

Influence of Education Belief in Normal Students Based on Mathematical Statistics

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ABSTRACT

Research objectives: The policy of free pay normal university students education is the symbol of respecting teachers and valuing education, and its implementation is of great strategic significance in promoting primary and secondary school education level in an all-around way. It is quite urgent to strengthen studying on education and cultivation of sports major free normal students. Research methods: Literature consultation, questionnaire survey, and mathematical statistics are applied to explore the effects of sports major free normal students' individual consciousness on education belief. Research process: Individual anticipation, occupational identity and integrity awareness are chosen as three specific dimensions of sports major free normal students' individual consciousness; analyses and comparison are made on their relative problems. Conclusions: The negative effects of individual anticipation on education belief comes from concerns about post-graduate study; In occupational identity, the realization of social status and individual value will contribute to inexhaustible impetus for developing education belief; In integrity awareness, ethical conduct has positive impacts on education belief. Finally, it presents an outlook of the future development of sports major free normal students' education belief.

Keywords: sports major, free normal students, individual consciousness, education belief, normal students education

INTRODUCTION

Implementation of free pay education for Normal university students in Normal university directly under Ministry of Education (on trial) was put forward on the basis of issues in China's compulsory education, such as uneven distribution of urban and rural educational resources, poor overall quality of teachers and weak rural teachers, in particular (Ming, 2007; Lam and Muldner, 2017). By assigning pilot normal university, the policy gathered experience and established system in the hope of cultivating excellent teachers and enriching teachers. Above all, it contributed effectively to make up for the shortage in rural and urban primary and secondary schools' teachers in less-developed economic regions to further realize educational equality and improve teaching quality, form into thick atmosphere of respecting teachers and valuing education in society and make education the most respect undertaking in society. Since 2007, nearly 6000 sports major free pay Normal university' students graduated from Beijing Normal University, East China Normal University, Northeast Normal University, Central China Normal University, Shaanxi Normal University and Southwest University, served to primary and secondary schools in all regions, and bore the responsibilities of advancing physical education reform and improving physical quality (Zhang and Li, 2017; Geller et al., 2017).

By far, these six subordinate Normal University have attracted many excellent "Free Pay Normal university' student" with their schools' reputation and faculty. However, there is an urgent problem to be solved and further discussed that is how to retain these talents and cultivate them into "Excellent teachers and teaching staff that engages in lifelong education" to adapt to basic education reform and development as well as satisfy the demands of school sports curriculum reform, have them performed all obligations described under the agreement in earnest rather than take advantage of the arrangement as "springboard" (Hu, 2007; Ballou and Springer, 2017). This may not only require external system construction and policy guarantee, but also require free pay Normal University

Contribution of this paper to the literature

- To understand the current situation of professional sports free normal education beliefs.
- Clear influence Chinese professional sports free normal education the main individual consciousness factor of faith.
- Improve the professional sports free normal training system.

students themselves to set up firm education belief (Chen and Zhang, 2016). In the view of the definition of standardization, belief is “a kind of extremely conviction or respect on some religions or doctrines and take it as a guideline of action.” Applying the concept of belief in to pedagogy, Zhongying Shi, a scholar, put forward that education belief is “People’s extremely conviction and respect on educational activities’ values and realization way in individual and social development process, which are regarded as basic principles of education behaviors and also sources of education belief and impetus of education” (Zhang, 2009; Eitel et al., 2017). In the study, education belief is defined as sports major free pay normal university’ students’ love for teaching profession, possibility of lifelong teaching and firmness of performing agreement of “free pay normal university students” (Zhang, 2017; Falloon, 2017). It is objective requirement of teaching profession and powerful guarantee for improving education quality (Hsieh and Tsai, 2017). Free pay normal university’ students may not only work as a teacher passively for ten years to keep commitment in accordance with agreement stipulation, but moreover should bear firm education belief with a love of teaching profession, only by doing so can build firm foundation for sports education in the future (Fang and Qi, 2009; Sit and Brudzinski, 2017).

