the industry personnel, so that the training objectives will be more scientific and reasonable.

Database course involves a lot of content, part of the theoretical content is more abstract and complex, so the selection of teaching content should fully consider the students' understanding ability and existing knowledge base. Under the guidance of OBE concept, starting from the course teaching objectives and taking the cultivation of students' ability as the starting point, the teaching contents are reasonably selected and the corresponding curriculum standards are set up. Make clear the content and degree of knowledge students need to master, so as to make the design of teaching activities more targeted. Then according to the teaching evaluation results and learning effect feedback of each stage, we can adjust the teaching content and methods in time, so as to continuously improve the teaching quality and achieve the purpose of ability training.

In terms of teaching content, the introduction of the latest database technology development can guide students to broaden their horizons and cultivate their initiative to explore new technologies. In addition, in order to better realize the cultivation of students' practical ability, practical cases are introduced into the theoretical knowledge explanation. The use of relevant knowledge to solve practical problems can make students better grasp the steps and methods to solve problems. In the process of solving practical problems, teachers can inspire students to use a variety of different strategies to solve the same problem, to achieve the purpose of developing thinking and improving learning ability.

2.2 Adopting reasonable and effective teaching methods

First of all, we can use task-driven teaching mode[3]. By combining the teaching objectives with task-driven teaching mode, we can decompose the knowledge points according to the task requirements, and make clear the teaching tasks, key points and difficulties of each unit. Teachers only play a guiding role, but students are the center of teaching. By

mobilizing the enthusiasm of students, students can become the masters of the classroom, while teachers only prompt, comment and summarize when necessary. For example, before class, teachers can inform students of the teaching objectives and tasks of this class, so that students can always be clear about what they need to learn in the whole learning process. Then, under the guidance of the teacher, through autonomous learning and team learning, students use their knowledge to solve practical problems or put forward ideas and methods to solve problems in the form of exploration and discussion. Through the task driven teaching mode, the knowledge points are integrated into the task, which can fully mobilize the enthusiasm of students and promote the students to master the knowledge points.

In addition, flipped classroom can also be used as an effective teaching method to realize the OBE concept, which is student-centered and gives full play to students' subjective initiative[4]. Before class teaching, students can learn in advance through learning resources such as teaching videos or PPT resources, fully preview the course content, and then return to the classroom for teacher-student communication. Finally, students submit their homework. Flipped classroom, as a new teaching mode, subverts the traditional classroom form. Students change from passive acceptance of knowledge to the master of the classroom. "Flipped classroom" teaching mode can accelerate the integration and application of teaching resources and teaching methods, which puts forward higher requirements and challenges for teachers. At the same time, "flipped classroom" can enhance the students' subjective consciousness, effectively improve the learning effect, break the restrictions of time and space.

2.3 Adopting blended teaching mode

In addition to offline teaching, with the support of information technology, we can increase online teaching channels, make use of blended teaching mode to let students control their own learning process, reasonably arrange their own learning time, improve the utilization efficiency of knowledge resources[5]. For example, the database course teaching can be combined with the application of information technology such as network teaching platform, MOOC system and teaching live software to establish the online teaching system of the course. The course notice, courseware, video courses, exercises and other course resources are released through the platform. Students can learn autonomously according to the requirements, and problems in learning can be solved by communicating with teachers through network teaching platform or QQ. Teachers can arrange time to interact with students through live software, explain the important knowledge points. After class, students can learn the video of the classroom content repeatedly, check the missing, complete and submit the homework. According to the students' learning record statistics and homework information feedback on the teaching platform, teachers can timely grasp the students' learning status and learning effect.

2.4 Optimization of experiment design

Problem-Based Learning strategy is introduced into the experiment of database principle and application course. The strategy emphasizes student-centered, and allows students to analyze, discuss and make decisions in the form of team cooperation according to the knowledge they have learned, so as to jointly solve complex problems and improve students' autonomous learning ability and team cooperation spirit.

When choosing the content of the experiment, we should not only have the practice of basic knowledge, but also include innovative content and comprehensive practical cases. Through the experiment, students can further deepen the understanding of basic knowledge points, and improve the ability to analyze and solve practical problems.

The implementation process of database principle and application Experimental Teaching: inform students of the learning objectives and experimental requirements of each experimental course before class, so that students can make clear the experimental tasks and expected learning results in the whole experimental process. In class, first of all, the teacher provides a number of experimental topics and task requirements, so that students can choose their own topics according to their own interests. For the more comprehensive experimental projects, students can be guided to work in teams of 3-5 people to complete the experimental tasks and goals through cooperation. After the task is completed, each group will reply, and finally the teacher will give guidance.

Through this way of learning, students' autonomous learning ability and team cooperation ability can be effectively improved.

2.5 Establish a scientific evaluation mechanism

The traditional teaching evaluation mechanism is mainly through the combination of examination results and usual results to determine the final score of students. Under the concept of OBE education, we should not only evaluate the test results, but also pay attention to the performance of students in the whole learning process. For example, students can be evaluated from different aspects according to the completion of each project and task, and the evaluation indicators can be increased, such as innovation, teamwork, etc. When evaluating the completion of students' tasks, we should also pay full attention to students' self-evaluation. At the end of the course, students are required to judge their learning achievements according to the evaluation criteria, so as to enhance students' self-monitoring of learning. In addition, group evaluation and teacher evaluation are introduced to give more comprehensive and objective evaluation results through multiple dimensions.

3 Classroom teaching practice based on OBE

In this paper, the application of OBE concept in practical teaching is demonstrated by taking the SQL query language chapter in the course of database principles and applications as a case.

First of all, we should make it clear that the teaching goal of this course is to let students master the syntax structure of standard SQL query statements, master the methods of simple query, linked table query and nested query, and be able to skillfully use all kinds of query statements in the specific database management system to complete the actual query task. Then, starting from this teaching goal, the key and difficult points of this chapter are classified, and the corresponding ability training standards are formulated for each knowledge point. For example, simple query and join query are frequently used in actual database operation, so students are required to master and apply these query sentences flexibly. However, some contents of nested query, such as multi-layer nesting, are relatively complex and only need to meet the ability standard of understanding and primary application.

In the process of teaching, in addition to the application of traditional courseware, the computer operation demonstration video of important knowledge points is also added. For example, the execution process of SQL statements of connection query and nested query is recorded in advance through video recording software, and then the above learning resources are released through network teaching platform or QQ group, so that students can preview and review through online teaching resources after class. Finally, students can consolidate and deepen their understanding of knowledge points by learning in class.

In addition, the database of student information management system is introduced as an actual case, and the practical application of SQL query in the database is taken as the goal. Through the task driven, students can apply the theoretical knowledge learned in the classroom to practice, which can better stimulate students' interest in learning, improve students' practical ability, and reflect the OBE concept of learning outcome-oriented goal. After the completion of the case operation, teachers can organize students to evaluate the results and exchange experience. Through students' self-evaluation and mutual evaluation, plus teachers' comments, students can better understand their mastery of the course.

4 Conclusion

In this paper, OBE concept is taken as the guiding strategy of database teaching reform. First of all, students' ability training is taken as the standard to select the appropriate teaching content, and the corresponding curriculum standards are set up. Through the introduction of new database technology and practical cases to expand students' horizons. Then the task driven method and flipped classroom mode are introduced to improve students' autonomous learning ability, expression ability and innovative thinking ability. In the teaching mode, through the application of new technology, the introduction of online blended teaching mode, so that students' learning style is more flexible and efficient. In the experimental teaching, problem-based learning strategy is adopted to better improve students' practical ability and cooperation ability. In the evaluation method, the introduction of multi-dimensional evaluation system can better stimulate students' learning motivation. The whole course

teaching reform is carried out from the aspects of teaching content, teaching design, teaching methods and evaluation methods to form a relatively perfect teaching system.

References

[1] Gu PH, Hu WL, Lin P, Bao NS, Lu XH, Xiong GJ, Chen Y. OBE engineering education model in Shantou University[J]. Research In Higher Education Of Engineering, 2014(1):27-37.

[2] Shi XQ. Design and implementation of course teaching based on the concept of outcome-based education[J]. Research in Higher Education of Engineering, 2018(5):154-160.

[3] Bi CM. The application of task-driven teaching model[J]. Journal of Shanxi Datong University(Natural Science), 2008(6):84-86.

[4] Zhang JL, Wang Y, Zhang BH. Introducing a new teaching model: flipped classroom[J]. Journal Of Distance Education, 2012(4):46-51.

[5] Feng XY, Wang RX, Wu YJ. A literature review on blended learning: based on analytical framework of blended learning[J]. Journal Of Distance Education, 2018(3):13-24.

Problems and Countermeasures of Craftsmen Training in Higher Vocational Colleges

Zifan Ye[*]

Institute of Higher Education, Lanzhou University, Lanzhou 730000, Gansu Province, China

Abstract: The fundamental task of higher vocational colleges is to put the core values of education through the whole process of skilled personnel training, and cultivate craftsmen with both ability and political integrity. By summing up the current situation of the cultivation of craftsmen in higher vocational colleges, this paper analyzes the problems of the cultivation of craftsmen in higher vocational colleges, and puts forward some suggestions to pay more attention to the cultivation of craftsmen; To explore a new model of craftsman training. This is not only of great significance to grasp the opportunity brought by the "double high" plan, enhance the core competitiveness of higher vocational college graduates and realize the transformation and development of higher vocational colleges, but also contribute to the smooth transition of China to "China Intelligent Manufacturing".

Keywords: Vocational college; Craftsman talent; Problems; Countermeasure

General Secretary Xi proposed: " We should apply the achievement of fostering virtue through setting up ethics as the fundamental standard for rating the performance of all the college's works, truly implement that idea of educating with culture and morality, and constantly improve the students' ideological level, political awareness, moral character and self-cultivation, so that they are aware of what is noble, obey public morality and strictly follow personal morals"[1]. The fundamental task of higher vocational colleges is to cultivate craftsmen with both ability and political integrity. Under the guidance of "craftsman spirit", students can imperceptibly form the excellent quality of preciseness and dedication in the design and production of products, and deepen their love for career and enthusiasm for social service. Craftsman talent is an important carrier of craftsman spirit and an inexhaustible driving force for the country's high-quality development.

1 Analysis on the background of craftsmen training in Higher Vocational Colleges

In December 2016, Premier Li Keqiang stressed "accelerating the cultivation of a large number of high-quality workers and talents with professional skills and craftsmanship spirit"[2]. Cultivating craftsman talents is not only the potential requirement to improve the quality of skilled personnel training, but also the inevitable requirement of high-quality development of higher vocational colleges, and also the meaning of building a powerful manufacturing country.

At present, the development of higher vocational education has begun to take shape. In terms of the number of higher vocational colleges, as of June 2019, there were 1423 higher vocational colleges, an increase of 0.35% over the previous year[3]. In terms of teaching staff, as of June 2019, there were 699400 teaching staff in higher vocational colleges, an increase of 2.06% over the previous year. There are 514436 full-time teachers in higher vocational colleges, an increase of 3.37% over the previous year. The proportion of "double qualified" teachers was 30.6%[4]. In terms of the employment rate of graduates, the employment rate of higher vocational college graduates in 2018 was 92.0%[5]. In terms of international exchanges, more than 30 higher

vocational colleges have established 33 overseas branches abroad, and 595 professional teaching standards have been implemented abroad[6]. In 2018, there were 17000 full-time International Students in higher vocational colleges, an increase of 50% over the previous year[7]. In terms of college-enterprise cooperation, the intensity of college-enterprise cooperation has increased significantly, with 644 colleges participating in the modern apprenticeship pilot[6]. Higher vocational colleges are playing an increasingly important role in conveying skilled talents, expanding employment and promoting students' development.

Higher vocational colleges are the main front of cultivating craftsmen. Among them, ingenuity and craftsmanship are indispensable parts of cultivating craftsman talents. Ingenuity is the value and pursuit of skilled talents. They are dedicated to their work, perfect, and unique. Craftsmanship is an outstanding skill operation level, which is the basis of making high-precision products. The survey shows that it takes at least five to ten years of practice to achieve outstanding skills[8]. Higher vocational colleges have obvious advantages in cultivating craftsmen with ingenuity and craftsmanship. One is the construction of "double qualified" teachers. A full-time and part-time teacher team with reasonable structure and outstanding theoretical level and skills can cultivate students' theoretical knowledge and practical ability. The second is the construction of practical training base. Advanced equipment and concepts can help students master practical skills and acquire practical skills in hands-on operation. The third is the holding of teaching skills competition. Students exchange skills in the form of competition, which makes teaching skills competition an effective way to deepen students' practical ability. Fourth, college-enterprise cooperation. Through the in-depth cooperation between colleges and enterprises, we can build a double main body to cultivate talents.

2 Problems in the cultivation of craftsmen in Higher Vocational Colleges

The cultivation of craftsman talents should follow the dialectical law of practice and cognition, which is of great significance for deepening the level of cognition, improving practical ability and high-quality development of higher vocational colleges.

But there are some problems in the process of craftsmen training.

2.1 The emphasis on craftsman training needs to be further improved

The cultivation of craftsman talents needs to be paid attention to, but the current system is not perfect, which restricts the generation of craftsman spirit. At the national level, even though the state attaches great importance to the cultivation of craftsman talents, there are still problems in the communication and connection between vocational education and general education, college-enterprise cooperation, the integration of production and education, and the quality of cultivating students. The concept of "learning to be a good official" and "terminal education" still occupy a dominant position. There are still biases against vocational education and front-line service workers. Some people with money worship pursue short-term and fast ways, while the craftsman spirit of indifferent to fame and wealth and striving for perfection gradually disappears.

2.2 Traditional and diversified craftsman training mode needs to be improved

First, the talent training of Higher Vocational Colleges follows the traditional talent training mode, which is designed according to the training objectives of academic talents, and is not completely suitable for the training of skilled talents. The curriculum system of "basic courses professional basic courses professional courses" is contrary to the characteristics of applied talents. Second, there is a lack of moral cultivation plan of craftsman spirit in higher vocational colleges; Teachers focus on the explanation of knowledge and theoretical content, ignoring the unity of knowledge and practice; Students attach importance to skills and professional courses, while the courses related to craftsman training are not paid attention to by students. Third, the cultivation of craftsman talents is not fully integrated into the teaching and practical training system. There is a phenomenon of "two skins" in the cultivation, teaching and practical training of craftsman spirit in higher vocational colleges, and the "craftsman spirit" is not fully integrated into the talent training system.

2.3 Students' social service ability needs to be further improved

The specialty construction of higher vocational

colleges is not guided by the local economic and industrial structure, and the students' social service ability needs to be improved. First, in the setting of specialties, higher vocational colleges did not give full play to the advantages and characteristics of industrial clusters, did not consider the ability of running a college, and did not set up clustered specialties around an industrial chain. Second, in terms of the matching degree between talent cultivation and market, due to the lack of proper data tracking and prediction, there is a phenomenon that the specialty setting is unreasonable and the number of popular professional talents is excessive. Third, the conversion rate of research results is low. Even if the project is aimed at solving a certain social problem, there is a phenomenon of derailment between theory and practice when the achievements of scientific research are applied to practice. Fourth, the quality of the students is not high, because there is no obligatory evaluation standard to regulate and assess in the college's talent training system, so that some higher vocational graduates' social service ability is not strong.

