

# A Study on the Factors Influencing the Teaching Effect of Moral and Social Courses in Primary Schools

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## ABSTRACT

Taking the influence of various factors on the teaching effect of moral and social courses of primary school students as the research content, a unified examination was conducted on third-grade students from 413 primary schools in Kunming, and 1270 valid questionnaires were obtained from their teachers. A questionnaire was innovatively designed with 52 dimensions, and the data were analyzed using the SPSS big data analysis platform to find the most influential factors in the teaching and learning of moral and social courses and to propose suggestions for improving the teaching effectiveness of moral and social courses.

## KEYWORDS

Data Analysis, Moral and Social Course, Primary Education

## INTRODUCTION

The primary school has an important influence on shaping the correct social and life concepts in one's future. It is very important to guide students ideologically and correctly at this stage. The moral and social course in primary school is centered on students' ideological activities to help them understand society from a correct perspective to establish a correct outlook on life and values (Liu, 2020). Xi (2004) said, "The ideological and moral conditions of minors have an important impact on China's future spiritual outlook. The construction of a spiritual civilization should start with children" (p. 64). Since moral and social courses originate from life, various factors in the educational environment may have an impact on the teaching result. It is important to find factors that will have a greater impact on the teaching process of the moral and social course in primary school and optimize the factors to improve the ideological and moral level of primary school students.

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## Background

The moral and social course is an important way for primary school students to understand themselves and the world, and good moral and social education affects the mental development of primary school students to a great extent. Therefore, moral and social courses play an important role in the process of primary school students' cognitive development. Piaget's (1984) cognitive stage theory divides children's moral and cognitive development into the heteronomous morality stage (7-11 years old) and the autonomous morality stage (after 11 years old).

This theory is generally accepted. The primary school stage is in the heteronomous morality stage. Its main characteristics include the following:

1. Children believe that rules and norms are set by authority figures. These rules and norms cannot be changed and must be strictly followed.
2. Children judge behavior as good or bad according to the consequence, not according to the actor's motivation.
3. They believe that punishment for wrongdoing is inevitable and recognize punishment as a means of maintaining order.
4. They obey authority and have a sense of obligation to follow adult standards and obey adult rules.

It can be argued that the research conclusions, drawn from data of third graders, can be applied to the heteronomous morality stage, that is, the whole primary school stage.

Primary school students have a certain ability to judge whether adults' words are correct or not, but this ability is not mature. For this reason, primary school students at this time need education from adults in the formation of moral understanding. As a science of moral formation for primary school students, it is obvious that moral and social courses play an important role in this process. Improving the teaching quality of moral and social courses can enable students to form more perfect and positive morality.

Teacher cognition is an educational belief that teachers believe they can influence their students and that they can assist them in effective learning through such beliefs (Greenwood & Parkay, 1989); it is a combination of teachers' ideas about their attitudes, values, and teaching philosophies, including mainly teachers' explicit or implicit views of language theory, language teaching, professional knowledge, teacher-student roles, classroom activity design, and use of teaching methods (Freeman, 2002); and it is a cognitive process and structure that is not easily observed by teachers in teaching, including teachers' beliefs, knowledge, principles, theories, and attitudes about teaching, as well as the thinking, judgments, and reflections teachers make before, during, and after instruction (Borg, 2002, 2006). Teacher cognition is conditioned by objective reality, interacts and influences classroom teaching, and has some influence on individuals to change, develop, and renew through self-reflection, collegial interactions, teacher training, and other teacher professional development activities (Zheng & Davison, 2008).

From a teacher cognitive perspective, what and how teachers think affects everything about classroom teaching. That means that teacher cognition is important for constructing effective teacher pedagogy and student learning. It is closely related to teacher classroom behavior, teaching methods, classroom interactions, and instructional assessment (Li, 2020; Williams & Burden, 2011). Therefore, a key entry point for improving elementary school education in the subject of moral and social courses is factors associated with teachers of moral and social courses. To improve student learning, teachers are first required to continuously innovate their ways of thinking, knowledge structures, teaching expertise, and technological reserves.