The writer started from the perspective of free pay normal university students’ individual consciousness, investigated the effects of individual anticipation, individual identity on teaching profession and integrity awareness on education belief (Zhang and Qin, 2012; Kant et al., 2017). It aimed to put sports major free pay normal university students into more realistic living situation, put forward feasible suggestions on cultivation and development of China sports major free pay normal university students’ education belief by focusing on their mental appeal.

RESEARCH METHODS

Literature Consultation

According to research objectives and contents, documentary, books and China National Knowledge Infrastructure’s relative academic papers that related to free pay free pay normal university students’ education has been consulted to get the knowledge of the up-to-date research status and development tendency in the field, meanwhile provide theoretical support for argument in the research.

Questionnaire Survey

“Questionnaire survey on education belief of sports major free pay normal university students” has been compiled, including three ratings scales –free pay normal university’ students’ anticipation on their future teaching profession’s employment development status, their identity of occupation as sports teacher, as well as individual integrity awareness (Zhang and Peng, 2017; Taggart, 2017; Ding et al., 2017). Through project analysis, all issues can achieve effective discrimination, and at the same time inner consistency coefficient of the scales are 0.759, 0.733, 0.787, respectively, while total scale’s reliability could reach 0.760, suggesting their good homogeneity reliability; besides, 210 questionnaires were released to sports major free pay normal university’ students, 210 ones were returned, return rate reached 100%, from which there were 201 effective questionnaire, effective rate therefore reached 95%.

Mathematical Statistics

Sort out investigation data and make statistical analysis of the data using SPSS 12.0.

RESULTS AND ANALYSES

The writer referenced Theory of needs hierarchy (occupational prestige, role expectation, development requirement etc.) studied by Maslow, an American humanistic psychologist, and Motivation system theory’s individual consciousness (cognition, emotion, willpower and value) put forward by Ford, which plays major roles in occupational choice and development process. Besides, he combined with China’s practical conditions in implementation of free pay normal university students’ education (Mayer, 2017). He chose three specific

Table 1. Regression analysis of individual consciousness and sports major free pay normal university students' education belief

Indicator	Regression coefficient	Standard deviation	P value	Result
Individual anticipation	-0.773	0.112	0.000	Significant
Individual identity of teaching profession	0.695	0.127	0.001	Significant
Individual integrity awareness	0.709	0.119	0.000	Significant

Table 2. Statistics of Sports major free pay normal university students care and concern

Issue	Average score	Standard deviation
1. Implementation situation of school sports	3.88	1.00
2. Rather poor working environment as sports teachers in hometown	3.91	0.93
3. Situation of salary income in future ten years	4.01	0.99
4. Ten years are so long that would delay one's future	3.61	1.27
5. Path to attend graduate school in future	3.58	1.29
6. No time and vigor to attend graduate school after working	3.72	1.18
7. Not suitable for working as a primary and secondary school's sports teacher	2.45	1.02

dimensions of sports major free pay normal university students' individual consciousness-individual anticipation, occupational identity and integrity awareness and defined them as follows (McLean et al., 2017). Individual anticipation is individual concern about and care for some problems relative to their future occupation; occupational identity is individual identity with their occupation in cognition, emotion, willpower etc.; integrity awareness is orientation and attitude towards honesty and credibility (Zhang, 2007; Paredes, 2017).

Free pay normal university students would score at five grades regarding issues, such as "implementation situation of school sports", "Ten years' salary income", "Path to attend graduate school", "Working environment in hometown", "Ten years are too long that would affect future", "No time to attend graduate school after working", "not suitable to work as primary and secondary school's sports teachers" and so on. The higher score suggests the students' concern about their future". Then, it solved mean of the seven items that was individual anticipation score.

The same as individual anticipation handling way was used; score at five grades was done on individual occupational identity of teaching profession's issues. Such as "I think it is stable to be a teacher", "I think that teacher has higher social status", "I think that working as a teacher could make contribution to hometown" and individual integrity awareness' issues, for instance, "I should insist on now that I make a commitment", "Integrity is an important principle to conduct oneself", "I would bear huge social pressure if I break the agreement". Then mean of them was solved that was the score of the variable (Scott et al., 2017).

