

The Brief Analysis about Students Choosing Teachers

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ABSTRACT: In this paper, combined with the mathematical knowledge, it carries out a simple analysis about the necessity of students to choose their class teachers, briefly explains its positive side, the possible problems and corresponding countermeasures to solve these problems, and it can also provide a new teaching thought for the teaching reform. Believing that with the reform of education as well as the students' self-consciousness awakening, such methods will get effective promotion.

KEYWORDS: independent choice; Teachers' competition; Teachers integrated

1 INTRODUCTION

A student wants to find a really suitable teacher for him is very difficult. Presumably for many students, it only could be "can meet but not make". With the necessity of teaching reform, more and more students suggest that they desire to have the right to choose their own teachers, and the situation has been taken notice by the relevant education scholars in recent years. A survey showed that 26.8% of the students wanted to have the right to choose teachers, 32.5% of the students wanted to have the right to choose the way of examination, 20.6% of the students wanted to have the right to choose the teaching materials, and 20.1% of the students wanted to have the right to choose majors. As far as the students' rights, more and more students ask for having more choices, which means that students' self-consciousness and autonomy are growing fast^[1]. Compared with traditional students, the contemporary students pay more attention to themselves and they don't want to just passively accept their school teaching materials, courses, and teachers and so on. For teaching methods and learning methods, many students also have a lot of their own original ideas. Quite a few students are becoming more and more inclined to heuristic learning and independent exploration of teaching ideas, rather than blindly accepting the teachers' teaching in the class. Colleges and universities are made of students and teachers, so their purpose is mainly to serve the students. In the face of students' ideological changes, colleges and universities should pay enough attention to the rationality needs of the

students. The world is changing every moment of the day and the traditional teaching mode can't still be useful to the contemporary students inevitably. So teaching reform is imperative and teaching ideas must be changed.

2 ANALYSIS ABOUT THE NECESSITY OF CHOOSING TEACHERS

Most of the students say: "the title level, education background cannot fully prove the ability of a teacher. When students choose teachers, students considered the teachers' teaching experience, teaching effects and the most important thing they considered is to judge whether the teacher is suitable for themselves ". Making the students choose their own suitable teachers can reflect students' trust in teachers. Students also can have a friendly feeling to teachers, which stimulates students' learning interests, learning initiative and self-consciousness^[2]. Two analyses combined two mathematical knowledge below can be used to make us deeply understand its inner meaning.

2.1 *The analysis in the perspective of clustering algorithm*

In natural science and social science, there have been a lot of topics about classification. The so-called class, popular saying is a collection of similar elements. The collection of physical or abstract objects can be divided into multiple classes of similar objects, known as clustering. Clustering

according to a particular standard (e.g., distance criterion) divides a data set into different classes or clusters, making the same data objects within the cluster similarity as large as possible, and not in the same cluster, the differences of the data as much as possible. After the clustering, data gather as much as possible in the same class and the data not in the same become as far as possible. Popular unsupervised clustering algorithm is working as below: given the number of classes and the training sample set, through a certain algorithm constantly iterative convergence results are obtained. Now the data will automatically go to different classes. Given another test data, then you can use the algorithm to classify these test data smoothly. Now that we say "a person with type, content with group of points", then we can consider introducing the clustering algorithm to the similar problem of choosing teachers. If regarded different teachers as classes or a kind of clustering center and regarded students as data sample, let the students experience different teachers' lessons and make personal evaluation to them, it believes that after a few courses, students will be able to find suitable teachers for their own. And these evaluation means experience, the next grade students may combine the students' evaluations before with the actual situation of their own to make a choice. If students still can't select teachers, schools can organize the students to carry on an evaluation about students themselves, through the knowledge of data mining to give students advice. If the number of the teachers and students can be reasonable matched, it believes that every student may find their appropriate teachers, if not the most ideal teacher but is a local optimal solution.