Some people have put forward some opinions on how to improve the teaching efficiency of primary schools: Liu (2017) proposed that the way to improve the quality of teaching in the moral and social course is to set up a good evaluation system, and the teachers who listen to the lessons need to

communicate more with each other to help correct the deficiencies of teaching; Lu (2011) proposed that theories of learning motivation, such as hierarchy theory, self-efficacy theory, achievement motivation theory, and attribution theory, are important for motivating students to learn; and Yao (2004) discussed an effective teaching strategy from three types of classroom teaching strategies, namely, main teaching strategies, auxiliary teaching strategies, and management strategies.

The current studies have put forward some ideas on how to improve the teaching efficiency of primary school, but they still ignore some problems. Yu (2006) believed that the current discipline separation is the main problem of systematic education. In the current system, it is difficult to put forward an effective teaching method that can be applied to all disciplines. In this regard, it is very important to study only one discipline in the research on how to improve the teaching effect. In addition, most studies focus on how to improve the effectiveness of classroom teaching and ignore some other implicit variables, such as teacher treatment and teaching environment.

In fact, research on how to analyze classroom situations or questionnaire data to find a method to improve teaching quality has long appeared. Zhang and Gong (2013) analyzed the current situation of university computer foundation courses and proposed an improvement method by considering the experience in theoretical and practical teaching and assessment methods. Wang and Wu et al. (2010) distributed questionnaires to undergraduate students of computer departments in Fuzhou University to investigate and analyze their learning interests, and pointed out the main problems in students' learning and proposed guiding opinions for teaching.

Although there are precedents for this, there have been no articles in China that have collected and analyzed questionnaire data from students at the primary school level and suggested improvements for other environmental implicit variables such as teacher treatment and teaching environment.

Chinese national curriculum school-based implementation is one of the concepts in the Ministry of Education's "Research on School-based Curriculum Development and Implementation Actions at the Junior High School Level" project and Beijing's "Research on School-based Implementation of the National Curriculum" project (Xv, 2006).

Xv (2008) believed that the effective sharing and exchange of successful curriculum implementation experiences among schools can help guide schools in different districts in Chinese national curriculum school-based implementation.

In this regard, this paper selected the data of the questionnaire on teaching quality of teachers obtained during the unified test of moral and social courses in grade 3 of primary schools in Kunming in 2018, including the questionnaire obtained from students of 412 primary schools in Kunming. Then, a real name WeChat questionnaire survey was conducted on 1270 teachers in the moral and social course, and the results of the unified test and the corresponding teachers' teaching information were comprehensively processed to obtain data. Then, SPSS is used to study the relationship between the subitems of the questionnaire from the teachers in moral and social courses and students' test results. To analyze the internal relationship from an objective point of view, we determine the most influential factors on moral and social teaching and formulate corresponding solutions for these factors.

Since it has been shown earlier that through Piaget's (1984) theory, it can be argued that the conclusions obtained by analyzing the data from the third grade can be applied throughout the primary school stage, and through Xv's conclusion (2006), it can be argued that the results obtained by analyzing the data from Kunming City can be used for other regions. Combining these two, it can be argued that conclusions, which are drawn by analyzing the data from third-grade students of primary schools in Kunming, can be used as a general model for moral and social education in primary school and can serve as a guide for school-based implementation of moral and social education in other regions. That is, we arrive at a model that is a generic educational model for the subject of elementary school moral and social course.

Among the 52 dimensions, in addition to the seven dimensions describing the attributes of teachers (including gender, age, teaching age, professional title, professional type, educational background, and the number of subjects they teach), there are 45 dimensions describing teachers' psychological

quality, the degree of school interference in teaching, the situation of schools organizing teaching activities, and the factors such as school and regional economy and culture that are innovatively proposed (including “whether teachers participate in training”, “how long they participate in teaching and research activities”, “understanding of curriculum standards”, “investigation of school personnel” and “frequency of visits of experts outside school”). These dimensions can provide guidance for the conclusion to the greatest extent.

## Research Scheme

This paper first quantified the questionnaire data for data analysis, then used SPSS to analyze the influencing factors of moral and social course teaching, and finally drew a conclusion. Methods of analyzing the factors influencing the teaching effectiveness of the moral and social courses and their roles are shown in Figure 1.