2.4 The enthusiasm of enterprises to participate in college-enterprise cooperation needs to be further improved

First, the introduction of new ideas, new technologies and crafts and other advanced aspects of enterprises is relatively low, which makes it difficult to build a community of shared destiny. There is a gap between the national regulations and the actual implementation effect of the enterprise system. Second, in the enterprise training, it ignores the integration of students and advanced enterprise culture, the lack of dedication and concentration, and only focuses on the acquisition of students' skills as "professionals". In the period of social transformation, marketization and intellectualization are full of all aspects of life. The social atmosphere of eager for quick success and instant benefit conflicts with the spirit of strict craftsman. Third, enterprises, as profit-making organizations, pay more attention to short-term economic benefits. Enterprises bear various risks in the long-term process of training skilled talents, which weakens the enthusiasm of enterprises to participate in college-enterprise cooperation.

3 Countermeasures for the cultivation of craftsmen in Higher Vocational Colleges

The aim of craftsman talents in higher vocational colleges is to cultivate craftsmen who are moral and artistic and pursue perfect products. Only through the "craftsman spirit" throughout the whole process of product manufacturing and personnel training, can we cultivate the great craftsman who keeps improving, so that China's industrial transformation and upgrading, out of Chinese characteristics.

3.1 Pay more attention to the cultivation of craftsmen

The key to raising the level of attention is to form a consensus: The cultivation of craftsmen is indispensable. The most outstanding performance is to improve the system, through which the cultivation of craftsman talents has principles to follow and rules to obey. Under the premise that the state attaches great importance to vocational education, the construction of modern vocational education system is implemented. We should abandon the idea that vocational education is "terminal education" and improve the communication and connection between vocational education and general education, so that vocational education can be promoted, further studied and recognized by the society. We should improve the framework of vocational education, establish a strict vocational training system and a scientific employment qualification access system. At the same time, the corresponding legal system and human resource system should be improved to provide a solid institutional guarantee for the cultivation of craftsman talents. At the college level, we should formulate the craftsman talent training system and development plan based on the actual situation of our college, and earnestly implement the requirements for craftsman talent training. To enhance the degree of attention, strengthen the top-level design, improve the system is an important guarantee for the cultivation of craftsman talents.

3.2 Exploring a new model of craftsman training

At present, the talent training mode of higher vocational colleges still follows the traditional talent training mode, which is not suitable for the cultivation of application-oriented talents. Therefore, we should explore a new mode in line with the cultivation of craftsman talents. The training logic of "practice before theory" is more in line with

the needs of enterprises. First, the cultivation of craftsman talents is mainly based on moral education. The moral education curriculum system is relatively single, and the interpretation of craftsman spirit is not comprehensive and in-depth. The cultivation of craftsman talents is not only the responsibility of moral education teachers, but also needs to be implemented in each course. Each teacher needs to standardize his own words and deeds in order to play the role of teacher. The second is to create a good campus culture. Based on the cooperation between college and enterprise, we should combine campus culture with enterprise culture to create an atmosphere of "labor equality" on campus. Through some activities to publicize the stories of great country craftsman, such as "great country craftsman enter the campus" and other activities, students can learn about great country craftsman, find examples around them, and enhance their personal identification with the spirit of craftsmen. Through the activities, students can feel the outstanding product technology and the concentrated and realistic personality charm of great country craftsman, visualize and embody the abstract spirit of craftsmen, and put it into action to inherit the spirit of craftsmen.

3.3 Strengthen the construction of famous craftsmen

Teachers play an irreplaceable role in the cultivation of craftsmen. A teacher's words and deeds are model, so teachers should set an example to show the professional attitude of craftsman spirit, the professional spirit of keeping improving and the innovative consciousness of keeping pace with the times. The teacher's own behavior is the most powerful way to promote the spirit of craftsman, leading the spirit of craftsman through the whole process of talent training. Second, in terms of salary and promotion, the relevant fields are inclined to technical and skilled talents, give full play to the role of technical and skilled talents, and truly implement the slogan of "breaking the five only". At the same time, increase the introduction of high skilled talents and improve the relevant supporting measures. The third is to strengthen the construction of a team of professional and part-time craftsmen with reasonable structure. Teachers should use various ways to temper their skills and promote the generation of their craftsmanship spirit. At the same time, schools should pay more attention to teacher training, and teacher training should be carried out according to the actual needs of each teacher.

3.4 Improve students' social service ability

Students' knowledge and skills should be put into social service to play a role. First, the specialty setting of higher vocational colleges should be guided by the local industrial structure, and fully consider the ability of running a college to start short-term and long-term majors. The second is to apply scientific research achievements to practice. Third, improve the social service consciousness of talents. Pay attention to students' ability of serving the society, dedication, concentration and innovation through practice. Taking part in extracurricular practice activities will be included in the quality evaluation system. Students' participation in social practice activities can fully cultivate their love for labor, the spirit of hard work, and get the opportunity to contact the society, which is helpful to improve the ability of social service. Even if students have certain skills and abilities, they should take social service as the way and industrial transformation and upgrading as the goal, so that craft products can be applied to the society.

3.5 Let enterprises perform in the cultivation of craftsmen

As one of the important ways for the development of higher vocational colleges, college-enterprise cooperation needs to improve the relevant laws and regulations, clarify the responsibilities and rights of the three parties, and provide guarantee and basis for the cooperation between colleges and enterprises. Second, craftsman spirit is the embodiment of spirit. According to the principles of scientificity, systematicness, adaptability and consistency with talent training objectives, enterprises should establish a quality evaluation system of craftsman talent cultivation based on three aspects including nature, quality and quantity. The first level indicators must include craftsman's professional consciousness, craftsman's knowledge ability, craftsman's practical ability, craftsman's service ability and craftsman's ability There are five indicators of innovation ability. The content of the second and third level evaluation indexes depends on the nature of the specialty. For example, "craftsman's professional consciousness" should have at least four secondary indicators of "political quality", "professional ethics", "professional quality" and "professional ability". At the same time,

we should also pay attention to the introduction of professional third-party institutions to evaluate the quality evaluation system. Thirdly, teachers in enterprises are also a key link in cultivating craftsmen. Enterprises should give certain labor remuneration to the masters who directly participate in the education, so that they can maintain the integrity of being indifferent to fame and wealth and devote themselves to imparting skills.

References

[1] Xi JP. Speech at the forum of teachers and students at Peking University ([EB/OL].) (2018-05-03) [2020-12-23]. http://www.xinhuanet.com/2018-05/03/c_ 1122774230.htm.

[2] Li KQ. Effectively put vocational education in a more prominent position and accelerate the cultivation of a large number of high-quality workers and talents with professional skills and craftsmanship spirit [EB / OL]. (2016-12-02) [2021-01-25] http://www.gov.cn/xinwen/2016-12/02/content_ 5142246.htm.

[3] Ministry of education. Number of colleges, staff and full-time teachers at all levels in 2019 [EB / OL]. (2020-05-20) [2020-12-15] http://www.moe.gov.cn/s78/A03/moe_ 560/jytjsj_ 2019/qg/202006/t20200611_ 464804.html.

[4] Ministry of education. The development of teachers in China in 2019 [EB / OL]. (2020-06-11) [2020-12-23] http://www.moe.gov.cn/jyb_ sjzl/s5990/202008/t20200831_ 483697.html.

[5] Wang BQ, Ma Y. Employment Blue Book: Employment Report of Vocational College Students in 2019 [M]. Social Science Literature Press, 2019

[6] Liu J. Press conference of China's higher vocational education quality annual report 2019 was held in Beijing [EB / OL]. (June 25, 2019) [December 22, 2020] https://www.tech.net.cn/news/show-66626.html.

[7] Zhai F. 2019 annual report on quality of Higher Vocational Education in China [EB / OL]. (June 24, 2019) [December 22, 2020] https://www.tech.net.cn/news/show-66623.html.

[8] Li SL, Chen G. Integrating "craftsman spirit" into skilled personnel training[J]. People's Forum, 2019(30): 68-69.

Comparative Study of Vocabulary Learning Difficulties Experienced by Urban and Rural Middle School Students

——A Case Study of Xiyanfang Middle School and Middle School Attached to XATU

Bo Xu[*], Hua Zhang, Yu Zhang

Xi 'an Technological University, Xi'an 710021, China

Abstract: It is greatly significant for middle school students to learn vocabulary in English learning. However, there are many barriers while mastering vocabulary.By comparing the current situation of vocabulary learning between urban and rural middle school students, the paper tries to find out the specific aspects of backwardness in vocabulary learning of rural middle school students. Reasons which cause the difficulties will be investigated and then corresponding solutions will be put forward to narrow the gap between urban and rural middle school students in vocabulary learning.

Keywords: Vocabulary learning; Difficulties; Learning strategies; Learning attitude

1 Research background

Vocabulary learning is a key in English learning, and the size of vocabulary directly affects the development of students' language skills. The vocabulary shortage will lead to certain restrictions on the practical use of language. For middle school students, influenced by various factors, vocabulary learning becomes time-consuming and inefficient. Poor learning effect will make students lack confidence and interest in English learning, thus hindering their accumulation and mastery of English vocabulary. The differences between urban and rural students' living environment, educational resources allocation, individual ideas and other factors are bound to have an impact on students' learning. Therefore, this study will select two middle school students as the object, carry out questionnaires, interviews and tests to investigate the current situation of urban and rural junior high school students' vocabulary learning, find the gap, and put forward suggestions[1-5].

2 Research design

2.1 Research objects

This paper selects 50 students of Grade 8 from Xiyanfang Middle School (hereinafter referred to as XYFS) in Zhouzhi County and Middle School Attached to XATU(hereinafter referred to as XATUS) in Beilin District respectively to conduct a questionnaire survey and vocabulary test. In addition, it interviews the leaders of the English teaching and research groups of the two schools and the students in the sample class. All the sampled schools are in the average level in the districts and counties, and all the students have set up English courses for more than five years, with a certain English learning background.

2.2 Research issues

This study focuses on the following three issues:

(1) What's the current situation of vocabulary learning in XATUS and XYFS?

(2) Are the students of XATUS better than those of XYFS in vocabulary learning? If so, what is the reason for the gap?

(3) What measures should be taken to narrow the gap between the two schools?

2.3 Research methods

This study mainly adopts vocabulary test, questionnaire survey, observation and individual interview to enhance the scientific research. The vocabulary test is designed according to the Compulsory Education English Curriculum Standard (2020 Edition) which involves phonetic test, writing words according to the Chinese and initials, writing the Chinese meaning of the given words, identifying synonyms, identifying words in similar forms, filling in the blanks with the appropriate form of the given words and cloze.

3 Research analysis

3.1 A comprehensive analysis of vocabulary learning

The vocabulary test is divided into seven parts with a total score of 100. The test is a closed-book examination and it is supervised by two their English teachers, with a duration of 60 minutes. Table 1 Shows the comparison of vocabulary test scores between the two sample classes.

Table 1. Results of comprehensive vocabulary test

			XATUS	XYFS	Gap
		Total Score	69.96	57.12	12.84
	Section 1	Phonetic Test (20 points)	15.12	10.08	5.04
	Section 2&3	Mastery of Word Meaning (10 points)	6.89	6.49	0.4
Average Score	Section 4	Analysis of synonyms (10 points)	8.36	6.42	1.94
	Section 5	Discrimination of Words in Similar Forms (10 points)	6.7	6.6	0.1
	Section 6	Word Appropriate Form Filling(20 points)	12.44	11.24	1.2
	Section 7	Cloze (20 points)	13.36	9.8	3.56

Table 1 shows the present situation of vocabulary learning of two sample classes. The total average score of XATUS is 69.96, and that of XYFS is 57.12. The gap between two schools was 12.84 points. Obviously, the current situation of vocabulary learning in XATUS is better than that of XYFS which reflects the gap of vocabulary learning between schools in urban and rural areas .

In the phonetic test, the urban sample school XATUS scored 15.12 points, which was higher than that of the rural sample one XYFS by 5.04 points, indicating that the students of XYFS were inferior to those of XATUS. According to the test results, 82% of the students in XYFS can't write more than five words according to the phonetic prompts. But in the part of word meaning mastery, the difference between the two schools is only 0.4 points, which shows that the students of the two schools have nearly the same performance in this aspect. In terms of synonym discrimination, XATUS scored 8.36 points, which was higher than that of XYFS by 1.94 points. Therefore, the students of the urban sample school did better than those of the rural sample school in terms of synonym discrimination. And as the results showed, most of the students in both schools had trouble in making distinction between "look", "see", "look at" and "watch". In the part of discrimination of words in similar forms, XATUS is only 0.1 points

higher than XYFS, the two schools are almost at the same level, and students of both schools have difficulties in distinguishing "later" & "latter" and "police" & "policy".

While learning vocabulary, it is a necessity for students to master the grammatical use of words. According to the test results, the gap between XATUS and XYFS is 1.2 points, so the students of the urban sample school might master the grammar knowledge better than the students of the rural sample school. For the performance on cloze, there was a gap of 3.76 points between Middle XATUS and XYFS which indicated that the students in Middle School Attached to XATU could apply vocabulary knowledge more comprehensively. After a comprehensive analysis of the vocabulary test results, it is found that students in rural sample school XYFS have more difficulties in vocabulary learning, and the current situation of vocabulary learning is worse than that of XATUS the urban sample school.

3.2 Analysis of interview results

In order to further explore the reasons for the vocabulary learning gap between urban and rural middle school students, this study conducted interviews with two sample classes of students and their English teachers to understand the students' living environment, English learning habits, vocabulary strategy application ability and the

allocation of educational resources.

According to the interview, the students in XATUS all expressed that their parents can supervise their learning. And they all set up English courses from the third grade of primary school, and reported for English extracurricular guidance. In the interview, all the students thought the ways of the vocabulary teaching helped them a lot. Also, they said their teachers had introduced them some effective strategies to learn vocabulary like associative method, using picture, and using affix and root etc. which made word learning easier for them. However, less than 40% of the students in XYFS are supervised by their parents in their study. Due to the limited literacy of their parents, they can not help students in English learning. According to the interviewees of XYFS, even though English courses have been offered since grade 3, only 53% of the students have received formal English classroom education and 10% of the students have received extra-curricular English guidance due to the lack of teachers. Therefore, their English learning lags behind. As for the vocabulary strategies taught by teachers, most students said that they could not use them freely, so they prefer to memorize them mechanically.

According to the teachers of XATUS, there are totally six English teachers in this school, one of whom is a special grade teacher. Each teacher takes two classes. And according to the teachers of XYFS, there are eight English teachers in total, each with two classes. However, only two of them majored in English and obtained a Bachelor of Arts degree. The rest of the teachers are in other majors like computer science, and two of them only obtained the associate degree. She said that the loss of teachers was extremely serious in the school because of low income and underdeveloped infrastructure.

3.3 Questionnaire analysis

The questionnaire consists of 30 questions which adopts five point scale marking . Among them, 1 symbolizes "never or almost never consistent with me", 2 means "usually not consistent with me", 3 indicates "sometimes consistent with me", 4 symbolizes "usually consistent with me" and 5 means "always or almost always consistent with me". In this survey, 50 questionnaires were issued, and all of which were collected and the data were valid.