To examine evidence of individual anticipation, individual identity of teaching profession and integrity awareness in individual consciousness, make multiple regression analysis of the three items' mean and education belief score, as shown in **Table 1**.

Table 1 suggests that individual consciousness's three dimensions- individual anticipation (p value is $0.000 < 0.05$), occupational identity (pvalue is $0.001 < 0.05$), integrity awareness (pvalue is $0.000 < 0.05$). All have remarkable influences on education belief of sports major free pay normal university' students.

Individual Anticipation

In the terms of individual anticipation status choice, statistical result can refer to **Table 2**.

Table 2 suggests that the higher care and concern from sports major free pay normal university students are salary income (4.01), working environment (3.91), implementation situation of local school sports (3.88), attend graduate school (3.72) and future development (3.61) and other realistic issues. All come from realistic contradiction that the students faced to. On one hand, policy of free pay normal university students has solved employment burden under the circumstance of presently huge employment pressure, the students can smoothly get a job after graduation, having them a longing for living quality and career development (Luo et al., 2017). On the other hand, current situation as grass roots sports' teachers' low wage, poor working environment, constraints in graduate study and stipulated teaching time limits make the students unable to be optimistic, and they would suffer great impacts in case personal ideal confronts with realistic difficulties; Sports major free pay normal university' students have shown lower care for and concern about whether they are suitable to be a sports teacher in primary and secondary school, reasons are not only because they love sports, but moreover they are confident to take the responsibility of being a sports teacher in the school with their cultivation experience in key normal university, and the improvement of personal cultural accomplishment and professional skills (Atapattu et al., 2017).

Make correlation analysis of mean of the three and education belief, get results as **Table 3**.

Table 3. Correlation analysis of individual anticipation index and education belief

Indicator	Statistical significance (Sig). (2-tailed)	Pearson coefficient
Individual anticipation index	0.000	-.221**
Education belief		

Note: ** means significantly related

Table 4. Table of sports major free pay normal university students' concern index (principal component)

Problem	Concern about attending graduate school	Concern about future	Concern about income	Concern about occupation
1. Implementation situation of school sports	-	1.008	-	-
2. Rather poor working environment as sports teachers in hometown	-	0.660	-	-
3. Situation of salary income in future ten years	-	-	0.861	-
4. Ten years are so long that would delay one's future	-	-	0.575	-
5. Path to attend graduate school in future	1.721	-	-	-
6. No time and vigor to attend graduate school after working	0.714	-	-	-
7. Not suitable for working as a primary and secondary school's sports teacher	-	-	-	0.521
Rate of explanation	57.90%	25.40%	11.98%	4.72%
Accumulative rate of explanation	57.90%	83.30%	95.28%	100.00%

Table 5. Regress analysis of concern indicators' effects on normal university students' education belief

Indicator	Coefficient	Standard deviation	P value	Results
Concern about graduate study	-0.2801	0.1154	0.0158	Significant
Concern about prospect of job	-0.1290	0.0939	0.1664	Non-significant
Focus on future income	0.1243	0.1086	0.2543	Non-significant

Table 3 suggests that sports major free pay normal university' students' individual anticipation is significantly negative correlated with its education belief that higher individual anticipation is, the lower education belief would be. In order to further explore what kind of their anticipation would affect education belief thereof, the writer implemented principal component analysis handling with the entire seven issues, obtained feature values and explained variance are as shown in **Table 4**.

Divide seven problems from **Table 4** into four dimensions as follows: concern about future (1.2), concern about income (3.4), concern about advanced study as attending graduate school (5.6) concern about occupation (7), from which the last one (7.concern about occupation) is ignored due to too small explanation rate. Principal component analysis suggested that utmost problem to the sports major free pay normal university students' most concern is the problem about advanced study as attending graduate school in future, whose variance explanation rate reaches as high as 57.9%, followed by concern about future (25.4%) and concern about income (11.98%), those account for some proportions. This suggests that key normal university' education and edification make them further realize fierce competition in modern society and urgent demand in talents of high level, so that they long for continuous learning at graduate level to improve personal education background and competitiveness. This also reflects that students' negative and slack mood results from their one-sided and subjective thoughts of graduate learning constraints by the agreement stipulation due to insufficient social publicity and explanation of free pay normal university students' policy. School lacks of career orientation and career ideal education on sports major free pay normal university' students. Whereas students have not realized that, they could accomplish much and are of great significance in devoting to primary and secondary school's physical education at grass roots. A great number of the students come from family with poor economic conditions; they are worried about their future work at grass roots because of income of primary and secondary school's sports teachers in economic less-developed regions. Obviously, they do not know the state preferential policy and vigorous supports on basic education in backward areas.