2.2 The analysis in the perspective of inner product

By the principle of vector inner product we can further understand this problem. If students and teachers respectively regarded as two kinds of data, the inner product has its form of $\langle \text{student}, \text{teachers} \rangle$. We can learn from the inner product that if the two classes of data are less biased, the result is higher and the greater the biased is, the lower the inner result of two classes of data is. Students are biased, such as the style of the students are fond of listening to the teacher, the type of teacher, the teacher's personality charm, even the teacher's appearance and bearing style clothes. Teachers are biased, and more obvious such as teaching content, teaching style, the rhythm of the lecture and the method of humor or rigor. If the less biased to students and teachers, which is more in tune, then calculate the inner product, the higher the effect of teaching is the better. Instead, the greater the biased of students and teachers, teachers don't adapt to the students, the students don't like the teacher, then the inner product will be very low. Maybe, the inner product even

becomes negative and producing adverse effect also can be imagined. Or in a more visualized way, the geometric meaning of vector inner product performs in terms of projection, the degree of a student can adapt to teachers just as the vector of teachers are on the projection of vector of students and when the projection is larger, the effect will be better. Therefore, we often find such a phenomenon that some students usually who do not like learning may prefer a certain course, because of personal charm by the teacher or the style of the lecturer. If the number of teachers and number of students are in reasonable matching, all the students can find their suitable teachers. Perhaps, the teachers chosen by students are not their favorite ones not it's the local optimum choose.

3 POSITIVE SIDE OF CHOOSING TEACHERS

Due to the long formed by "only one teacher to be chosen", there is a teachers' long-term monopoly of a course, it's not reasonable and students can only accept a teacher's teaching passively. At the same time, part of teachers' education enthusiasm is faint due to the lack of effective supervision mechanism as well as the poor teaching quality evaluation system, which make the teaching quality declined. Many teachers don't study lately knowledge initiatively, and they are not active in innovation on teaching methods and teaching means. What's more, teaching materials used by students are unchanged for a long time, lesson plan is unchanged and teaching method is fixed, therefore, education teaching quality of colleges and universities are becoming poorer and poorer^[3]. Students has the most reasonable right to criticize teachers' teaching quality and working attitudes because of objectivity, representative, and targeted. Teachers' teaching contents, methods, means directly make effects on students, make the expected changes in the students' body and mind, to achieve the purpose of cultivating people. Teachers' teaching process can stimulate students a strong thirst for knowledge and lead to the students' interests, which affects the students' absorption degree to the teachers' work achievement, and emphasizes the teachers' labor value. Let the students choose teachers, to achieve "more than one teacher to be chosen" competition. Putting teachers in such a competitive environment to compete with others, so as to reflect the value of teachers, also give new teachers a chance to show themselves and this new starting point is pretty good. Giving students the chance to choose their own teachers shows respect for the rights of students. At the same time, it makes us understand that education is a service industry. All the teachers should have a nervous consciousness, and constantly improve their ethics, enhance their teaching quality, renew

education ideas and try to get their own education teaching work well.

4 SOME PROBLEMS OF CHOOSING TEACHERS

First of all, if let students have the opportunity to choose their teachers, the choice range is a challenge. It's certain that the scope of choosing should not be too narrow. If there are only two teachers to be chosen, its effect is about zero. Because there are only two candidates for students to choose equals having no choice. But scope should not be too wide as well, if the students have several choices, the students will, of course, very satisfied, but it's clearly too strict for teachers' quality requirements. A teacher may be only good at one aspect of the course, if let him/her teach courses which is not good at in that field, it will be a big challenge to the teachers. If teachers cannot span too much fields for teaching, schools must increase the number of teachers in order to meet the students' choice. As a result, the number of teachers will be another challenge, the school will need to cost a lot of money to hire more teachers, therefore, it's difficult to achieve for the school which is lack of funding.