Table 2. Reliability and validity of the questionnaire

XYFS	Total Reliability	Attitude Towards Vocabulary Learning	Vocabulary Learning Difficulties	Vocabulary Learning Strategies
Cronbach a	0.996	0.973	0.990	0.995
Numbers	30	5	6	19
KMO measure of sampling adequacy: 0.928				
XATUS	Total Reliability	Attitude Towards Vocabulary Learning	Vocabulary Learning Difficulties	Vocabulary Learning Strategies
Cronbach a	0.991	0.940	0.990	0.981
Numbers	30	5	6	19
KMO measure of sampling adequacy: 0.934				

Table 2 shows the reliability and validity of the questionnaire. SPSS analysis shows that the Cronbach a of each dimension of the questionnaire of both sample school is higher than 0.9, so the questionnaire is highly reliable. The KMO measure of sampling adequacy of the two middle schools are both more than 0.9 and less than 1, so the data collected by the questionnaire are suitable for analysis.

The results of the questionnaire show that most of the students in XATUS have a positive attitude towards vocabulary learning, while the students in XAFS have a relatively negative attitude. For example, 60% of the students in the urban sample school are confident in their English learning, while only 20% of the students in the rural sample School have confidence in English learning. Even though more than 80% of the students in the two middle schools can realize the importance of vocabulary learning, most of the students in the rural sample school do not attach enough importance to it. And more than 50% of the students in XYFS lack persistence in vocabulary learning and they do not want to learn English well just because they think it is a time-consuming task.

In the process of vocabulary learning, students in XYFS encounter more difficulties than students in XATUS. For example, 40% of the students in XYFS said they had difficulties in phonetic alphabet

learning, while only 16% of the students in XATUS had difficulties in this aspect.40% of the students in the rural sample school thought it was difficult to distinguish part of speech and memorize long words, while only 18% of the students in the urban sample school said they needed help in this aspect.

In the mastery of vocabulary strategy, The results show that the students of XATUS have a good command of vocabulary learning strategies, and most of them can use vocabulary learning skills and methods more flexibly, so as to improve the efficiency of vocabulary learning. For example, 56% of the students in XYFS mark phonetic symbols with Chinese character to aid their memory, while only 16% of the students in XATUS use this method. This method is a stereotype which is is not scientific and efficient in recent days. In classroom learning, more than 50% of the students of XATUS preview in advance and take notes, but in XYFS, only 36% of the students preview the content and 38% of the students make notes. At the same time, compared with the sample school in rural areas, more students of XATUS can use pictures, actions, objects and other means to assist vocabulary learning and memory.

After the analysis of the questionnaire data, it is found that the students in XATUS hold a more positive attitude towards vocabulary learning than those of XYFS. The students in XYFS face more difficulties in vocabulary learning than those of XATUS. The students in the urban sample school master more scientific and efficient vocabulary learning strategies than those of the sample school on rural area.

4 Conclusion and implication

According to the results of vocabulary test, the students of XATUS have a better performance in vocabulary learning than those of XYFS who are encountered with more difficulties in vocabulary learning. For instance, the students in the rural sample school have a poor mastery of phonetic symbols and comprehensive adoption of vocabulary. Based on the results of questionnaire and interview, besides some objective factors, the reasons for the gap also include the difference of students' attitude towards vocabulary learning and the gap of their ability in adopting vocabulary learning strategies.

It is not difficult to find that even now the government are emphasizing the overall allocation of urban and rural education resources, there is still a gap between urban and rural English education, which is obvious in vocabulary teaching and learning. In order to narrow the gap, in addition to enhancing the hardware, rural middle schools should pay more attention to students' learning and mastering of international phonetic symbols, guide students to develop a positive attitude towards vocabulary learning, help students establish learning confidence, and cultivate students' ability to use vocabulary learning strategies.

References

[1]   Lu GQ. Modern English Lexicology [M]. Shanghai:Shanghai Foreign Language Education Press, January 2003.

[2]   Ministry of Education of the People's Republic of China. English curriculum Standards for Compulsory Education (2020 Edition) [M]. Beijing: Beijing Normal University Press, 2020.

[3]   Wu Y. A review of second language vocabulary acquisition [J] Research on Foreign Language Teaching in Basic Education, 2005 (4).

[4]   Huang JG. On the internal factors of students' English learning difficulties [J]. Journal of Baoshan University, 2005, 24 (1): 99-101.

[5]   Dang X. Causes and countermeasures of junior high school students' english vocabulary learning difficulties [J]. Gansu Education, 2018 (3): 86.

Discussion about the Mean, Median, Mode and their Validity, and the Representative Number

Weiwen Cao

Yinchuan Elite School, Yinchuan 750002, Ningxia Hui Autonomous Region, China

Abstract: The mean, median and mode are statistical means often used in statistics to describe the concentrative trend of a group of data. However, the three kinds of data are not only different in definition, but also different in application. For the same group of data, there is no definite and strict standard for which one should be used. What's more, different data may even lead to diametrically opposite conclusions. Even if we finally choose one, what extent the data can describe the concentrative trend of the group of data? Is there any statistical method that can describe the concentrative trend of a group of data more objectively and fairly? It is not only a very interesting issue, but also an issue including great research value.

Keywords: Mean; Median; Mode; Validity; Representative Number

1 Definition and properties of mean, median and mode

Mean: In general, for *n* numbers: $x_1, x_2, \cdots x_n$, we call $\frac{1}{n}(x_1 + x_2 + \cdots + x_n)$. that the mean of the *n* data. The mean can make full use of the information provided by all data, so it is more commonly used in real life, but it is easily affected by extreme data[1].

Median: Generally, if the data are arranged in order of size, and the data in the middle (or the mean of the two data in the middle) is called the median of the group of data. The advantage of median is that it is easy to calculate and less affected by extreme data, but it can't make full use of all data information.

Mode: The data that appears most frequently in a group of data is called mode. However, when the repeat times of each data is approximately equal, the mode often has no special significance[2].

2 Generation of the representative number

Although the definition and nature of mean, median and mode are very clear, for a group of large or small, long or short, uneven or neat data, which one should be used, or is there any statistical method to describe the concentrative trend of a group of data more objectively and fairly?

However, we don't have certain definite and strict standards to judge which data should be used. Even if we choose one of them through inexplicable, uncertain sensibility or rationality, what extent the kind of data can effectively describe the group of data, namely, what is its validity? Now let's study a common case in our life, so as to understand and think about the above series of problems more deeply.

The Salary of A Company								
Employee	Manager	Deputy Manager	Employee A	Employee B	Employee C	Employee D	Employee E	Employee F	Employee G
Salary	7000	4400	2400	2000	1900	1800	1800	1800	1200

For the group of data, manager, employee C and employee D respectively describe the salary of company from three different perspectives: mean, median and mode. No matter for a college student who has just graduated, or for a middle-aged person with greater pressure, it is better to earn more 100 yuan per month than less 100 yuan. So which kind of salary the job seeker should use as a reference standard? How much is the final salary? If the job seeker is not faced with three kinds of data, but with three employees: manager, employee C and employee D, the choice will become more difficult after some conversation,

We could see how difficult it is to select a representative data describing the concentrative trend of a group of data. This is because the three kinds of data describe the concentrative trend of a group of data from three different angles, so it is too one-sided to choose any one of them. At the same time, the validity of three kinds of data for different sequences will also have some differences, sometimes the difference is even very huge. For example, the mean is obviously not suitable to describe the sequence with more extreme data, and sometimes an extreme data will seriously affect the validity of mean. For the median, although the amount of data on both sides is the same, if the data on both sides are unbalanced, the validity of median will be greatly reduced. As for mode, unless the frequency of certain data is obviously dominant, the reference value will not be too significant. To sum up, in order to describe the concentrative trend of a group of data more objectively and fairly, combining the characteristics of the three kinds of data, organically forming a more representative data——the representative number, is the best and final way to solve the above complex problems.

So how should we "combine" the three kinds of data? Since the mean, median and mode are three necessary elements to form the representative number, the greater the validity, the greater proportion of the data, and vice versa. We use P to represent mean, V_P to represent mean validity; We use N to represent median, V_N to represent median validity; We use M to represent mode, V_M to represent mode validity. We use E to represent the representative number. According to the above analysis, we define the representative number as follows:

$$E = \frac{V_P P}{V_P + V_N + V_M} + \frac{V_N N}{V_P + V_N + V_M} + \frac{V_M M}{V_P + V_N + V_M}$$

3 Validity of mean, median and mode

3.1 Mean validity

Although we have solved the "weighted" problem of mean, median and mode validity, how to determine the validity of the three kinds of data? We know that mean validity is negatively correlated with the number of extreme data and extreme degree in the sequence. We usually use range (R) and variance (S^2) or standard deviation (S) to describe the fluctuation of a group of data. Therefore, the larger the range, variance or standard deviation of the group of data, the lower the validity of mean, and vice versa.. However, the size of range, variance or standard deviation cannot be determined by the group of data itself——this method is generally used to compare the fluctuation between different sequences. Since the standard deviation represents the average distance between each data and the mean, and the range represents the distance between the maximum data (a) and the minimum data (b), we can define the mean validity as follows: If $a \neq b$,

$$V_P = 1 - \frac{s}{\frac{R}{2}} = 1 - \frac{2s}{R}$$

; If $a=b$, $V_P=1$; In summary,

$$V_P = \begin{cases} 1 - \dfrac{2s}{R}, & (a \neq b) \\ 1, & (a = b) \end{cases}$$

3.2 Median validity

For a group of data, the ideal median should not only ensure that the amount of data on both sides is equal, but also ensure that the distribution of data on both sides is uniform and symmetrical. Therefore, it should be exactly equal to the intermediate value between the maximum data and the minimum data, so the closer the median is to the intermediate value, the higher its validity, and vice versa. Therefore, we can define the median validity as follows: If $a \neq b$,

$$V_N = 1 - \frac{\left| N - \frac{a+b}{2} \right|}{\frac{R}{2}} = 1 - \frac{\left| 2N - a - b \right|}{R};$$

If $a=b$, $V_N=1$; In summary,

$$V_N = \begin{cases} 1 - \dfrac{|2N - a - b|}{R}, & (a \neq b) \\ 1, & (a = b) \end{cases}$$

3.3 Mode validity

For mode, the more frequent it appears, the better it can reflect the trend of data concentration, and the higher its validity, and vice versa. Therefore, we can define mode validity as follows: $V_M = \dfrac{t}{n}$. But for mode validity, there are two problems as follows: (1) There may be multiple modes at the same time, so which data should be selected as the mode? In order to better describe the concentrative trend of a group of data, we should choose the data that is closest to the mean or median with higher validity as the mode; (2) No matter the mean or median is chosen as the standard of mode selection, sometimes there are two modes with the same distance from this standard, which one should we choose? In order to highlight the imbalance and disproportion of data distribution, we choose the smaller data as the mode.

4 Application case of the representative number

4.1 Case 1:

After determining the calculation method of mean, median and mode validity, we can also determine the calculation method of the representative number. Let's review the case mentioned above and feel the charm of the representative number together.

The Salary of A Company								
Employee	Manager	Deputy Manager	Employee A	Employee B	Employee C	Employee D	Employee E	Employee F	Employee G
Salary	7000	4400	2400	2000	1900	1800	1800	1800	1200

According to the above table, we can get the following table:

Directory	Figure	Directory	Figure
Mean (P)	2700	Minimum Number (b)	1200
Median (N)	1900	Range (R)	5800
Mode (M)	1800	Mean Validity (VP)	0.4
Standard Deviation (s)	1741.01	Median Validity (Vₙ)	0.24
Mode Frequency (t)	3	Mode Validity (Vₘ)	0.33
Data Quantity (n)	9	Representative Number (E)	2194
Maximum Number (a)	7000		

It can be seen from the table below that the salary standard that the job seeker should refer to is   yuan, rather than the average salary   yuan that is most commonly used in life.

4.2 Case 2:

Master and apprentice jointly run a shop. The salary of master is   yuan, but the salary of apprentice is   yuan. What is the salary of the shop?

According to the meaning of title, we can get the following table:

Directory	Figure	Directory	Figure
Mean (P)	50500	Minimum Number (b)	1000
Median (N)	50500	Range (R)	99000
Mode (M)	1000	Mean Validity (VP)	0
Standard Deviation (s)	49500	Median Validity (Vₙ)	1
Mode Frequency (t)	1	Mode Validity (Vₘ)	0.5
Data Quantity (n)	2	Representative Number (E)	34000
Maximum Number (a)	100000		

As can be seen from the table below, the reference salary in the table is   yuan, but the average salary is   yuan. It can be seen that the mean validity is very low when the sequence fluctuates greatly, so it can't effectively describe the concentrative trend of the group of data.

4.3 Case 3:

The random number generator generates   data between ～ as follows, to calculate the representative number of the group of data please:

Random Data									
6	67	15	15	86	22	64	29	11	20
87	42	11	51	7	41	76	53	95	15
28	29	67	10	49	47	56	70	70	26

According to the above table, we could get the following table:

Directory	Figure	Directory	Figure
Mean (P)	44.83	Minimum Number (b)	7
Median (N)	44.5	Range (R)	88
Mode (M)	15	Mean Validity (VP)	0.39
Standard Deviation (s)	26.73	Median Validity (V_N)	0.85
Mode Frequency (t)	3	Mode Validity (V_M)	0.1
Data Quantity (n)	30	Representative Number (E)	42.4
Maximum Number (a)	95		

It can be seen from the following table that with the increase of sequence, the representative number, mean and median would gradually be similar. It is because with the increase of sequence, while the mode validity is decreasing, the fluctuation of sequence tends to be smooth, and the distribution of data tends to be uniform and symmetrical, which leads to gradual improvement of the validity of mean and median.

In fact, we could not only use the representative number to describe the concentrative trend of a group of data, but also compare the quality of different sequences through the representative number, and adjust the distribution of data according to the representative number. For example, schools, enterprises or militaries could effectively allocate staffs and works according to the representative number to avoid the performance deviation caused by uneven distribution.

5 Conclusion

The representative number is an organic combination of mean, median and mode. Through the way of "weighting", it ends the history of one-sided and blind description of sequences among the three kinds of data, and enables people to describe the concentrative trend of a group of data more objectively and fairly. The generation of the representative number will have a very rich research value for both academic research and practical application.

References

[1] Compilation group of compulsory education textbook mathematics (grade 7-9) published by Beijing Normal University. Mathematics (Class 8, Volume 1)[M]. Beijing: Beijing Normal University Press, 2016.

[2] Compilation group of compulsory education textbook mathematics (grade 7-9) published by Beijing Normal University. Mathematics (Class 8, Volume 1)[M]. Beijing: Beijing Normal University Press, 2016.

[3] Compilation group of compulsory education textbook mathematics (grade 7-9) published by Beijing Normal University. Mathematics (Class 8, Volume 1)[M]. Beijing: Beijing Normal University Press, 2016.