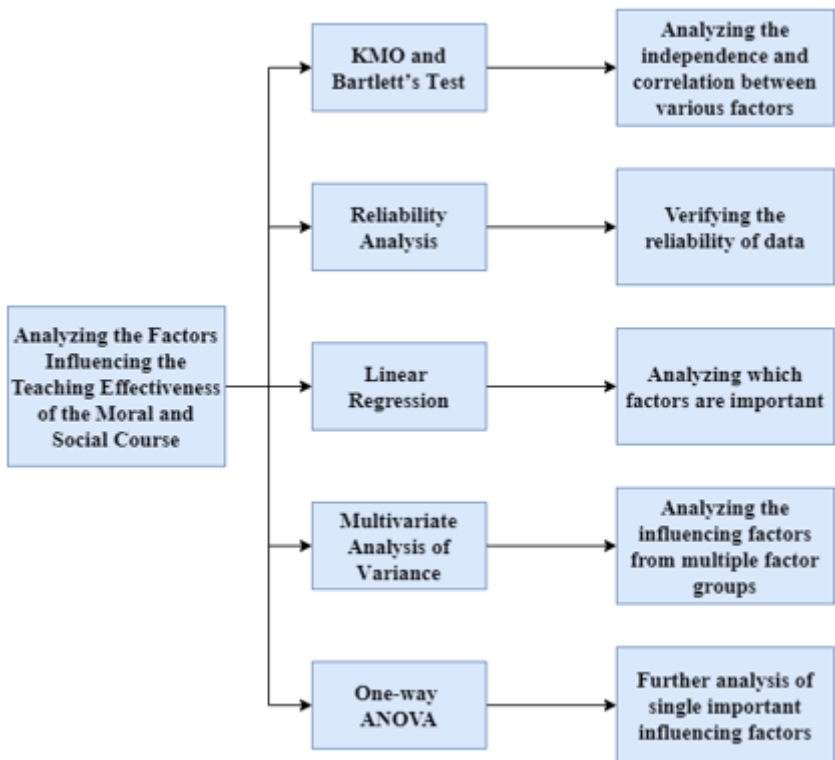
## Data Collection

The authors collected results of the 2018 primary school third grade moral and social course test in Kunming City and calculated the statistics of the results and the questionnaire of teachers.

First, the authors used the Oracle database to manage the test scores, collected the questionnaires of teachers through a real-name WeChat applet, and correlated the two in the Oracle database to obtain the raw data.

Based on reviewing a large amount of literature, a Teacher Questionnaire with a certain degree of reliability and validity was finally designed. The authors used Tian and Zhang et al.’s (2018) WeChat

Figure 1. Methods of analyzing the factors influencing the teaching effectiveness of the moral and social courses and their roles



app student home-school information system to distribute the questionnaire to 1270 moral and social course teachers from 412 primary schools in Kunming and surrounding counties.

The questions of the questionnaire included “school name,” “school’s urban/rural attributes,” “school level,” “school attributes,” “your gender,” “your age,” “your teaching experience,” “your education,” “What is your professional title,” “Do you agree with the following description of teachers,” “whether your school provides teachers with the necessary facilities and equipment for teaching,” and a series of other questions.

In addition to the dimensions covered in the questionnaire, the authors also conducted dimension mining through Python when processing the questionnaire data and removed some dimensions that were difficult to change, such as the school’s urban/rural attributes and school level. The dimensions that could be changed to help improve student performance would be retained. Finally, 1226 52-dimensional data points were retained for subsequent analysis.

## ANALYSIS METHOD SELECTION

### KMO and Bartlett’s Test

The KMO value is an indicator used to compare the simple correlation coefficients and the biased correlation coefficients between variables. The KMO value takes a value between 0 and 1, and the KMO value approaches 1 when the sum of squares of simple correlation coefficients between all variables is much larger than the sum of squares of biased correlation coefficients.

Bartlett’s test is based on the correlation coefficient matrix. It assumes that the correlation coefficient matrix is a unit array, which means that all elements on the diagonal of the correlation coefficient matrix are 1 and all elements on the nondiagonal are 0. The value of Bartlett’s test is obtained from the determinant of the correlation coefficient matrix. If the value of Bartlett’s value is less than 0.05, it means that the criteria are met, the data are spherically distributed, and the variables are independent of each other to a certain extent.