Regression analysis of the three dimensions is conducted. The results are as shown in **Table 5**.

Table 5 regress analysis indicates that sports major free pay normal university students' ubiquitous concern about prospect of job (pvalue is 0.1664>0.05) and focus on future income (pvalue is 0.2543>0.05) have not had significant impacts on their education belief. Whereas pressure caused by concern about graduate study (p value is 0.0158<0.05) has had the significant impacts on education belief, which may sway their will as a sports teacher at grass roots. As known in **Table 3**, sports major free pay normal university students' individual anticipation is in

Table 6. Sub item statistics on sports major free pay normal university students' profession identity

Indicator	Mean	Standard deviation
Sports teacher is a stable profession with moderate income	3.39	0.79
Sports teacher will be respected by the society	3.36	0.76
Sports teacher could make contributions to hometown sports undertaking	3.65	0.7

Table 7. Correlation analysis of individual identity of sports teaching profession and education belief

Indicator	Statistical significance (Sig). (2-tailed)	Pearson coefficient
Identity of sports teaching profession	0.000	.456**
Education belief		

Note:** represents significantly correlated

Table 8. Regression analysis of effects of occupational identity on sports major free pay normal university students' education belief

Indicator	Regression coefficient	Standard deviation	P value	Results
Sports teacher is a stable profession with moderate income	0.0843	0.167	0.126	Non-significant
Sports teacher will be respected by the society	0.5033	0.098	0.037	Significant
Sports teacher could make contributions to hometown sports undertaking	0.3133	0.134	0.041	Significant

significantly negative correlation with their education belief. Thus, in case the students' bear too much heavy psychological burden due to worries about graduate study and future development, they would only be passive, negative no matter in learning in university or teaching after graduation, and their teaching belief tend to be lowered and job burnout would be even generated, letting alone arousing their enthusiasm and sparing no efforts in devoting to physical education.

Individual Identity of Teaching Profession

Selections on individual identity of teaching profession are as shown in **Table 6**.

Table 6 mean of score indicates that occupational stability (3.39), social status (3.36), and realization of individual value (3.65) tend to be consistent. The three are concrete reflection of the students' identity in cognition, emotion, willpower and value when being a sports teacher in future. Most of the students come from economic less-developed regions or families without well-off conditions, they choose teaching profession on the condition of stronger stability, smaller working pressure, moderate social benefits due to pursue working and living quality. Which is a reasonable expression; in the view of social status and realization of individual value, sports teachers are main performer of school physical education, in which the efficiency is up to working quality of the sports teachers to a great level. They are guides to youth in sports activities. Government and society should attach greater importance to the crucial role of school sports activities on improving youth physical health, and outstanding competitive sports talents get benefits from selection and cultivation of sports teachers at grass roots. There tend to be sports teachers in the state rewarded "May 1st" model workers and typical examples of excellent teachers, which satisfies the students' demands on realization of social status and individual value of being a sports teacher.

Correlation analysis is made on mean of the three and education belief and results is as **Table 7**.

Table 7 suggests that sports major free pay normal university students' individual identity of sports teaching profession has shown significant correlation with education belief thereof. To make further analysis, regression analysis is made on every item and education belief, results are as shown in **Table 8**.