Research on Improving the Effectiveness of College Students' Theme Education Practice in the New Media Era

Yuying Zhao

Harbin Institute of Finance, Harbin 150030, Heilongjiang Province, China

Abstract: Carrying out theme education practice is an important measure of Ideological and political work. The goal and content of theme education activities are generally overlapped with other activities, which makes the school unable to bear the burden of carrying out multiple activities at the same time, thus affecting the actual effect of theme education practice activities. In this paper, by improving the method of theme education, and with a positive attitude and innovative spirit to continue to innovate the working mode of theme education practice, the way of using new media technology in the process of theme education is analyzed, and its characteristics and laws are analyzed, so as to improve the effective working path of theme education.

Keywords: New media era; Theme education; Effectiveness

1 Introduction

Theme education practice is a form of organizing specific activities, which is an important carrier of strengthening ideological and political education. It forms a complementary carrier of Ideological and political education with political learning, dialogue education and cultural infection. Because theme education is more planned, operational and practical, colleges and universities often actively organize and carry out theme education practice activities. However, with the extensive and continuous development of new media, the launch of the fourth technological revolution, especially the advent of 5g era, the development of various platforms, including website, app (microblog, WeChat), forum, online short video live[1]. It expands people's access to knowledge. Nowadays, the role and influence of new media on the Internet is increasing, and the rapid development of new media on the Internet provides us with a rare opportunity. Therefore, colleges and universities must adapt to the development situation of big data era under the new media environment, explore new forms and methods according to the needs of the times, and enhance the effect of theme education for college students. Let the new network concept and new network technology provide us with better and more colorful theme education forms. In a new era, theme education develops with the times, making full use of the power of new media technology, cultivating college students with a positive attitude and innovative spirit to understand

the law, improve their vision, pay attention to practical results, improve their understanding, and effectively use new media technology[2]. At the same time, colleges and universities should integrate all kinds of subject education practice activities based on internal relations, creatively carry out theme education activities according to the actual situation, and improve the effectiveness of theme education practice activities by strengthening the guidance, inspection and evaluation of theme education activities.

2　The significance of theme education practice

Taking the theme education of "pay homage to our 1919" as an example, this paper shows the significance of theme education practice. In 1919, China launched the May 4th movement, advocating science and democracy. This is the first cultural process for China to come into contact with western culture. It marks the beginning of modern Chinese history and a new democratic revolution. Due to the direct influence of the May 4th movement, the Chinese delegation attending the Paris Peace Conference rejected the contract. The film my 1919 vividly reflects the diplomatic situation of China 80 years ago by refusing the Chinese diplomatic mission to sign the Versailles peace treaty at the "Paris Peace Conference". It is an expression of appreciation for China's indomitable national spirit and strong patriotism. It also proves that China's diplomacy is a weak country without diplomacy. The Plenipotentiary of the Chinese government defended the dignity and rights of China at the Paris Peace Conference. The glorious achievement of refusing to sign the Treaty of Versailles, the moving historical story of people's petition and the struggle against imperialist forces have truly reshaped the international community and international relations since the first World War. Through carrying out the theme education practice of "pay homage to our 1919", we can carry out patriotism education for today's "after 00" college students. However, with the development of higher education reform and the extensive development of new media, the effectiveness of theme education is improved, so as to improve the quality of talent training[3]. Facing the new situation and new challenges, we should fully understand the importance of theme education practice, which promotes the development of university reform. Strengthening the

ideological and political education level of college students is also the practical requirement of "people-oriented".

3　The application of new media technology and the way of theme education practice

3.1　Seize the opportunity of new media

Under the rapid change of new media, how to deeply integrate the subject education practice with new media in content and form, actively expand the breadth, depth and sensitivity of subject education practice, improve the latest and most widely used new functions, and improve the effectiveness of media technology. With the development of the times, the opportunities and challenges brought by new media promote the effectiveness of theme education practice activities, and new media brings about the rapid development of theme education practice activities.

3.2　Strengthen the research of new media communication law

In the new media environment, information release is more convenient. In the practice of "pay homage to our 1919" theme education, all counselors will become the source of information dissemination, and through the network media platform, can effectively carry out the publicity of theme education, mobilize college students to actively participate in the practice of theme education, realize the two-way interaction of information, not only strengthen the interaction of theme education practice, but also increase the overall responsibility for the theme. The process of communication is three-dimensional and all-round. The effective combination of new media technology and theme education makes the practice process of theme education no longer unilateral, but a way of many to many communication. In thematic education, we can not only spread the text content with the help of new media, but also express it in various forms such as pictures, sound and video. Each participant in the theme education activities should use new media to promote the efficient implementation of theme education activities and increase the interactivity of theme education activities [4].

3.3　Establishing ideological education platform

At present, most of the mainstream values of "Post-00" college students are positive and sound. In the face of national events and challenges, they can show

strong patriotism, a high sense of social responsibility and a high degree of commitment. However, less and less college students are affected by the network media and social change. Some social values have declined, such as focusing on money, neglecting ideals, neglecting individuals and groups, neglecting knowledge, neglecting morality, emphasizing demands and neglecting commitment. Colleges and universities should take cultivating college students with the spirit of the times, patriotism and serving the people as the primary task, and establish and occupy an efficient ideological and political education communication platform[5].

4 The current situation of the use of new media technology in the practice of thematic education

The characteristics of new media era are digital communication, network communication and global communication. In the information age, with the rapid development and wide application of new media such as mobile phone, Internet and digital TV, new media has become a means for college counselors to study and think about problems. We must make full use of new media technology to innovate the propaganda and education of theme education.

4.1 Multi platform promotion

In the current 4G network environment, the amount of information is large, the update speed is fast, and the media platform is diverse. The content planning and promotion method of theme education activities is to make full use of the hot topics of network culture, firmly control the dominant position and discourse power of culture in the network virtual society, make full use of various platforms of various media, and concentrate on the practice of theme education. In the information age, online media is not only a channel for students to acquire knowledge, but also a new way for college counselors to educate students. Counselors must make full use of the network platform and make full use of their educational benefits. Counselors are required to establish education network teaching mechanism and use familiar network platform to educate students. Teachers should constantly improve their ability to use the network, improve their network application ability, and establish an online learning platform for students.

4.2 Educational content of various subjects

Excellent theory, speech spirit, advanced achievements of counselors, outstanding achievements of Party building and other red classics are directly presented through the media platform. Counselors widely use the mobile terminal software APP, they can also manage the educational network platform through the counselors to carry out various interactive exchanges, and suggest setting up WeChat official account or micro-blog to diversify the content of the theme education in the media environment[6].

4.3 Various activities

Because online media has the advantage of not limited by time and space. New media technology can completely change the form of theme education activities, which not only changes the old methods of theme education practice activities. Various media such as microblog, wechat, APP client, real-time video, short video and so on are widely used to diversify the format of theme education practice, and new media of various platforms are fully used to achieve the best effect.

5 Achievements and effectiveness of theme education practice in colleges and universities

5.1 Close to college students' life

Through carrying out efficient theme education practice activities, it can reflect that theme education activities are closer to college students' life. First, the theme education activities in Colleges and universities emphasize the problems reflected by college students as the starting point, insist on reflecting the real state of College Students' learning and life, and quickly change the outstanding problems reflected by students. Enhance college students' satisfaction with school and teachers. Second, teachers of all grades are greatly improving their service level for college students. Third, whether the lecturers are considerate of students in need of help and provide materials. They provide necessary help for students with learning difficulties and employment difficulties, strengthen ideological education, establish healthy personality, and actively participate in socialist modernization reform[7]. The theme education activities of college students are close to the life of college students.

5.2 Improve the ideological and political education level of counselors

As the overall person in charge of implementing the theme education activities of college students, counselors organize the theme education activities of college students closely around "serving students", "taking students as the foundation" and "improving the ideological and political level of college students". The activities highlight the leading position of counselors, show the master spirit of counselors, and improve their sense of honor and mission in teaching and education A sense of humor. It provides a broad platform for the growth of counselors and teachers, so that counselors can share more educational practice and development results. Through the organization of theme education activities for college students, counselors can feel "tired and happy" and enjoy the dignity they should have[8].

5.3 Close to society

University is the place with the most active thinking, the strongest innovation ability, high staff and wisdom. First of all, we should firmly grasp the important mission of "serving the economic and cultural construction", clarify the demand for human resources, adjust the discipline and professional environment, optimize the talent training plan, and cultivate more urgent and needed talents in the society. Secondly, it is important to focus on serving the local economy, inherit the innovative culture, spread university resources to the society, break the university wall, improve the utilization rate of resources, and test the effectiveness of activities in a satisfactory or unsatisfactory way. Carrying out theme education practice activities in Colleges and universities, strengthening the construction of Party style and clean government, emphasizing the transformation of four ways, further strengthening the relationship between the party and the masses, the relationship between teachers and students, and the combination of theoretical arms and practical problems, carrying out theme education for college students can promote learning and education activities as well as all kinds of work centered on college students, which is closer to the reality of social life[9].

6 Conclusion

Colleges and universities actively carry out theme education activities for college students, and adopt new media technology with a positive attitude and innovative spirit, which can better understand the regularity of education practice, improve predictability, pay attention to efficiency, improve visibility, and integrate "salutation" and "inheritance" into the whole process of university education. Promote their commitment to contribute to the cause of colleges and universities.

References

[1] Wu H. Establishing a five in one "Chuxin school" and promoting theme education into the mind and heart -- Exploration and research on the innovative practice of the party construction mode of the student Party branch of the Medical Laboratory Department of Jiangxi Vocational College of health [J]. Youth and Society, 2020(27): 181-182.

[2] Gao Y, Sun CW. Xi Jinping's theory and practice of forgetting his mind and keeping in mind the mission system [J]. Jilin Education, 2020(26): 47-49.

[3] Qi HT. Practice and thinking of integrating the red boat spirit into the party spirit education of Party members and cadres -- Taking Haining City of Zhejiang Province as an example [J]. Leadership Science Forum, 2020(17): 64-68.

[4] Zhao XX. Research on college counselors' education of students' socialist core values [J]. Youth and Society, 2020(24): 125-126.

[5] Zhang YH, Zhu CF. A review of practice cases of systematic student theme education activities in Colleges and Universities -- Taking Anhui Vocational College of Defense Science and technology as an example [J]. Journal of Science and Technology Economy, 2020, 28 (24): 157-158.

[6] Zhang JL, Li ZP. The practice of constructing theme class meeting under the vision of "Internet plus education" -- Taking the class meeting class of "facing setbacks and strengthening confidence" as an example [J]. New Curriculum, 2020 (33): 223.

[7] Hu QM. Practice and Thinking on carrying out the theme education of "Never forget the original intention and remember the mission" [J]. Science and Technology Style, 2020(21): 140.

[8] Li HQ. Research on the educational practice of the theme "Never forget the original intention and remember the mission" of college student Party Branch [J]. Public Relations World, 2020(14): 119-120.

[9] Mi T. An exploration of the new characteristics of patriotic education in the new era [J]. Journal of Shi Jiazang University, 2020, 22(4): 44-49.

Research on the Transformation and Upgrading of Ideological and Political Education Management in Colleges and Universities

Xiao Wang

Xi'an Conservatory of Music, Xi'an 710061, Shaanxi Province, China

Abstract: In Colleges and universities, the organization of Ideological and political teaching courses can strengthen the ideological education of students, but at present there are still some problems in the ideological and political teaching in Colleges and universities, the ideological and political teaching has not achieved the expected effect, and the ideological and political teaching will be hindered in the work. This paper focuses on the connotation of Ideological and political teaching in Colleges and universities, and puts forward the measures of transformation and upgrading of Ideological and political teaching management.

Keywords: University; Ideological and political education; Problems; Optimization measures

1 Introduction

University is an important learning stage for students. To leave university and enter society, students need to face all kinds of challenges independently. Ideological and political teaching is an important ideological education course on campus. Although the ideological and political course will not explain some survival skills to the students, it can continuously improve the students' will quality and ideological morality, and ultimately cultivate the students' strong individual and tough character. In Colleges and universities, it is necessary to do a good job of Ideological and political teaching, stand the last class of students, only constantly improve their teaching methods, find problems, deal with problems, can make the ideological and political teaching effect gradually improve.

2 On the connotation of Ideological and political education in Colleges and Universities

In Colleges and universities, the organization of Ideological and political teaching, mainly through the moral norms, ideological and political concepts and other further explanation, affect the students' thinking. Organize and carry out planned and purposeful teaching activities in schools, and improve students' Ideological and moral level through the explanation of Ideological and political courses. Teachers organize ideal and belief teaching, explain Marxism Leninism, Mao Zedong, Deng Xiaoping Theory and other related thoughts to arm students' minds, and help students form correct values, world outlook and outlook on life. In the education of the spirit of the times, explain some reform spirit and national spirit to gradually carry out ideological and political education for students, so as to promote college students to continuously improve their political attitude and belief position. Citizen moral education should be based on the basic moral standards, guide college students to learn, and help college students develop the ideological and moral qualities of unity, friendliness, patriotism and law-abiding.

3 Analysis on the problems of Ideological and political education in Colleges and Universities

3.1 Insufficient support for teaching resources

In some colleges and universities, teachers give insufficient teaching resources for ideological and political education, which is a prominent problem in the current ideological and political education work. Each university has its own characteristic majors, and students tend to choose these characteristic majors. Students think that the ideological and political teaching is boring, and it is not very helpful to improve their professional ability and expand their knowledge. There are also some schools tend to build characteristic majors with teaching resources, but ignore the ideological and political teaching. As a result, the staff do not realize the promotion effect of Ideological and political teaching on students' ideological education. The lack of attention to ideological and political education in schools will lead to the inclination of resource allocation, especially the lack of teachers. The inclination of some teachers' resources is mainly due to the students' lack of enthusiasm for ideological and political education, which will lead to the ideological and political education facing a large number of students, and some students will also show a refusal attitude[1-2].

3.2 The effectiveness of theoretical teaching is low

The discipline and construction of Ideological and political education is relatively weak, with few courses, no curriculum system, and no linkage effect of curriculum teaching. Some teachers design complicated teaching contents, old-fashioned teaching methods and unclear teaching objectives, which leads to the weak discipline construction of Ideological and political course.

4 Measures to optimize ideological and political education in Colleges and Universities

4.1 Give more policy resources support to ideological and Political Education

We should formulate the policy of Ideological and political teaching, improve the support of teachers and students for ideological and political teaching, and further enhance the attention of Ideological and political teachers for curriculum design. At present, the enthusiasm of teachers for ideological and political teaching is gradually declining. In terms of policy, schools give more policy preference to ideological and political teaching, so as to stimulate teachers' attention to ideological and political teaching. In addition, to further strengthen students' attention to the ideological and political curriculum, schools and teachers need to adopt corresponding methods to give students the necessary guidance and further deepen students' cognition of the ideological and political classroom. For example, colleges and universities can organize poetry recitation competitions to attract students to participate in poetry recitation[3].

4.2 Optimizing theory teaching

At present, the ideological and political theory teaching course is less, more content, cannot give students a good teaching effect, therefore, the ideological and political teachers should make a detailed division of the existing courses, re list, and form a complete ideological and political education theory system, in order to show rigorous logic in the theoretical teaching. Reasonable arrangement of teaching curriculum content, in the curriculum arrangement, the school should avoid ideological and political courses in the evening or weekend, ideological and political courses should be adjusted to normal time. Focus on building an effective ideological and political teaching team, provide teachers with refresher training regularly, improve teachers' professional level, further strengthen the assessment of teachers' teaching activities, so that students can put more energy and time into the lesson activities[4].