In short, the closer the KMO value is to 1, the stronger the correlation between the variables; if the value of Bartlett’s value is less than 0.05, it means that the variables are independent of each other to a certain extent (Uma, 2017).

The KMO test and Bartlett’s test were performed on the scores, and the results are shown in Table 1.

From the data shown in Table 1, it is clear that the factors are independent of each other and strongly correlated.

### Reliability Analysis

Reliability refers to the degree of consistency in the results obtained when the same method is used for repeated measurements of the same object. Generally, internal consistency is used to indicate the reliability of a test.

In this paper, Cronbach’s  $\alpha$  reliability coefficient was used, and its formula is:

$$\alpha = \left( \frac{k}{k-1} \right) * \left( 1 - \frac{\sum S_i^2}{ST^2} \right) \quad (1)$$

Table 1. KMO and Bartlett’s test table

KMO Value	Bartlett Value
0.000	0.934

In the formula,  $k$  is the total number of items in the scale,  $S_i^2$  is the intra item variance of the score of item  $i$ , and  $ST^2$  is the variance of the total score of all items. It can be seen from the formula that the coefficient  $\alpha$  evaluates the consistency between the scores of each item in the scale, which belongs to the internal consistency coefficient.

The higher the Cronbach's  $\alpha$  of the test, the more consistent, stable, and reliable the results are. Generally, the value of coefficient  $\alpha$  is between 0 and 1. When its value does not exceed 0.6, it is considered that the internal consistency reliability is insufficient. When its value reaches 0.7-0.8, it indicates that the scale has considerable reliability. The reliability of the scale is very good when the value of  $\alpha$  reaches 0.8-0.9. If its value was below 0.6, the authors should have considered redesigning the questionnaire.

The results of the analysis are shown in Table 2, with a reliability of 0.901, which allowed the authors to conclude that the data were reliable.

### Linear Regression

Linear regression analysis is a method of predicting the future value of a random variable that is correlated with one or a group of independent variables. Regression analysis requires the creation of a regression equation describing the correlation between the variables. It is calculated as follows:

$$\bar{y} = ax + b \quad (2)$$

$$\alpha = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sum_{i=1}^n (x_i - \bar{x})^2} \quad (3)$$

The coefficient of determination of the linear regression responds to what percentage of the fluctuations in  $y$  can be described by the fluctuations in  $x$ . Significance is another evaluation indicator, and when it is less than 0.05, it represents that the factor has a significant impact on the target.

In this paper, linear regression was calculated on the questionnaire data to derive factors that would have a significant effect. The absolute value of the linear regression correlation coefficient  $R$  was 0.550, and the coefficient of determination was 0.302. Factors that would have a significant effect could describe 30.2% of the variation in the scores of moral and social courses, and the model was considered to be effective. The table of linear regression coefficients of factors that would have a significant effect is shown in Table 3.

The significance of the above factors is less than 0.05, which means that they would have a significant impact on the score of the moral and social course.

It can be concluded that "teacher's gender" had the most significant effect, followed by "teacher education," and the other factors that also had a significant effect are "Number of times instructed by experts outside the school," "The number of times a teacher sits in on a class taught by another teacher of the same subject," and "Are there enough office consumables."

**Table 2. Confidence analysis table of moral and social courses**

Cronbach $\alpha$	Number of dimension items
0.901	52

**Table 3. Table of linear regression coefficients for factors that would have a significant effect**

Variable	Coefficient	Standard Error	Significance
Teacher's gender	4.624	0.488	0.000
Teacher's education	2.288	0.389	0.000
Number of times instructed by experts outside the school	-1.534	0.337	0.000
The number of times a teacher sits in on a class taught by another teacher of the same subject	-1.033	0.203	0.000
Are there enough office consumables	1.148	0.428	0.007

## Multivariate Analysis of Variance

Multivariate analysis of variance, which is used to investigate whether a dependent variable is influenced by multiple factors, tests whether there is a significant difference between the means of the dependent variable and between different combinations of the levels at which multiple factors take values. Multivariate analysis of variance can analyze both the effect of one factor and the interaction between factors, as well as the analysis of covariance and the interaction of each factor variable with covariates. It allows for deriving the square of the complex correlation coefficient (R-squared), which is used to reflect the percentage of variance explained by the regression equation to the variance of the dependent variable. In addition, this method can also obtain the significance value of the influence of each factor on the dependent variable. When its value (P value) is less than 0.05, it can be considered that this factor is significant.