Table 8 regression analysis shows that three aspects of occupational identity have different impacts on education belief, from which occupational stability (p value is 0.126>0.05) that has small impacts on education belief, whereas social status (p value is 0.037<0.05) and realization of individual value (p value is 0.041<0.05) have significant impacts on moulding good education belief. Earth-shaking changes in society and economy have changed youth way of thinking and value orientation in a subtle manner, diversified interest subject has reinforced individual's independence and autonomy. sports major free pay normal university students in generation after 1990s cannot provide inexhaustible impetus for education belief as teaching in grassroots for a long time as they don't identify with occupation as a sports teacher in slow rhythm, sequencing and normal income. Therefore, to motivate positive effects of occupational identity on education belief, the students should increase self-efficacy from social status and realization of individual value, cherish their occupation, put enthusiasm and energy into physical education. Give potential into full play and devote to create good working efficiency and outstanding working performance, so that intensify their belief and resolution in devoting to school sports at grass roots.

Table 9. Statistics of sports major free pay normal university students' integrity awareness

Indicator	Mean	Standard deviation
I should pay default fine if I break a previous promise	3.63	0.87
Integrity is a basic principle of conduct	3.93	0.79
I would bear huge pressure from public opinion if I break a promise	3.51	0.86

Table 10. Correlation analysis of the effects of integrity awareness on sports major free pay normal university students' education belief

Indicator	Statistical significance (Sig). (2-tailed)	Pearson coefficient
Integrity awareness	0.000	.375**
Education belief		

Note:** represents significantly correlation

Table 11. Regression analysis of the effects of integrity awareness on sports major free pay normal university students' education belief

Indicator	Regression coefficient	Standard deviation	P value	Results
I should pay default fine if I break a previous promise	0.133	0.088	0.098	Non-significant
Integrity is a basic principle of conduct	0.204	0.101	0.044	Significant
I would bear huge pressure from public opinion if I break a promise	-0.14	0.104	0.174	Non-significant

Individual Integrity Awareness

Table 9 is mean of each item score shows that default fine (3.63), ethical conduct(3.93), pressure from public opinion (3.51) have a consistent impacts on sports major free pay normal university students' practices as keeping a promise and performing the agreement with integrity. As stipulated, the students should not only return awarded free tuition fee but also confront with high default fine if they break a promise, which indeed it's unaffordable for most of the students with poor family conditions. Honesty and trustworthiness are traditional virtues of Chinese nation, basic norm of modern social interpersonal communication, and even essential foundation of moral cultivation for teaching profession- role model with moral integrity; family edification, school education, moral restraint and professional integrity contribute to the students' persistence in integrity principle of conduct. administrative department for education should establish a kind of real integrity records(including letter of integrity commitment, personal information, conduct assessment, reward and punishment records, individual and school opinions and so on) in management of free pay normal university students' performance, the records would deliver to employers with students' personal archives, extending individual credit records into society. Students should also take pressure from public opinion in case breaking a promise into consideration. Make correlation analysis of three items in integrity awareness and education belief as **Table 10**.

Table 10 shows that sports major free pay normal university students' integrity awareness show significant correlations with their education belief. At the same time, make regression analysis of every item and education belief, results are as shown in **Table 11**.

Table 11 regression analysis indicates the three aspects of integrity awareness have different impacts on education belief, such as default fine (p value is 0.098>0.05) and pressure from public opinion (p value is 0.174>0.05) have not big impacts on education belief, whereas ethical conduct (p value is 0.037<0.05) has significant impacts on moulding good education belief. Free pay normal university students' firmness in previous belief and dedication in hometown school physical education after graduation arise mainly from personal inner moral restraints -love for teaching in their inner spiritual level rather than external economic and social pressure.

CONCLUSIONS

Negative Effects of Individual Anticipation on Education Belief comes from Concern about Attending Graduate School to Pursue Advanced Study

From sports major free pay normal university' students future anticipation, there found a seemingly contradictory conclusion: they focus on realistic material level more than potential development space, but comparative analysis of the three dimensions shown that free pay normal university students were quite concerned about their future advanced study such as attending graduate school, which would exert negative effects on education belief. Through investigation, may students urged to attend graduate school in case of not clear with the purpose of such advanced study pursuing, they thought it a way to promote their competitiveness in job market

and use it to strive for better treatment, higher development platform that were better material benefits. With regard to this, the two had no contradiction. Besides, we also found that there was a misunderstanding among a considerable number of free pay normal university students that they were not allowed to attend graduate school. They weren't clear about relative policy provisions of the state-sports major free pay normal university students could pursue graduate student study at a degree of master of education, they could learn professional course in-service, those would award graduation certification of a graduate students and a diploma of master of education if they pass teaching assessment and oral defense.