4.3 Improving the means of education

At present, most university teachers carry out ideological and political theory teaching relying on PPT display, but teachers can also use wechat, microblog and other new tools to explain the ideological and political course. In the current information age, the use of information dissemination tools to increase the dissemination of Ideological and political education knowledge publicity, can be recorded part of the ideological and political course content uploaded to the mobile app software, and timely push to students, so that students can watch these videos through the mobile phone.

5 Concluding remarks

The school constantly enriches the ideological and political teaching content in Colleges and universities. Teachers should pay more attention to their own teaching work. School leaders should give more policy and talent support to ideological and political teaching work, guide teachers to innovate teaching methods and teaching means, and combine with information equipment and multimedia equipment to improve their own teaching quality.

References

[1]   Deng ZB. Analysis on the particularity of ideological and political education of students majoring in coal vocational colleges[J]. Think tank era, 2020(4): 276-277.

[2]   Liang KB. On the role of news events in university ideological and political education[J]. Youth and society, 2020(8): 183-184.

[3]   Zhang XY. On the innovation of College Students' Ideological and political teaching methods in the new media environment[J]. Yellow River & Loess & Yellow race, 2020(17): 200026.

[4]   Wu Shaowei. The integration of craftsman spirit in ideological and political education in colleges and universities and its path[J]. Journal of Higher Education, 2020(5): 194-196.

Study on the Promoting Mechanism of Teachers' Ethics Internalization in Universities

Shan Chang

Central University of Finance and Economics, Beijing 100081, China

Abstract: On the basis of clarifying the teachers' Ethics internalization theory, this paper analyzes the typical dilemma in teachers' Ethics internalization. To resolve these problems, this paper construct an overall framework, including security mechanism, normative mechanism, education mechanism, evaluation mechanism and supervision mechanism, which the external conditions are used to constantly strengthen the moral needs of the subject, then enhance the consciousness of moral internalization, improve the effectiveness of teachers' moral construction.

Keywords: Teachers' ethics, Internalization, Promoting mechanism, External driving force, Ethics standard

The teachers team building is the basic work for colleges to carry out the fundamental task of building up people by virtue. The ethics of teachers is the first standard to evaluate the quality of teachers. The construction of teachers' ethics in colleges is a complex project, in which to internalize teachers' ethics as their own moral quality is an important department.

1 The meaning of teachers' ethics internalization

1.1 Moral internalization and teachers' ethics internalization

The general meaning of internalization refers to the process of transforming external objective things into the internal spiritual structure of subjects. And the moral internalization means that morality is the social and cultural existence outside the individual, internalization is necessary because it can make morality to be acquired and accepted by the individual[1].

Teachers' ethics is teachers' professional ethics, which belongs to the category of morality. Therefore, the internalization of teachers' ethics is that teachers transform the social agreed professional ethics norms into their own moral needs, and transform the external constraints into their own moral qualities[2]. The process of teachers' moral internalization is the process of teachers' self-cultivation and self-construction, from heteronomy to self-discipline. Only when teachers' morality realizes individual internalization, teachers' moral consciousness can be transformed into teachers' moral habits and conscious behavio, can be infiltrated into the whole process of teachers' behavior, rather than only staying on the surface.

1.2 Internalization and externalization of teachers' ethics

Teachers' ethics internalization and externalization are two stages of teachers' moral cultivation. Internalization is external teachers' professional ethics and behavior norms transforming into their own ideological consciousness, while externalization is their own ideological motivation or internal spiritual actions transforming into good teachers' moral behavior. In short, internalization is the input of teachers' moral consciousness, the premise and foundation of teachers' moral cultivation, externalization is the output of teachers' moral behavior, and the purpose and destination of teachers' moral cultivation.

1.3 The driving forces of teachers' ethics internalization

Materialist dialectics holds that the development is the result of interaction between internal and external factors; internal factors are the basis for the development, which stipulate the basic trend and direction of the development; external factors are indispensable conditions for the development. The power to promote the development of moral internalization can be divided into internal driving force and external driving force. Internal driving force is the individual subjective desire and requirement. External driving force may be political, economic, cultural, educational and other external factors, which affect the realization degree of moral internalization. The internal driving force is closely related to the moral needs of teachers, and more belongs to the individual category. The external driving force can be realized through the work system, norm and education, which can accelerate the process of teachers' ethics internalization.

1.4 Significance of teachers' ethics internalization

Teachers' ethics are internalized, so that teachers pay more attention to moral self-discipline and have a sense of social responsibility and professional identity. In the process of exploring, understanding, affirming and developing themselves, they consciously enhance the sense of honor and mission of teaching and educating students, truly love their posts, spread advanced ideology and culture, firmly support the Party's ruling, guide students' healthy growth, and maintain their responsibility and dedication to the educational cause for a long time. The improvement of a teacher' moral level will improve the overall moral level of teachers.

2 The Dilemma of teachers' ethics internalization

In colleges, the phenomenon of teachers' moral anomie still exists: some teachers don't preach, teach and solve doubts, but seek rewards, promotion, treatment, status; some teachers are not so concerned about their own work, but pay too much attention to fame and fortune, even do things against academic morality. Some teachers feel that their work is busy, intensity, the pay and return is not proportional. Some teachers are proud to have high deposits, private cars, villas, class fees. A few teachers don't work hard, they read PPT in class from beginning to end. Some teachers do not pay attention to manners. What's more, some teachers violated national laws and regulations.

The cause of the above phenomenon of teachers' moral anomie is the teachers' professional ethics is not truly internalized into the inner consciousness. At present, there are many problems in the process of teachers' ethics internalization in colleges.

2.1 The low self-consciousness of teachers' ethics internalization due to life and professional pressure

Teachers should not only bear the professional pressure from teaching and research, professional title promotion, personal development and so on, but also bear the pressure of high house prices and children education. If we can not actively solve the pressure of teachers' life and reasonable demands for individual development, teachers will not be able to identify and accept professinal moral, and even think teachers' ethics as a constraint and burden.

2.2 The lack of motivation of teachers' ethics internalization due to the lack reality of teachers' moral norms

Teachers' moral norms in colleges are too unified, lack of hierarchy and differences. In colleges, teachers' value orientation diversity, using the same standard to require all teachers is not practicality, and even appeared the strange phenomenon that the more emphasis on the teachers' ethics, the more problems in teachers' moral decline.

2.3 The low effect of teachers' ethics internalization due to the superficial construction of teachers' ethics

At present, colleges attach great importance to the construction of teachers' ethics and style, and take various measures actively. However, there are still many problems in the practical operation of the construction of teachers' ethics and style. For example, some colleges' construction of teachers' ethics and style is only communication, discussion and recognition. Therefore, the effect is not obvious. Some colleges focus on discipline propaganda, ignore the pure gravel process that replaces mental accomplishment, ignore the subjectivity of moral learning, ignore the internal needs of moral learning subjects, and lead to the passive position of teachers in the process of moral internalization.

2.4 The teachers' ethics internalization consciousness being indifferent due to the teachers' ethics evaluation and supervision are not enough

At present, in colleges there are more energy and financial resources in scientific research activities, and the evaluation and assessment standards of talents are due to their scientific research achievements, ignoring teachers' ideological education work, which also affects teachers' understanding of the necessity of teachers' ethics internalization[3]. In many colleges, the daily supervision of teachers' ethics is not much, the main responsibility of supervision is not clear, and supervision has not been done enough. The lack of evaluation and supervision directly causes teachers to despise ethics. In the absence of external constraints, it is easy to make unethical behavior in pursuit of realistic interests. It is difficult for some teachers to internalize teachers' ethics independently even if they can adhere to the bottom line of teachers' ethics.

3 Construction of the mechanism for promoting teachers' ethics internalization

The promotion mechanism of teachers' ethics internalization refers to the process that schools form external driving forces through the construction of mechanisms, norms and other measures to promote teachers to produce endogenous motivation in compliance with teachers' ethics, and internal and external driving forces to work together.

3.1 The proper function of the mchanism for promoting teachers' ethics internalization

The internalization of teachers' ethics is that teachers should transform the heteronomy norms in group occupations into individual self-discipline norms and their own moral qualities, and consciously abide by the process of implementation. The following functions of the mechanism of teachers' moral internalization should be included.

(1) The first is the guiding function, the mechanism of teachers' ethics internalization should make clear the concrete standard of teachers' ethics construction, and solve the desalination, ambiguity and confusion of teachers' ethics value, the moral right and wrong are missing and the moral direction is lost.

(2) The second is to enhance the function, it is the natural mission and important function of the mechanism to stimulate and maintain the moral needs of the subject.

(3) Third, the "ecological" function, the mechanism of teachers' ethics internalization should be able to maintain the ecological balance and stability of the whole education system, and have a continuous and healthy permeability and coupling effect on the education system ecology.

(4) Fourth, long-term function, the ethics internalization is a long and complex process, the mechanism for promoting teachers' ethics internalization should have long-term effect and can prevent teachers' moral anomie to the greatest extent.

3.2 Design of mechanism for promoting teachers' ethics internalization

3.2.1 Building a diversified teachers' ethics guarantee mechanism

It is necessary to provide teachers with the resources and platforms for personal development and achievements, so as to maximize their "individual function development ", which can not only achieve the teachers of high learning, but also achieve the teachers of strong moral. For example, colleges can actively create conditions for the promotion of personal business, such as teachers' further education and overseas visits, or help teachers set up teaching teams that "spread and help"[4], although they do not directly propagate teachers' ethics, they support the improvement of teachers' teaching and research ability. At the same time, it satisfies and stimulates teachers' professional pride, sense of honor and mission, and creates a cultural atmosphere of respecting teachers[5].

3.2.2 Establish a multi-level teachers' ethics standard

Human cognition is hierarchical and developmental, if morality far beyond human cognition , internalization is difficult to realize. Therefore, teachers' ethics standard should be suitable for teachers' cognition and have clear layers, which can gradually guide teachers to strengthen teachers' ethics cultivatio. That is, teachers' ethics standard should be ideal and realistic, both low requirements of the short-term goals, but also high requirements of the long-term goals. Teachers' ethics standards can be divided into three levels: professional ethics ideal, professional ethics principle and professional ethics rule. The ideal of professional ethics is the highest level of teachers' ethics, which encourages teachers

to establish lofty professional ideals in the form of moral initiatives; the principle of professional ethics is the basic principle of teachers' ethics, which guides teachers' correct professional behavior in the form of moral instructions or moral initiatives; the code of professional ethics is the minimum requirement of teachers' practice, which restricts teachers' bad conduct through relevant regulations[6]. At the same time, teachers' professional ethics should adapt to the development and changes of the new era, carry out dynamic improvement, make the professional ethics norms scientific, targeted and operable, and promote teachers to take the initiative to internalize teachers' ethics.

3.2.3 Establish a normal teachers' ethics education mechanism

The teachers' ethics internalizes to a conscious and active behavior of teachers, and penetrates into the whole process of teachers' behavior,is not achieved by short-term learning and education. It is necessary to establish a multi-channel, multi-level and normalized education mechanism. Multi channel refers to the diversity of education methods. We should constantly innovate ways and methods, combine professional ethics learning with seminars, typical demonstration and guidance,which can strengthen the education effect. We should give full consideration to the spiritual needs of teachers, build a variety of platforms such as teacher' ethics forum, awards and so on, so that teachers can have the opportunity to talk about their life ideals, career pursuit, career practice, etc., and carry out self reflection and self-improvement in the narration. Multi level means that we should pay attention to the level in education and carry out education for teachers at different levels. For example, for new young teachers, we should enhance their understanding of the rules and principles of professional ethics; for teachers with deeper qualifications, we should strengthen their learning and pursuit of the ideal of teachers' ethics. Normalization refers to that teachers' ethics education should run through the whole school running work and the whole career of teachers. Taking this work as an important part of the daily work of the school, it should be carried out in a planned, purposeful and organized way, so as to ensure that the professional ethics continue to penetrate into every teacher's heart, and then reflected in every link of words and deeds[6].

3.2.4 Establish an effective of teachers' ethics evaluation mechanism

The evaluation of teachers' professional ethics is the necessary way to urge teachers to perform professional ethics, and effective evaluation is the booster to promote teachers to internalize teachers' ethics. The effective evaluation mechanism of teachers' ethics should meet the following two requirements, one is the scientific and reasonable evaluation system, the other is the effective implementation of the evaluation results. A scientific and reasonable evaluation system should follow both the principle of comprehensive evaluation and the principle of classified evaluation[7]. Comprehensive evaluation refers to the combination of social evaluation and self-evaluation, qualitative evaluation and quantitative evaluation, process evaluation and end point evaluation, fully considering the actual situation of students, schools, colleagues, parents, social environment, etc. Scientific evaluation is carried out through a variety of effective ways, such as discussion talks, questionnaires, feedback and so on. Classification evaluation divides teachers' ethics into many aspects, such as teacher education, cultural inheritance and so on. Through investigation and evaluation, spot check and listening to lessons, qualitative evaluation is the main method, supplemented by a small amount of quantitative evaluation, classification evaluation of teachers' ethics. The effective implementation of the evaluation results means that the evaluation results of teachers' ethics should be linked to the vested interests of teachers' annual academic appraising, appointment assessment, allowance and salary, and professional title evaluation[8], so that the evaluation results of teachers' ethics can find the focus and the construction of teachers' ethics can not be mere formality.

3.2.5 Establish a serious supervision mechanism for teachers' ethics

The supervision and restraint mechanism of teachers' ethics is to integrate the heteronomy of teachers' ethics into the whole process of self-discipline, to make the heteronomy and self-discipline coexist organically, and to promote the teachers' ethics internalization together. Colleges should give full play to the role of the main body of supervision, and form a comprehensive supervision model in which discipline supervision, supervision, inspection and

supervision, supervision by functional departments work in the same direction, and carry out various supervision methods together. First, timely detection of teachers' misconduct and serious handling. Second, by understanding teachers' thoughts, work and living conditions, combining teachers' moral construction with solving teachers' actual problems, we can enhance the influence of teachers' moral construction.

References

[1] Liu P. Transformation of social morality to individual morality —— On the subjectivity moral internalization and individual morality generation[J]. Learning and Practice ,2012(05):117-123.

[2] Tian GP. A Study on theproblems and countermeasures of Teachers' Ethics Internalization in Colleges and Universities [J].Morality and Civilization ,2008(02):83-86.

[3] Di YR. A study on the construction of teachers' ethics in colleges and universities in the new era [J].Leading Journal of Ideological&Thoeretical Education, 2018(04):107-111.

[4] Zhang J. A Study on the mechanism of promoting teachers' ethics internalization in colleges and universities[J]. Journal of Hubei Correspondence University,2014, 27(01):37-38.

[5] Guo Y. Analysis on the Way of Teachers' Ethics Construction in Colleges from the Perspective of Peripheral Performance[J]. Wuhan University of Technology (Social Sciences Edition),2017,30(06):167-170

[6] Huang ZX, Xu JH. Discussion on the internalization of teachers' ethics[J]. Forestry Education in China, 2020, 38(03): 34-37.