The R-square value calculated from the questionnaire data was 0.400. This means that the significant influencing factors can explain the 40.0% change in the score of the moral and social course.

Additionally, The significance of "teacher's gender," "teacher education," "number of teachers teaching," "level of training attended," "how often teaching research is conducted," "degree of knowledge of curriculum standards," "number of times of guidance by experts outside the school," "frequency of assignment by superiors," "whether you want to change your career," "whether the school is a good place to work," "number of listening to lessons from teachers of the same subject," "the number of times the head teacher listened to the class in depth," "the number of times the head teacher listened to the class in depth," and "whether the classroom meets the needs" were all lower than 0.05, which means that their impacts on achievement were significantly different. The coefficients of the factors that significantly differed from each other are shown in Table 4.

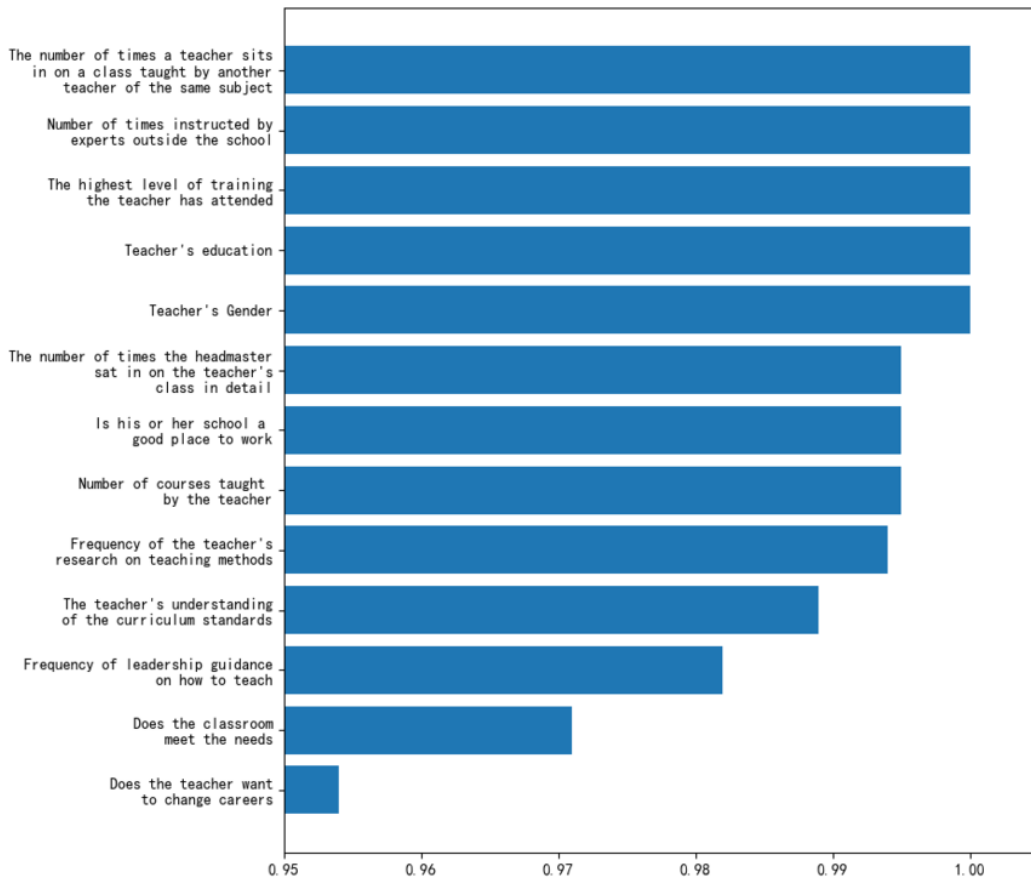
At the same time, the P value of "Teacher's gender," "Teacher's education," "Number of courses taught by the teacher," "The highest level of training the teacher has attended," "Frequency of the teacher's research on teaching methods," "The teacher's understanding of the curriculum standards," "Number of times instructed by experts outside the school," "Frequency of leadership guidance on how to teach," "Does the teacher want to change careers," "Are their school a good place to work," "The number of times a teacher sits in on a class taught by another teacher of the same subject," "The number of times the headmaster sat in on the teacher's class in detail," and "Does the classroom meet the needs," was lower than 0.05, which means that they would have a significant difference in the score. A significance table for factors that made significant differences in scores of moral and social courses is shown in Table 4.