Second, in the process of choosing their teachers by students, it may cause unfair competition among teachers. Because the students' view about a teacher are different, depending on students' opinion may be biased to judge teachers. Of course we hope all the students can make a reasonable choice for themselves objectively, but some teachers in order to attract students will play a little trick. Such as roping students in an abnormal way to vote for him/her, lowering the request to the student or give some messages about the test on purpose, etc. Not by teaching effects and serious attitude in the class but opportunistic, they have to make unfair competition in order to attract more students. If any similar phenomenon happens, it will cause improper vicious competition and obviously it is out of the orbit of the original teaching, which is a worthy of note.

Finally, in this process, it may cause resources of teaching unfair distribution. Pure relationship between students and teachers should be teaching and learning rather than the interest relations, the emotional bond existing among them. If relying on the good teachers whom students like, the schools request higher student's tuition or other conditions. It may cause the process of education converting to a market transaction. The relationship between teachers and students will be turned into a commercial relationship^[4]. Students who pay more tuition or bribe related people can choose a good teacher but other students can't. Students who learn well can choose a good teacher, but other students

who can't do well in lessons have no chance to choose a good teacher. If so, it certainly will cause uneven distribution of teaching resources, it is unfair for most students, because they pay the same tuition so everyone should have the same opportunity. Students choose teachers because of trust and admiration of the teacher, rather than schools and teachers can take an advantage of this to make profits and extortion. This is another notable problem.

5 OPINIONS TO SOLVE THE PROBLEMS ABOVE

As for the problem of the range for students to choose teachers, universities should consider breaking "barriers", which means breaking the narrow scope of colleges or universities themselves. They should realize the integration of teachers with other colleges and universities. For example, some schools are in lack of teachers for a certain course, but the teachers in this course in other colleges and universities are more than needed. Then, the schools can consult an agreement between the teachers' transfer temporarily for the specific task. Finally, each student in different universities can choose a teacher from another school to come to take the class. In this way, not only activate the whole of the professional teachers resources to achieve maximum value, but also enhance the sense of competition between teachers, just because the teacher must face more competitors now, not only just in the same school. The good professional teachers from exterior also produce the oppression to them. If not performing self-improvement, a teacher finally may lead to the result that no school would hire him/her. The basic direction trend of the world is a fusion and co-prosperity. The economy can be merged and culture can be merged, so the resource of teachers can also be merged. To realize the communication between the university teachers, making teachers co-prosperity is a key ring in the process of achieving the students choosing teachers, so it cannot be ignored.

In the evaluation of teachers, the students' satisfaction should be only one aspect of evaluating. In the process of choosing teachers, we should adhere to the principle of integrity and strive to conduct a comprehensive measure. We must consider both his/her effectiveness, and his/her work attitudes, both subjective efforts, and the basis of his/her original basic situation, level and so on. A strict teacher management system should be constructed and roping students by means of unfair competition should be punished severely. Schools should pay more attention to the evaluation principle of combination quality and quantity of students, not only on the analysis of the number of students but

also on the quality of students' achievement. It's biased and not comprehensive to judge teachers if only from the teacher's popularity, the school's evaluation and the students' assessment should be combined. Widely listen to the effects from various aspects is important too ^[5].

6 EXPECTATION

Currently, many scholars and experts who study education theory have deeply demonstrated the education industry income, the necessity, inevitability and rationality of education investment and so on. But less researches focuses on the interests of the investors to demonstrate problem and it is not enough. Nowadays, it is easy to find that there is a correlated relationship between the educated level and the future income and family investment in education is also increasing. Therefore, colleges and universities should take advantage of the opportunity of students choosing teachers to promote the reform of higher education system as soon as possible, to reduce staff for greater efficiency, to do a good job of teachers' reasonable employment and mobility. At the same time,

education management department should provide teachers more professional training and other opportunities to pursue further studies to improve the level of education quality of colleges and universities as soon as possible and the structure of teachers distribution should be optimized. This is the key to achieve students choosing teachers, and this is the inevitable requirement of improving teaching quality.

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