[7] Meng F. The Professional moral internalization and promoting mechanism of Collage teacher [D]. Xi'an University of Science and Technology, 2012

[8] He XL, Cheng GQ et al. Present situation, problems and countermeasures of teachers' ethics construction in colleges and universities —— Based on the investigation of "h "universities in Hubei Province [J]. Journal of Higher Education ,2014,35(11):53-59.

The Application of Pragmatic Theory in College English Teaching

Qingyan Meng

Harbin Huade University, Harbin 150025, China

Abstract: This paper briefly summarizes the relevant theories of pragmatics, analyzes the importance of pragmatics in College English education, probes into the application of pragmatics in College English education, and points out the measures of combining pragmatics with college English teaching.

Keywords: Pragmatics; University education; English teaching; Application research

1 Introduction

Traditional linguistic translation plays an important role in College English teaching and learning. Most schools adopt traditional language translation methods, which can teach students to understand and analyze standard sentences, pay attention to grammatical rules, and ignore the influence of other factors in the process of English learning. In recent years, pragmatic approach has been popular in English learning. Pragmatic approach mainly focuses on situational operation, and the discourse meaning is different in different situations. Different from middle school, College English education requires students' proficiency in English and pays more attention to students' Comprehensive English levelStudents' communication ability, students' extracurricular practice ability, and students' pragmatic ability. Under the new curriculum standard, we need to change the traditional teaching mode. Teachers should optimize the teaching mode and update the teaching concept. In College English curriculum, teachers must convey practical knowledge to students and use practical knowledge to guide teaching methods, so as to effectively improve students' communication ability.

The ultimate goal of English teaching is to develop students' language ability. Although the basic knowledge of language is very important, language application skills are more important. The combination of language knowledge and practical knowledge in English curriculum can achieve better results for the development of students' language skills. The study of pragmatic teaching method has the importance of universal guidance. The following is a discussion by some scholars who focus on the application of practical theory in College English teaching. Tian Ying[1] conducted language teaching under the guidance of pragmatism theory, studied how to improve students' practical ability, realize the improvement of intercultural communication ability and language, and provided useful reference materials for the practical use of English teaching. Zhang Xin[2] mainly discusses the application of pragmatic theory in English comprehensive curriculum education. Besides listening, speaking, reading and translation, he points out the definition of pragmatics and expounds the importance of context. The advantages of practical learning theory can help students master English communication skills better. Wang Yingjie[3] combined with college English teaching practice, analyzed the guiding role of pragmatic theory in foreign language teaching, the necessity of pragmatic theory in College English teaching, and improved the quality of foreign language teaching and students.

2 Related theories of Pragmatics

Pragmatics, a branch of linguistics, studies the role of

context in speech communication, which is different from semantics or grammar. Pragmatic studies focus on the role of context and emphasize the study of the meaning of certain words and sentences in context. Verbal communication cannot be separated from situation: Time, place, subject, situation, etc. The communicator must infer the specific meaning of the utterance according to the specific situation. Discourses out of context will cause confusion among communicators and lead to misunderstanding of practical problems due to the failure to realize the communicative function of language. Pragmatism studies the meaning of discourse and context, and explores the relationship between discourse and context. It includes speech, cooperative principle and politeness principle. The application and development of pragmatism put forward higher requirements for talents, which requires them to have higher ability of foreign language quality. Foreign language communication skills include two parts. Language skills and practical skills. The cultivation of practical skills is an important part, especially for students with English ability. In College English teaching, teachers often focus on teaching language forms, such as vocabulary and grammar, while ignoring the introduction of language opportunities and context. How to apply practical research to college English teaching should be the focus of research teaching. The purpose of College English education is to cultivate college students' language ability. Language knowledge is very important, but language application skills are more important. Therefore, we must apply practical theory in English teaching, integrate English and practical knowledge into education, and cultivate foreign language talents with strong language ability to meet the needs of society. Specifically, it studies how to use and understand language in various communication environments. There are three main theories in modern practice research. Austin's speech act theory, Searle's direct and indirect speech act theory and Grice's principle of dialogue and cooperation. Pragmatic teaching theory has become an important guide to develop students' English teaching practice ability. Based on John Austin's speech act theory, Grice's cooperative principle and Sperber Wilson's relevance principle, this paper analyzes the effect of pragmatic theory in College English teaching, and puts forward some measures to combine pragmatics with college English

teaching.

3 The application of pragmatic theory in College English Teaching

Under the traditional teaching theory, university education pays more attention to the accumulation of language knowledge, and pays little attention to the value of language communication. As a result, teachers and parents only focus on supervising students' performance, but ignore the use of real language. The goal of College English education is to enhance students' comprehensive application ability, especially their listening, speaking, reading and writing ability, so that they can communicate effectively in English in their future study, work and society. In order to meet the needs of social development and international exchanges, they should interact and improve their comprehensive cultural literacy. It can be seen that cultivating students' practical ability is the focus of English education. Especially in the learning stage, most students have accumulated a wealth of English knowledge, and have a certain level of language and language skills, the actual English skills can not meet the needs of language communication. Nowadays, English plays an increasingly important role in international communication. As an international language, English has an obvious international status. With the improvement of the external environment, the requirements of college students for English have been greatly improved. It is particularly important to cultivate and improve college students' English practical skills. The application of pragmatic theory in College English teaching provides a reference for English teaching.

4 The application of pragmatic theory in College English Teaching

4.1 The application and education of cooperative principle in College English teaching

Teachers must teach students the cooperative principles of English teaching and other practical theories, so that students can understand them and apply them to the real world communication environment, so as to effectively improve their practical skills. The application of cooperative principle in College English teaching includes the

following aspects. (1) Quantity standard: When the students practice oral English, the teacher must remind the students to observe the quantity standard in the conversation. The audience should provide an appropriate amount of information when answering questions, and should not provide long-term communication and unnecessary additional information. (2) Quality standard: Teachers' answers to questions should not be falsely recorded or lack of evidence. (3) Relationship criteria: The students' answers to the teacher's questions in the classroom must be related to the questions. (4) Methods and guidelines: Teachers should have a clear direction and purpose when asking questions in class, avoid using language that will make students feel fuzzy and ambiguous in the process, and use concise and clear language to guide students. When answering the teacher's questions, students' thinking must meet the standards of simplicity, clarity and organization.

4.2 The application and education of politeness principle in College English teaching

Politeness principle can explain the speech behavior in conversation according to the rules of social interaction. The combination of politeness principle and language teaching contributes to college English classroom teaching. In College English courses, students are usually competitive. If they want to express their opinions, teachers must meet their psychological needs, praise and encourage students, so that students are willing to learn and increase their interest and confidence in learning. In English course, teachers can use praise standard skillfully. When the students can correctly answer the teacher's questions, the teacher will praise and evaluate the students in a clever way, thus stimulating the enthusiasm for classroom activities. When students make mistakes, teachers should keep a mild and euphemistic attitude, so that they can criticize students, so that they are willing to accept. When evaluating students, teachers should try to avoid using negative language that will damage students' self-esteem. Encourage students to learn English actively. In classroom teaching, teachers should try their best to think from the students' point of view, skillfully use plural first person pronouns, and appropriately use the "consistent principle" to maintain the consistency between teachers and students and avoid severely criticizing students' mistakes in College English classroom teaching.

Teachers should think about the reasons for students' mistakes, reasonably use the "empathy criterion", and try to avoid embarrassing students, so as to avoid students' rebellious and sincere change.Therefore, the rational use of compassionate and inspiring language will increase the emotional communication between teachers and students.

4.3 The application and education of speech act theory in College English teaching

Speech act theory is the first theory to distinguish expressive discourse from dominant discourse. It was first proposed by Austin. Descriptive discourse refers to the process or state of explaining things, while discourse action refers to the word itself. Later, Austin divided speech act into "speech" and "act". After Austin, Searle put forward the appropriate condition of indirectness, that is, indirect speech.In Austin's "three-point theory" of speech acts, "speech act" is the most important. Both sides need to know the importance of speech act at the same time. The importance of speech act depends on whether the sentence can be given the power of words after the sentence is finished, or whether the speaker's speech intention can be reflected, and whether it can really "act with words". The coexistence environment of communication includes mutual understanding and mastery. In College English teaching, it is necessary to explore the speaker's unusual meaning in words and sentences so that students can understand their true meaning. In extensive reading, students should also be guided to analyze the extra meaning of the speaker. The biggest obstacle for students is to focus on how to understand and express the meaning of words correctly according to the actual situation. Help in foreign language teaching. You will really learn to express your communication intention in writing and translation practice.

5 Measures to combine pragmatic theory with college English Teaching

5.1 Focus on improving the awareness of teachers

The power of teachers' practical consciousness is the key to cultivate students' practical ability. Teachers should timely introduce relevant practical knowledge according to the actual content of the course, such as: Context, doctrine, principle. While carrying out the principles of practice, we must pay attention to the

precepts and actions, try to communicate, and try to use language appropriately.

5.2 Create a language environment

In order to improve students' practical knowledge, it is necessary to create a language environment in the teaching process. Let students master the arrangement and use of words, the meaning of phrases and sentences, and the text combined with context. Through situational education to activate textbooks, students can learn the situational meaning of their knowledge, master their skills, and develop the ability of adaptability and flexible use of language.

6 Conclusion

In recent years, pragmatic approach has been popular in English learning. Pragmatic approach mainly focuses on situational operation, and the discourse meaning is different in different situations. Different from middle school, college english education requires students' proficiency in English and pays more attention to students' comprehensive English level. Students' communication ability, students' extracurricular practice ability, and students' pragmatic ability. Pragmatics, a branch of linguistics, studies the role of context in speech communication, which is different from semantics or grammar. The study of language usage pays attention to the role of context and emphasizes the study of the meaning of some words and sentences in context. Verbal communication cannot be separated from situation. Communicators must infer the specific meaning of the utterance according to the specific situation. Discourses out of context will cause confusion among communicators and lead to misunderstanding of practical problems due to the failure to realize the communicative function of language. This paper briefly summarizes the relevant theories of pragmatics, analyzes the importance of pragmatics in College English education, probes into the application of pragmatics in College English education, and points out the measures of combining pragmatics with college English teaching.

References

[1] Tian Y. Application of pragmatic theory in College English Teaching [J]. Journal of Liaoning University of Technology (SOCIAL SCIENCE EDITION), 2016, 18(4): 133-135.

[2] Zhang X. Application of pragmatic theory in College Comprehensive English Teaching [J]. Journal of Jilin radio and TV University, 2012 (10): 140.

[3] Wang YJ. On the Application of Pragmatics in College English Teaching [J]. Chinese Journal (Foreign Language Education and Teaching), 2010(7): 127-128.

Enlightenment of the Talent Training Mode of Japan's Colleges and Universities to China's five-year Higher Vocational Education

Jinxiu Wu

Zhejiang Tongji Vocational College of Science and Technology, Hangzhou 311231, China

Abstract: Since Jimei navigation College of Fujian Province started five-year junior college education in 1984, five-year higher vocational education has become one of the important forms of Higher Vocational Education in China. In the 1960s, with the rapid development of Japan's economy, there was a shortage of technical personnel. In order to cultivate a large number of technical personnel in a short period of time, Japan's specialized colleges and universities recruited junior high school graduates, studied in school for five years, and obtained an associate's degree after graduation, which provided a large number of technical personnel for the development of Japan's basic industry manufacturing industry. By combing the development process of Japan's colleges and universities, this paper studies Japan's colleges and universities from the aspects of school running subjects, talent training objectives, training methods and evaluation methods. It can provide the basis and implementation methods for China to better promote the convergence of secondary and higher vocational education, strengthen the training of secondary and higher vocational education, and provide theoretical basis and practical experience for improving the quality of five-year higher vocational education.

Keywords: Japan's specialized higher education institutions; Talent training mode; Experience

On April 10, 1984, the Ministry of education put forward in "several opinions on the adjustment and reform of higher engineering education levels, specifications and length of study" that "we can try to recruit students from junior middle school graduates with a length of study of five years[1]." This document is the starting point of Five-year Higher Vocational Education in China. The so-called five-year higher vocational education, whose enrollment object is junior high school graduates, mainly cultivates high-quality skilled talents different from undergraduate, which is a five-year higher vocational education with the convergence of secondary and higher vocational education. At present, there are mainly three forms in our country: five-year consistent system, 2 + 3 school year system and 3 + 2 school year system. In June 2019, Zhejiang Province issued the guiding opinions of Zhejiang Provincial Department of education on promoting the integration of secondary and higher vocational five-year vocational education, which clearly pointed out that promoting the convergence of secondary and higher vocational education and strengthening the training of secondary and higher vocational education is an important way to accelerate the construction of modern vocational education system and adapt to the industrial transformation and upgrading and structural adjustment[2]. In July 2020, Jiangsu Provincial Department of Education issued "opinions on promoting the high-quality development of Five-year Higher Vocational Education", and proposed to build a number of five-year higher vocational education units with comparative advantages in the country by the end of the "14th five year plan", and build about 20 five-year higher vocational education units in the fields of preschool education, nursing, modern service industry, modern agriculture, advanced manufacturing, etc The goal

of running a school is to set up a "demonstrative professional cluster"[3]. The introduction of the above two documents once again confirms the status of Five-year Higher Vocational Education in China's modern vocational education system, and also shows that the development direction of China's five-year higher vocational education has changed from the rise in quantity to the development in connotation. How to run the five-year higher vocational education that the people are satisfied with is an important problem that we are about to face. Throughout the world, we can find that the enrollment objects and training objectives of Japanese and Chinese five-year higher vocational colleges are basically the same. By combing the development process of Japanese Colleges and their talent training mode, we can provide some experience for Chinese five-year higher vocational education.

1 The development course of Japan's colleges and Universities

Before the Second World War, Japan's industrial schools mainly trained middle-level technical personnel. After the Second World War, Japan carried out the education system of "6334" after the education reform. The industrial schools were upgraded to universities and mainly transported high-level technical personnel to the society. This change resulted in the dilemma that the institutions training middle-level technical personnel were in a blank state. Japan's "6334" monorail school system has changed the shortcomings of the past education system to a certain extent, but there are many places that are not in line with the national

conditions of Japan at that time. In order to establish an education system in line with social reality, Japan's education reform has not stopped. In 1954, the Central Education Council of Japan proposed: It is necessary to "recognize the new school organization including short-term university curriculum and high school curriculum". In this context, the focus of Japan's post-war education reform is whether it is necessary to create a five-year or six-year vocational education system. In December 1956, the Education Committee of the Federation of Japanese economic organizations put forward in the report "opinions on technical education to meet the requirements of the new era": In 1959, other economic organizations in Japan also put forward corresponding suggestions on the proposal of combining two-year short-term universities with high schools and establishing five-year specialized universities. In 1960, the cabinet meeting of Japan adopted the national income doubling plan, and the key problem to realize the plan is to ensure the improvement of the quantity and quality of scientific and technical personnel and skilled personnel. Under the background of the plan, Japanese Colleges and universities came into being. In 1961, Japan revised the "school education law". In 1962, Japan established the first batch of colleges and universities. By 2006, there were 63 colleges and universities in Japan, including 55 national colleges, 5 public colleges and 3 private colleges. By 2017, the number of colleges and universities had dropped to 57, including 51 national colleges, 3 public colleges and 3 private colleges. The number of students was about 57601. By 2018, the number of 57 colleges and universities had increased No change.