The Realization of Social Status and Individual Value in Occupational Identity Could Contribute to Inexhaustible Impetus for Developing Education Belief

Identity of teaching occupation has a significant impact on education belief of free pay normal university students. Specially, belief as "a sports teacher would be respected by the society" and "could make contributions to hometown's sports undertakings" have stronger stimulation function on the students. Most of the students think that their learning motivation and striving direction are just to set up a typical excellent teacher for the state. They have a passion for being a teacher, and meanwhile get benefits from key supports of national policies and professional cultivation of normal university. With the accumulation of teaching experience and improvement of teaching ability, feelings would arise from their work as a sports teacher, which even strengthens their belief of long-term teaching and lifelong teaching.

Positive Effects of Ethical Conduct in Integrity Awareness on Education Belief

Individual integrity awareness could have a significant impact on education belief of free pay normal university' students, which not only because they should bear the economic compensation and loss in case they break the agreement, but moreover their conduct would be recorded into social integrity so that they bear certain social pressure. Most importantly, for most of the students, integrity is a way of social conduction that they worship. Noncompliance not only means economic and reputational loss, but also a betray to personal principle of life, which is an unbearable mental pressure for them. Breaking the agreement is like bearing heavy conscience debts that they would be weighted down.

On a whole, China sports major free pay normal university' students have good education belief. They possess certain original education belief before entering into university, problem of sports teachers quality have been partially solved in the beginning of cultivation of free pay normal university students, as they are required to have higher cultural course and sports performance during enrollment. Characteristic education in key normal university has professional in cultivating sports teachers improved, sports teachers' professionalism degree went deeper, their substitutability reduced. Therefore, it could promote the students' progress in competitiveness of job market, they would be confident in participating in primary and secondary school's sports undertaking at basic level in future and capable of adapting and impelling the development of sports course reform. It has a remarkable effect on shaping the students' personality, sports teachers' status and treatment would correspondingly promote that is beneficial to form into a social style as respecting teachers and valuing education. However, lack of understanding policies of the state education and free pay normal university students, influences of non-education industry's competitive salary and conditions, development restriction in long-term teaching at basic level schools and others would be realistic problems that trouble a part of the students (Li, 2017).

OUTLOOK

As policies' "receiver" and "performer", sports major free pay normal university students should make a long-term career planning, grasp integrating points between individual specialty and occupational feature of sports teacher, constantly mine personal potential to adapt to physical education reform and development. in good learning and living environment that key normal university offer, they should cherish and keep in mind for returning so that can strive hard and root in grass-roots with a stable mood; they should also strengthen personal ideological and ethical standards and promote sense of social responsibilities, and form into integrity habits in daily life. Really behavior as a teacher-a model with integrity so that set up good styles of teacher's ethics in future teaching.

Importance should be attached to the effects of family cultural education on enlightenment and cultivation on education belief of free pay normal university students. That is because degree of parents' education and way of family education would directly affect establishment of children's teaching motivation and development of education belief. Positive concepts of family education should be used to guide the students, the important roles of psychological and physical health and physical exercises on modern people's comprehensive development should

be highlighted so that the students could understand significances of sports teachers in social and state development reasoning.

School should aim to cultivate “excellent teachers and future educators”, strengthen occupational ideal education of sports teachers, letting occupational ideal to provide inexhaustible impetus for students “long-term teaching, lifelong teaching”. and should strengthen teachers’ ethical education on students, set up ethical examples for the students by the teachers’ words and deeds; while also focus on campus cultural construction and good learning style establishment, which also has a profound significance in the development of the students’ education belief.

Government should inherit and carry forward good style of respecting teachers and valuing education, improve social status of sports teacher, improve working environment and salary of sports teachers at grass roots. offer them higher development platform and wider paths to be a useful person, enable them to learn the essence, return to superior working place, settle in present school and do a good job”, and meanwhile should conduct vigorous propaganda of huge fortune that the students’ contain and create.

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