The degree of confidence can represent the accuracy of the sample statistical value, which refers to the probability that the sample statistical value falls within a certain positive and negative range of parameter values. The lower the significance level is, the higher the degree of confidence and the higher the reliability of the representative hypothesis. The degrees of confidence of the above factors are shown in Figure 2.

**Table 4. Significance table for factors that made significant differences in scores of moral and social course**

Factors	P Value
Teacher's gender	0.000
Teacher's education	0.000
Number of courses taught by the teacher	0.005
The highest level of training the teacher has attended	0.000
Frequency of the teacher's research on teaching methods	0.006
The teacher's understanding of the curriculum standards	0.011
Number of times instructed by experts outside the school	0.000
Frequency of leadership guidance on how to teach	0.018
Does the teacher want to change careers	0.046
Is his or her school a good place to work	0.005
The number of times a teacher sits in on a class taught by another teacher of the same subject	0.000
The number of times the headmaster sat in on the teacher's class in detail	0.005
Does the classroom meet the needs	0.029

**Figure 2. Confidence levels for factors that make a significant difference in examination results**





This paper starts with these factors and further analyzes them using one-way ANOVA to draw more in-depth conclusions.

## One-Way ANOVA

One-way ANOVA is used to investigate whether different levels of an independent variable have a significant effect on the dependent variable.

All of the factors in Table 4 showed significance (P value less than 0.05) on the score of moral and social course, implying that they all had significant effects on the score of moral and social course.

After the one-way ANOVA of all factors, the influence of different levels of significant factors on the teaching effect of moral and social courses was obtained. The results are shown in Table 5.

## Analysis of Influencing Factors

This study found that “Teacher’s gender,” “Teacher’s education,” “Number of courses taught by the teacher,” “The highest level of training the teacher has attended,” “Frequency of the teacher’s research on teaching methods,” “The teacher’s understanding of the curriculum standards,” “Number of times instructed by experts outside the school,” “Frequency of leadership guidance on how to teach,” “Does the teacher want to change careers,” “Is his or her school a good place to work,” “The number of times a teacher sits in on a class taught by another teacher of the same subject,” “The number of times the headmaster sat in on the teacher’s class in detail,” and “Does the classroom meet the needs,” have a significant impact on the teaching effect of moral and social course.

The analysis of the results shown in Table 5 is as follows:

1. The teaching performance of female teachers is significantly higher than that of male teachers, which is probably due to the difference in cognition caused by gender. Female teachers are patient and detail-oriented in their work and have a better ability to perceive emotions. Primary school

**Table 5. The influence of different levels of significant factors on the teaching effect of moral and social courses**

Factors	Positive impact on scores of moral and social course
Teacher’s gender	Female > Male
Teacher’s education	Master’s degree > Undergraduate degree > Junior college degree > Technical secondary school degree and below
Number of courses taught by the teacher	1 > 2 > 3 > 5 > 4
The highest level of training the teacher has attended	Provincial level > Municipal level > School level > National level > County Level
Frequency of the teacher’s research on teaching methods	Two weeks > One month > Two months
The teacher’s understanding of the curriculum standards	Very familiar > Familiar > Unfamiliar > A little familiar
Number of times instructed by experts outside the school	Always > Often > Sometimes > Never
Frequency of leadership guidance on how to teach	Always > Sometimes > Often > Never
Does the teacher want to change careers	Disagree > A little agree > Agree > Very agree
Is his or her school a good place to work	Very much agree > A little agree > Agree > Disagree
The number of times a teacher sits in on a class taught by another teacher of the same subject	Above 21 > 16-20 > 11-15 > Below 10
The number of times the headmaster sat in on the teacher’s class in detail	Rarely attend > Attend > Not attend
Does the classroom meet the needs	Very agree > Agree > Agree a little agree > Disagree

students are in their physical and psychological development. Female teachers are better able to understand students' emotions and guide them in their learning.