Table 1. Information on the Act of National Specialized Institutions of Higher Education with Independent Administrative Legal Person, 2003

Year	Set quantity	Annulment quantity	Proportion of state schools
1962	National 12 Public 2 Private 5	Private 1	62.30%
1963	National 12 Public 2 Private 2		70.50%
1964	National 12		78.20%
1965	National 7 Private 1		79.60%
1967	National 6		81.60%
1971	National 3		86.60%
1974	National 2		83.07%
1977		Private 1	84.37%
1978		Private 1	85.71%
1991	Public 1	Private 1	85.71%
2002	National 1		85.93%

Since 1991, Japanese Colleges and universities have been able to officially award associate degree to their graduates. With the continuous development of higher education, it has gradually expanded from manufacturing and industry related majors to business, service and other related majors. In addition, the college has also set up "specialized subjects" to provide college graduates with the opportunity to further their studies and train them into high-level technical personnel. By 2006, 54 colleges have set up specialized subjects. Students who have successfully completed their specialized subjects can apply for bachelor's degree.

At present, the expectation and demand of Japanese enterprises for college graduates are still growing, but the realistic problems of aging population and national finance make the development environment of college education very grim. On the whole, professional colleges and universities have entered the stage from the development of quantity to the improvement of quality.

2 The talent training mode of Japanese Colleges and Universities

2.1 Subject of running a school

After World War II, in order to make up for the lack of government power in running schools, the Japanese government advocated the participation of non-governmental forces in higher vocational education. Therefore, there are two types of Higher Vocational Education in Japan: government and private. Japan's colleges and universities mainly train front-line technical personnel, and the education content takes the engineering technology of manufacturing industry as the core. The educational resources and costs required by this kind of education are hard to bear by non-governmental forces, and the government created it for the needs of the country's economic development. As a kind of higher vocational education, from the beginning, public schools took the lead. In 1970, the proportion of national higher vocational schools in Industrial Higher Vocational Schools reached 81.7%. At present, the Japanese government is an important school running body of higher vocational schools.

2.2 Training objectives

The fundamental reason for the establishment of

higher vocational colleges is to meet the demand of Japanese manufacturing industry for industrial talents. Therefore, the basic feature of higher vocational colleges is that its talent training objectives are close to the talent demand of national and local industries. At the beginning, only mechanical and electrical, chemical engineering and civil engineering majors were set up in Colleges and universities, mainly to train middle and senior technical personnel of engineering. After the 1990s, with the continuous change of social demand for talents, the scope of majors in Colleges and universities gradually expanded, and other majors such as business information, information science and so on were added. From the professional perspective of training objectives, it covers more and more majors and even industries. From the perspective of talent training objectives, the first graduates of higher vocational colleges are basically directly into jobs, and their employment rate has always been in an ideal state. From the 1990s, on the one hand, it was affected by the increasing demand of Japanese industrial upgrading for talents, on the other hand, during this period, Japan began to enter the stage of fewer children, resulting in a series of practical situations, such as higher education transfer and fewer students. College graduates changed the development plan of employment after graduation, and some colleges broke through the original direction of running a school and actively built a diversified school system Since 1992, some colleges and universities have set up "specialized subjects". After completing the study in the colleges and universities, the graduates can continue to study in specialized subjects (equivalent to the undergraduate level). The cultivation of talents in specialized subjects puts more emphasis on "profound" professional knowledge and skills. The cultivation of "practical and creative" ability, and some engineering departments of comprehensive universities recruit students for college graduates[4]. so far, the talent training goal of college is to "impart in-depth professional knowledge, educate the necessary professional ability" as the learning purpose, and its employment rate is high. Therefore, the talent training goal of college mainly has three characteristics: professionalism, practicality and development.

2.3 Training mode

Under the background of that time, Japanese higher

specialized schools mainly opened engineering majors. Taking the electrical engineering discipline of Nagaoka Institute of technology as an example, the curriculum types of this major are mainly divided into general courses and professional courses. The general courses mainly include Mandarin, history, modern society, sports and other courses, while the professional courses mainly include creative technology practice, electrical and electronic system engineering experiment, electrical and electronic system engineering foundation, electrical and electronic theory, electrical and electronic technology. The curriculum of electrical engineering is also divided into compulsory courses and elective courses. In the whole curriculum, there are a large proportion of practical courses. Every year, there are practical courses in the compulsory courses. To meet the graduation requirements, students need to meet the credits of 36.5 practical courses, accounting for 51.1% of the credits of professional compulsory courses. It can be seen that Japan has a high proportion of practical courses. In addition, Japanese Colleges and universities also set up special industry university research cooperation institutions to cultivate talents. Taking Nagaoka Institute of technology as an example, regional science and technology center was set up in 2002 as a technology institution of industry university research cooperation, aiming at promoting the cooperation with industry and industry. In addition, the university has signed agreements on training industrial talents with the Niigata industrial creation organization Nico technology market. Through the cooperation of production, study and research, Japanese Colleges and universities are closely connected with Japanese small and medium-sized enterprises. On the one hand, it is conducive to organizing students' practice, on the other hand, it is also conducive to teachers' entering enterprises to exercise, improve practical experience, and better classroom teaching.

2.4 Evaluation method

In order to monitor and manage the teaching quality and level of colleges and universities, the Ministry of education, culture, education, sports, etc. stipulates that within seven years, Japanese Specialized Colleges and universities must accept the evaluation from the third party, such as Japanese higher education evaluation institution, university reform,

support and degree awarding institution, and Japanese engineering education accreditation institution Through the application of NIAD-UE and JABEE evaluation certification, we can continuously improve the level of education, teaching and management.

Taking NIAD-UE as an example, it carries out a comprehensive and multi-level evaluation of Japanese Colleges and universities, promotes the continuous improvement of educational quality and level of Japanese Colleges and universities, and gradually becomes the main way of evaluation of Japanese Colleges and universities. NIAD-UE is mainly based on the benchmark of colleges and universities, centered on educational activities, aimed at promoting the personality development of colleges and universities, based on the self-evaluation of colleges and universities, adopting paired evaluation, and adhering to the six evaluation principles of transparency and openness. The key stage of the evaluation is the second half of the implementation of the evaluation. First, the evaluation department will conduct a written investigation to confirm the purpose of the University. According to the self-evaluation statement submitted by the University, it will analyze the satisfaction degree of 11 evaluation benchmarks and two selective evaluation benchmarks, and make a written investigation statement. The evaluation department will entrust colleges and universities to select the interviewees, inform the interviewees four weeks before the interview, and send written survey results, confirmation items during the interview and other survey contents to colleges and universities. Secondly, the evaluation department will conduct an interview and survey. According to the written survey, it will focus on other matters that can not be determined, mainly including 1) interview with the person in charge of the school; 2) interview with teaching staff and logistics personnel; 3) interview with students and graduates; 4) education on-site inspection; 5) survey of learning environment; 6) supplementary collection according to the data. Finally, the evaluation department will analyze the results of the written investigation and interview, make a draft of the evaluation results and submit it to the evaluation committee. The evaluation committee will inform the higher specialized institutions of the evaluation results and set up an opinion Appeal Committee. The higher specialized institutions will discuss and analyze the evaluation results and make

an opinion appeal, but the evaluation committee has the final decision-making power.

3 Enlightenment to five year Higher Vocational Education in China

3.1 Actively build the overpass of "from college to undergraduate" talent training, and build a modern vocational education system

Japan's higher education institutions have set up a University of technology and science to build a technical education system of "junior college + undergraduate + graduate", so as to create more profound and developmental learning opportunities for the graduates of higher education institutions. In the process of building the overpass, we should make clear the training goal and orientation, formulate a reasonable independent enrollment plan, improve the entrance examination and admission methods, and make the "3 + 2" segmented training compatible with the "3 + 2" segmented training, so as to build a modern vocational education system.

3.2 Encourage school enterprise cooperation to set up "enterprise College" and promote modern apprenticeship in an all-round way

In the process of personnel training, Japanese Colleges and universities not only attach great importance to the study of internship and practical courses, but also set up special production, teaching and research institutions. These measures have strengthened the close connection between talent training and industries and enterprises to a certain extent. Since 2014, the implementation of modern apprenticeship in China has achieved certain results in deepening the integration of industry and education and promoting school enterprise cooperation. However, there are still some problems, such as the lack of double subjects, the absence of the dominant position of enterprises in personnel training, and the obvious phenomenon of enterprises participating in school running and assisting students. How to further strengthen the connection between schools and enterprises and construct "community of destiny" is an important problem in the development of Vocational Education in China. To encourage school enterprise cooperation to set up enterprise college and fully implement modern apprenticeship, we can rely on the leading enterprises in the industry to

carry out continuous and in-depth cooperation and exchange in the aspects of training concept, operation mechanism, development mode, management system, teacher training and practical training base, etc., which is aimed at improving enterprise production capacity, economic benefits and talent training quality of higher vocational colleges It is an integration of industry, University and research with mutual benefit and common development.

3.3 Comprehensively evaluate and publicize the conditions, status and quality of Five-year Higher Vocational Talents Training

Under the unified regulations of the Ministry of education, culture, culture, sports, and culture, Japanese Colleges and universities need to accept the third-party evaluation of relevant institutions within a certain period of time. The evaluation here is not only the quality of talent cultivation, but also the elements covering the whole process of talent cultivation, including teaching, teaching and research, teachers and hardware facilities. The final evaluation results are published to the whole society. There are various forms of Five-year Higher Vocational Education in our country. Secondary and higher vocational education are in different schools, so it is difficult to evaluate. We can use the method of regular evaluation to evaluate the conditions, status and quality of five-year higher vocational education, guide and urge the main bodies and units to follow the law of education, strengthen infrastructure construction, improve school conditions, standardize school behavior and optimize internal management Strengthen the connotation construction, improve the quality of personnel training, and promote the healthy and sustainable development of five-year higher vocational education. The final evaluation results are arranged according to the grade and published to the whole society; For the school running units that are not satisfied with the continuous training of five-year higher vocational talents, the entry and exit system should be introduced to run high-quality five-year higher vocational colleges.

References

[1]   Zhang JX. Some relations of coordinated development of secondary and higher vocational education [J]. Forum on vocational education, 2013(7): 118-120, 23.

[2]   Guiding opinions of Zhejiang Provincial Department of

education on further promoting integrated five year vocational education of secondary and higher vocational education. http://www.zjzcj.com/show.php?id=39730

[3] Jiangsu education position of social education. The provincial education department about promoting the development of the five-year higher vocational education quality. http://jyt.jiangsu.gov.cn/art/2020/8/5/art_55511_9353218.html-2020

[4] Research on Japanese Higher Education Institutions. Reference and Enlightenment[J]. Vocational and technical education, 2017, 38(13): 168-173.

Author Guidelines

Before your submission, please check that your manuscript has been prepared in accordance to the step-by-step instructions for submitting a manuscript to our online submission system. We recommend that you keep this page open for your reference as you move through the submission process.

If there are any differences in author guidelines between the print and online version, it is recommended that authors refer to the online version for use.

Manuscript Format

[*Journal title*] accepts manuscript that is in MS Word or LaTeX format. All manuscripts must be written in clear, comprehensible English. Both American and British English are acceptable. Usage of non-English words should be kept to a minimum and all must be italicized (except for e.g. and i.e.) If you have concerns about the level of English in your submission, please ensure that it is proofread before submission by a native English speaker or a scientific editing service.

Cover letter

All submissions for [*Journal Title*] should include a cover letter as a separate file. A cover letter should contain a brief explanation of what was previously known, the conceptual advancement with the findings and its significance to broad readership. The cover letter is confidential and will be read only by the editors. It will not be seen by reviewers.

Title

The title should capture the conceptual significance for a broad audience. The title should not be more than 50 words and should be able to give readers an overall view of the paper's significance. Titles should avoid using uncommon jargons, abbreviations and punctuation.

List of Authors

The names of authors must be spelled out rather than set in initials with their affiliations footnoted. Authors should be listed according to the extent of their contribution, with the major contributor listed first. All corresponding authors (maximum 2) should be identified with an asterisk. Affiliations should contain the following core information: department, institution, city, state, postal code, and country. For contact, email address of only one corresponding author is expected within the manuscript. Please note that all authors must see and approve the final version of the manuscript before submitting.

Abstract

Articles must include an abstract containing a maximum of 200 words. The purpose of abstract is to provide sufficient information for a reader to choose either to proceed to the full text of the article. After the abstract, please give 3-8 key words; please avoid using the same words as those already used in the title.

Section Headings

Please number all section headings, subheadings and sub-subheadings. Use boldface to identify major headings (e.g. **1**, **2**, **3**, etc.) and subheadings (e.g. **1.1**, **1.2**, **2.1**, **2.2** etc.) For the sub-subheadings, please distinguish it further using non-boldface numbers in parenthesis (e.g. (1), (2), (3), etc.)

Introduction

Introduction should provide a background that gives a broad readership an overall outlook of the field and the research performed. It tackles a problem and states its important regarding with the significance of the study. Introduction can conclude with a brief statement of the aim of the work and a comment about whether that aim was achieved.

Materials and Methods

This section provides the general experimental design and methodologies used. The aim is to provide enough detail to for other investigators to fully replicate your results. It is also required to facilitate better understanding of the results obtained. Protocols and procedures for new methods must be included in detail to reproduce the experiments.

Ethics

Ethics information, including IACUC permit numbers and/or IRB name, if applicable. This information should be included in a subheading labelled "Ethics Statement" in the "Methods" section of your manuscript file, in as much detail as possible.

Results

This section can be divided into subheadings. This section focuses on the results of the experiments performed.

Discussion

This section should provide the significance of the results and identify the impact of the research in a broader context. It should not be redundant or similar to the content of the results section.

Conclusion

Please use the conclusion section for interpretation only, and not to summarize information already presented in the text or abstract.

Conflict of Interest

All authors are required to declare all activities that have the potential to be deemed as a source of competing interest in relations to their submitted manuscript. Examples of such activities could include personal or work-related relationships, events, etc. Authors who have nothing to declare are encouraged to add "No conflict of interest was reported by all authors" in this section.

Funding

Authors should declare all financial and non-financial support that have the potential to be deemed as a source of competing interest in relations to their submitted manuscript in this section. Financial supports are generally in the form of grants, royalties, consulting fees and more. Examples of non-financial support could include the following: externally-supplied equipments/biological sources, writing assistance, administrative support, contributions from non-authors etc.

Appendix

This section is optional and is for all materials (e.g. advanced technical details) that has been excluded from the main text but remain essential to readers in understanding the manuscripts. This section is not for supplementary figures. Authors are advised to refer to the section on 'Supplementary figures' for such submissions.

Text

The text of the manuscript should be in Microsoft Word or Latex. The length of the manuscript cannot be more than 50000 characters (inclusive of spaces) or approximately 7000 words.

Nomenclature for genes and proteins

This journal aims to reach researchers all over the globe. Hence, for both reviewers' and readers' ease in comprehension, authors are highly encouraged to use the appropriate gene and protein nomenclature. Authors may prefer to utilize resources such as http://www.ncbi.nlm.nih.gov/gene

Figures

Authors should include all figures into the manuscript and submit it as 1 file in the OJS system. Reference to the "Instructions for Typesetting manuscript" is strongly encouraged. Figures include photographs, scanned images, graphs, charts and schematic diagrams. Figures submitted should avoid unnecessary decorative effects (e.g. 3D graphs) as well as be minimally processed (e.g. changes in

brightness and contrast applied uniformly for the entire figure). It should also be set against a white background. Please remember to label all figures (e.g. axis etc.) and add in captions (below the figure) as required. These captions should be numbered (e.g. **Figure 1**, **Figure 2**, etc.) in boldface. All figures must have a brief title (also known as caption) that describes the entire figure without citing specific panels, followed by a legend defined as description of each panel. Please identify each panel with uppercase letters in parenthesis (e.g. A, B, C, etc.)

The preferred file formats for any separately submitted figure(s) are TIFF or JPEG. All figures should be legible in print form and of optimal resolution. Optimal resolutions preferred are 300 dots per inch for RBG coloured, 600 dots per inch for greyscale and 1200 dots per inch for line art. Although there are no file size limitation imposed, authors are highly encouraged to compress their figures to an ideal size without unduly affecting legibility and resolution of figures. This will also speed up the process of uploading in the submission system if necessary.

The Editor-in-Chief and Publisher reserve the right to request from author(s) the high-resolution files and unprocessed data and metadata files should the need arise at any point after manuscript submission for reasons such as production, evaluation or other purposes. The file name should allow for ease in identifying the associated manuscript submitted.

Tables, lists and equations

Tables, lists and equations must be submitted together with the manuscript. Likewise, lists and equations should be properly aligned and its meaning clear to readers. Tables created using Microsoft Word table function are preferred. Place each table in your manuscript file right after the paragraph in which it is first cited. Do not submit your tables in separate files. The tables should include a concise but sufficiently explanatory title at the top. Vertical lines should not be used to separate columns. Leave some extra space between the columns instead. All tables should be based on three horizontal lines to separate the caption, header and body. A few additional horizontal lines MAY be included as needed (example below). Any explanations essential to the understanding of the table should be given in footnotes at the bottom of the table. SI units should be used.

Supplementary information

This section is optional and contains all materials and figures that have been excluded from the entire manuscript. This information are relevant to the manuscript but remains non-essential to readers' understanding of the manuscript's main content. All supplementary information should be submitted as a separate file in Step 4 during submission. Please ensure the names of such files contain 'suppl. info'.

In-text citations

Reference citations in the text should be numbered consecutively in superscript square brackets. Some examples:

1. Negotiation research spans many disciplines [3, 4].
2. This result was later contradicted by Becker and Seligman [5].
3. This effect has been widely studied [1–3, 7].

Personal communications and unpublished works can only be used in the main text of the submission and are not to be placed in the Reference section. Authors are advised to limit such usage to the minimum. They should also be easily identifiable by stating the authors and year of such unpublished works or personal communications and the word 'Unpublished' in parenthesis.

E.g. (Smith J, 2000, Unpublished)

References

This section is compulsory and should be placed at the end of all manuscripts. Do not use footnotes or endnotes as a substitute for a reference list. The list of references should only include works that are cited in the text and that have been published or accepted for publication. Personal communications and unpublished works should be excluded from this section.

For references in reference list, all authors must be stated. Authors referenced are listed with their surname followed by their initials. All references should be numbered (e.g. 1. 2. 3. etc.) and sequenced according to the order it appears as an in-text citation. References should follow the following pattern: Author(s) followed by year of publication, title of publication, full journal name in italics, volume number, issue number in parenthesis, page range and lastly the DOI (if applicable). If the referred article has more than three authors, list only the first three authors and abbreviate the remaining authors to italicized 'et al.' (meaning: "and others").

Journal

Journal article (print) with one to three authors

[1] Yao Y., Xia B. Application of Phase Frequency Feature Group Delay Algorithm in Database Differential Access. Computer Simulation, 2014, 31(12): 238-241.

Journal article (print) with more than three authors

[2] Gamelin F.X., Baquet G., Berthoin S., et al. Effect of high intensity intermittent training on heart rate variability in prepubescent children. European Journal of Applied Physiology, 2009, 105: 731–738.

Journal article (online) with one to three authors

[3] Jackson D., Firtko A., Edenborough M. Personal resilience as a strategy for surviving and thriving in the face of workplace adversity: a literature review. Journal of Advanced Nursing, 2009, 60(1): 1–9,

Journal article (online) with more than three authors

[4] Hargreave M., Jensen A., Nielsen T.S.S., et al. Maternal use of fertility drugs and risk of cancer in children—A nationwide population-based cohort study in Denmark. International Journal of Cancer, 2015, 136(8): 1931–1939.

Book

Book with one to three authors

[5] Schneider Z., Whitehead D., Elliott D. Nursing and midwifery research: methods and appraisal for evidence-based practice. 3rd edn. 2009, Elsevier Australia, Marrickville, NSW.

Book with more than three authors

[6] Davis M., Charles L., Curry M.J., et al. Challenging spatial norms. 2013, Routledge, London.

Chapter or Article in Book

[7] Knowles M.S. Independent study. In Using learning contracts. 1986, Jossey-Bass, San Francisco, 89–96.

Others

Proceedings of meetings and symposiums, conference papers

[8] Chang S.S., Liaw L. and Ruppenhofer J. (eds). Proceedings of the twenty-fifth annual meeting of the Berkeley Linguistics Society, February 12–15, 1999: general session and parasession on loan word phenomena. 2000, Berkeley Linguistics Society, Berkeley.

Conference proceedings (from electronic database)

[9] Bukowski R.M. Prognostic factors for survival in metastatic renal cell carcinoma: update 2008. Innovations and challenges in renal cancer: proceedings of the third Cambridge conference. Cancer, 2009, 115 (10): 2273, viewed 19 May 2009, Academic OneFile database.

Online Document with author names

[10] Este J., Warren C., Connor L., et al. Life in the clickstream: the future of journalism, Media Entertainment and Arts Alliance, 2008. viewed 27 May 2009, http://www.alliance.org.au/documents/ foj_report_final.pdf

Online Document without author name

[11] Developing an argument n.d., viewed March 30 2009, http://web.princeton.edu/sites/writing

/Writing_Center/WCWritingResources.htm

Thesis/Dissertation

[12] Gale L. The relationship between leadership and employee empowerment for successful total quality management. 2000, University of Western Sydney.

Standard

[13] Standards Australia Online. Glass in buildings: selection and installation. AS 1288–2006. 2006, SAI Global database.

Government Report

[14] National Commission of Audit. Report to the Commonwealth Government, Australian Government Publishing Service, 1996, Canberra.

Government report (online)

[15] Department of Health and Ageing. Ageing and aged care in Australia, 2008, viewed 10 November 2008, http://www.health.gov.au/internet/main/publishing.nsf/Content/ageing

No author

[16] Guide to agricultural meteorological practices. 2nd edn, Secretariat of the World Meteorological Organization, 2010, Geneva.

Note: When referencing an entry from a dictionary or an encyclopedia with no author there is no requirement to include the source in the reference list. In these cases, only cite the title and year of the source in-text. For an authored dictionary/encyclopedia, treat the source as an authored book.

Submission Preparation Checklist

As part of the submission process, authors are required to check off their submission's compliance with all of the following items, and submissions may be returned to authors that do not adhere to these guidelines.

1. The submission has not been previously published, nor is it before another journal for consideration (or an explanation has been provided in Comments to the Editor).

2. The submission file is in OpenOffice, Microsoft Word, RTF, or WordPerfect document file format.

3. Where available, URLs for the references have been provided.

4. The text is single-spaced; uses a 12-point font; employs italics, rather than underlining (except with URL addresses); and all illustrations, figures, and tables are placed within the text at the appropriate points, rather than at the end.

5. The text adheres to the stylistic and bibliographic requirements outlined in the Author Guidelines, which is found in About the Journal.

6. If submitting to a peer-reviewed section of the journal, the instructions in Ensuring a Blind Review have been followed.

Dear Researchers,

Journal of Contemporary Educational Research is an international, peer-reviewed and open access journal which is to promote the evaluative, integrative, theoretical and methodological research on contemporary education; shape a novel, broader view of issues in contemporary education; enhance the caliber of humanities research through active use of best domestic and foreign practices; and integrate the achievements of various sciences and knowledge areas with unconventional approaches.

All relevant papers are carefully considered, vetted by a distinguished team of international experts, and rapidly published. Original articles, short communications, case studies and comprehensive review articles can be submitted online via the journal's submission and peer review site.

The *Journal of Contemporary Educational Research* is published by Bio-Byword Scientific Publishing Company, it is a fast growing peer-reviewed and open access journal publisher, which is located in Sydney, Australia. As a dependable and credible corporation, it promotes and serves a broad range of subject areas such as medicine, construction, education and electronics for the benefit of humanity. By informing and educating a global community of scholars, practitioners, researchers and students, it endeavour's to be the world's leading independent academic and professional publisher.

All Bio-Byword journals are free from all access barriers, allowing for the widest possible global dissemination of their manuscripts and highest possible citations. Bio-Byword publisher online submission will go through a rapid peer review and production, making the process of publishing simpler and more efficient, which benefit from its user friendly online submission system that reduces the overall time from submission to publication.

Acceptance Notification: Within 21 days from the date of manuscript submission

Send your manuscript to the editor at: **info@bbwpublisher.com**

With Warm Regards,
Editor in Chief
Prof. Jandhyala B. G. Tilak *Journal of Contemporary Educational Research*

Integrated Services Platform of International Scientific Cooperation

Innoscience Research (Malaysia), which is global market oriented, was founded in 2016.Innoscience Research focuses on services based on scientific research. By cooperating with universities and scientific institutes all over the world, it performs medical researches to benefit human beings and promotes the interdisciplinary and international exchanges among researchers.

Innoscience Research covers biology, chemistry, physics and many other disciplines. It mainly focuses on the improvement of human health. It aims to promote the cooperation, exploration and exchange among researchers from different countries. By establishing platforms, Innoscience integrates the demands from different fields to realize the combination of clinical research and basic research and to accelerate and deepen the international scientific cooperation.
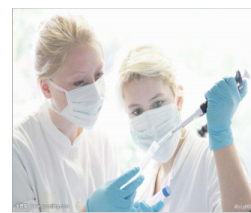
Cooperation Mode

Clinical Workers   **In-service Doctors**   **Foreign Researchers**

China Collaborators ⟷ Oversea Collaborators

Hospital   **University**   **Scientific institutions**

OUR JOURNALS

The *Journal of Architectural Research and Development* is an international peer-reviewed and open access journal which is devoted to establish a bridge between theory and practice in the fields of architectural and design research, urban planning and built environment research.

Topics covered but not limited to:

- Architectural design
- Architectural technology, including new technologies and energy saving technologies
- Architectural practice
- Urban planning
- Impacts of architecture on environment

Journal of Clinical and Nursing Research (JCNR) is an international, peer reviewed and open access journal that seeks to promote the development and exchange of knowledge which is directly relevant to all clinical and nursing research and practice. Articles which explore the meaning, prevention, treatment, outcome and impact of a high standard clinical and nursing practice and discipline are encouraged to be submitted as original article, review, case report, short communication and letters.

Topics covered by not limited to:

- Development of clinical and nursing research, evaluation, evidence-based practice and scientific enquiry
- Patients and family experiences of health care
- Clinical and nursing research to enhance patient safety and reduce harm to patients
- Ethics
- Clinical and Nursing history
- Medicine
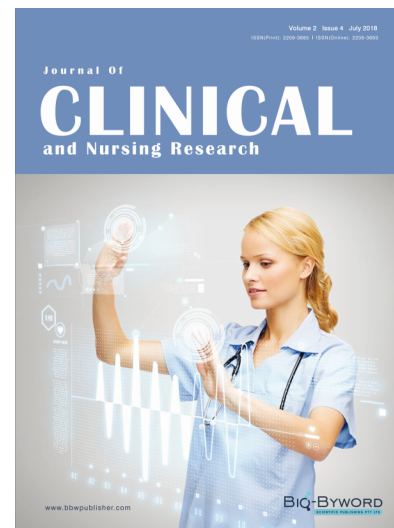
Journal of Electronic Research and Application is an international, peer-reviewed and open access journal which publishes original articles, reviews, short communications, case studies and letters in the field of electronic research and application.

Topics covered but not limited to:

- Automation
- Circuit Analysis and Application
- Electric and Electronic Measurement Systems
- Electrical Engineering
- Electronic Materials
- Electronics and Communications Engineering
- Power Systems and Power Electronics
- Signal Processing
- Telecommunications Engineering
- Wireless and Mobile Communication

OUR JOURNALS

Journal of Contemporary Educational Research is an international, peer-reviewed and open access journal which is to promote the evaluative, integrative, theoretical and methodological research on contemporary education; shape a novel, broader view of issues in contemporary education; enhance the calibre of humanities research through active use of best domestic and foreign practices; and integrate the achievements of various sciences and knowledge areas with unconventional approaches.

All relevant papers are carefully considered, vetted by a distinguished team of international experts, and rapidly published. Original articles, short communications, case studies and comprehensive review articles can be submitted online via the journal's submission and peer review site.

The *Journal of World Architecture* is a peer-reviewed international journal, which offers an avenue for researchers and practitioners to present the latest progress associated with architecture, occupants and related policies. It aims to encourage academic exchange and enhancing professional development in this field.

Topics covered but not limited to:

- Architecture theories and practices of design, technology and construction;
- Impacts of architecture on society, economy and environment;
- Analysis of occupants physically and psychologically and the application of new technologies, materials to meet their needs;
- formulation of public policy as well as organisational structures and networks.
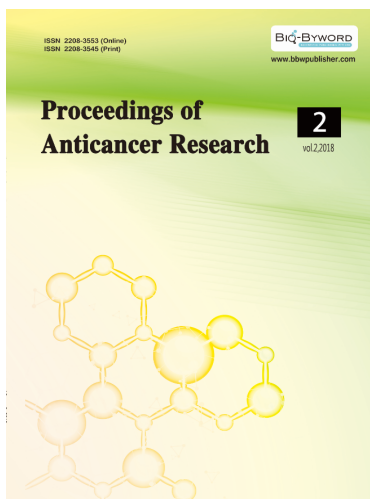
Proceedings of Anticancer Research is an international peer-reviewed and open access journal, which is devoted to the rapid publication of high quality original articles, reviews, case reports, short communication and letters on all aspects of experimental and clinical oncology.

Topics covered but not limited to：

- Cellular research and bio-markers
- Identification of bio-targets and agents with novel mechanisms of action
- Preventative and integrated treatment for cancer patients
- Radiation and surgery
- Palliative care
- Patient adherence, quality of life, satisfaction
- Anticancer medicine

Bio-Byword
SCIENTIFIC PUBLISHING PTY LTD