2. The fewer courses a teacher teaches at the same time, the stronger their investment, understanding, and repeated practice in these courses, and the education for each student is more targeted, thus improving the teaching effect of moral and social courses.
3. Factors such as teachers' higher education, attending high-level training, frequent research, and actively listening to other teachers' lectures have significant effects on the moral and social course, indicating that teachers should improve themselves more, keep up with the times, and understand the frontiers of society, which can continuously improve their teaching effectiveness.
4. Regarding the factor of "The number of times the headmaster sat in on the teacher's class in detail," because the headmaster should grasp the overall situation, they should only listen and evaluate the teachers' lectures appropriately; otherwise, too much or too little may have a negative effect.
5. Teachers who do not want to change careers tend to be more concerned about students and more enthusiastic about teaching. The positive effect of emotional teaching on students is very obvious.

Because education is closely related to its regional components and because regional education is a comprehensive national education, regional education research has a comprehensive character (Fang, 1996). The factors chosen here are all comprehensive factors that are not related to regional factors or have little relationship with them, so the conclusions drawn are general and transferable. The model obtained in this paper can be used by all teaching regions to obtain the most appropriate school-based implementation plan for the national curriculum, taking into account their specific needs.

## CONCLUSION

This paper took the influence of each influential factor on the effectiveness of teaching moral and social courses for primary school students as the research content, used SPSS to analyze the questionnaire data distributed after the Kunming primary school general examination, and found the most influential factors on the teaching of moral and social courses. Based on this, a general educational model that can guide the school-based implementation of moral and social education in schools of other educational regions was proposed.

It is important to point out that it is very difficult to further prove the effectiveness of the model in other cities' data statistics in a short period of time because of the difficulties in conducting municipal examinations and corresponding written surveys. This problem will be discussed in the next research.

The moral and social course integrates character education, personal life, student development, and social life for primary school students, and it takes on the important responsibility of character formation and social development for primary school students. However, most primary school students currently lack good learning habits and are not motivated enough to learn in the moral and social course. At the same time, because the moral and social course in primary school is a comprehensive course, the content involves many aspects. Most primary school students cannot accurately understand the content, nor can they determine the important and difficult points of learning, and the effect of transferring the knowledge points is not good. In addition, at this stage, the teaching method of moral and social courses is relatively singular, and teaching is more theoretical. This leads to primary school students' disinterest and even aversion to the knowledge of moral and social courses (Zhang, 2020).

The results showed that "Teacher's gender," "Teacher's education," "Number of courses taught by the teacher," "The highest level of training the teacher has attended," "Frequency of the teacher's research on teaching methods," "The teacher's understanding of the curriculum standards," "Number of times instructed by experts outside the school," "Frequency of leadership guidance on how to teach," "Does the teacher want to change careers," "Is his or her school a good place to work," "The number of times a teacher sits in on a class taught by another teacher of the same subject," "The

number of times the headmaster sat in on the teacher's class in detail," and "Does the classroom meet the needs," had significant differences in the effectiveness of teaching moral and social course. Among them, "female teacher," "few subjects taught," "highly educated," "participating in high-level training," "often studying how to teach," and "actively listen to courses taught by other teachers" have a significant impact on the teaching results of moral and social courses.

The teaching of moral and social courses focuses on the influence and shaping of students' inner world, so teachers should pay attention to the improvement of their own professional ability, to the accumulation and practice of their own knowledge in educational psychology, and to cognize the psychological world of primary school students at a more professional level to more accurately grasp the psychological development dynamics of primary school students and make teaching more effective (An, 2018). Second, due to the special nature of moral and social courses, teachers and their superiors need to eliminate the influence of exam-oriented education, grasp the core of moral and social courses, and pay more attention to students' inner perceptions and experiences. Finally, it is also important to pay attention to the teachers' work environment. Students are infected by their teachers' every word and deed from the day they start school, so they may imitate their teachers' practices in dealing with people (Tu, 2018). Therefore, teachers should be strict with themselves to create a positive and good environment for their students. At the same time, the course teaching evaluation index system needs to be continuously improved to make students interested in learning and to better develop their learning ability (Dong, 2015).

## **COMPETING INTERESTS**

The authors of this publication declare there is no conflict of interest.

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