



## Teaching reform and practice of general courses in universities of science and engineering ----- Take the course "Practical Image Etiquette" for example

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**Abstract:** In view of society's desire for diverse talents, especially in the context of increasing cross-cultural communication and teamwork, science and engineering college students need to cultivate professional knowledge and etiquette communication skills. At present, etiquette communication education is still insufficient in the science and engineering education system, the curriculum is theoretical, the teaching method is single, and it fails to meet the increasing practical and interactive needs of students. The social and students' expectations for the ability to communicate etiquette are aligned, highlighting the urgency of reform. This paper advocates integrating general etiquette courses into science and engineering education in order to improve students' social skills and professional quality. This paper puts forward a series of teaching reform strategies. Advocate flipped classroom, the use of multimedia technology to enhance the dynamic and participatory teaching. Situational simulation and role-playing activities are designed to enable students to learn and master etiquette rules in practice. In addition, it promotes the use of interactive learning platforms to create continuous online discussion and learning Spaces. At the same time, strengthen cooperation with enterprises to provide practical opportunities for students, so that theoretical knowledge and practical needs are closely connected. The professional development of teachers should not be neglected, and the teaching concept and method should be updated through regular training to ensure the quality of education. Establish a sound evaluation and feedback mechanism to monitor the effectiveness of reform and continuously optimize teaching strategies. Through the above reform measures, the aim is to create a student-centered etiquette communication education model with equal emphasis on theory and practice, in order to cultivate science and engineering talents who can not only cope with scientific and technological challenges, but also have good interpersonal skills, and meet the diversified needs of society. The research results and suggestions of this paper not only have practical significance for the curriculum reform of science and engineering schools, but also provide a new perspective for the humanities quality education in the field of higher education.

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In the tide of globalization and information technology, the society has an increasing demand for interdisciplinary talents, especially for science and engineering college students who are both professional and good at communication. With the frequent international exchanges and the increase of cross-cultural team cooperation, science and engineering students not only need to master solid scientific and technological knowledge, but also need to have good communication etiquette, so as to enhance their competitiveness and adaptability in the workplace. However, in the current science and engineering education system, etiquette communication education is often neglected, resulting in students' relatively weak ability in interpersonal communication, which not only affects the overall

development of individuals, but also fails to fully meet the diversified needs of society. Under the background of general education, universities of science and engineering are generally faced with the challenge of how to integrate humanistic quality education into professional education. Although the concept of general education has been widely recognized, there are still many difficulties in the concrete implementation, such as the provision of teachers and curriculum. For example, many science and engineering colleges are relatively short of teachers in the field of humanities and social sciences, which makes the etiquette communication course in general education unable to be fully guaranteed. In addition, many science and engineering professors do not have a deep enough understanding of general education,

resulting in a disconnect between the teaching methods and content and actual needs, and students' participation in etiquette communication courses is not high. On the other hand, despite the increasing demand of students for etiquette communication skills, the existing curriculum system has failed to respond effectively to this demand. The curriculum is too theoretical, lack of practice and interaction, which makes it difficult for students to convert theoretical knowledge into practical operation in the learning process, thus affecting the learning effect. At the same time, the evaluation of science and engineering graduates by enterprises and society also reflects the lack of etiquette communication ability, which echoes the expectation of students themselves to improve such ability, showing the urgency of etiquette communication education reform. Therefore, the purpose of this study is to explore how to effectively integrate general courses of etiquette communication into science and engineering education, so as to make up for the shortcomings of humanistic quality education in the existing education system. Through the reform of teaching methods, such as the use of flipped classroom, multimedia teaching, situational simulation and role playing, the aim is to improve the interest and practicality of teaching, encourage students to participate actively, and thus improve their social skills and professional quality. At the same time, the interactive learning platform should be built and the cooperation with enterprises should be strengthened, and the theoretical knowledge and practical needs should be closely combined, so that students can learn etiquette in a real communication environment, in order to cultivate composite science and engineering talents who can not only cope with scientific and technological challenges, but also have good interpersonal skills to meet the diversified needs of society.

## **The importance of etiquette communication education**

### **1. Social demand and talent quality**

The rapid development of society and the process of globalization have put forward new requirements for the quality of talents. Especially in today's ever-changing science and technology, college students of science and engineering should not only master exquisite scientific and technological knowledge, but also have the ability of efficient communication and cross-cultural communication, so as to adapt to the increasing international competitiveness. Society's demand for talents is no longer limited to a single professional skill, but tends to the comprehensive development of compound talents. In this context, the importance of etiquette communication education has become increasingly prominent, and it is a key

component of shaping the comprehensive quality of talents. With the advancement of globalization and internationalization, the cooperation between enterprises has become increasingly close, and cross-cultural team collaboration has become the norm. In the future workplace, science and engineering college students are not only likely to cooperate with their own counterparts, but also likely to work with experts from around the world to solve complex technical problems. This requires them not only to have deep professional knowledge, but also to understand and respect different cultural customs and learn to communicate effectively to ensure the efficiency and harmony of team cooperation. Therefore, the expectations of science and engineering graduates are no longer limited to the technical level, they want these graduates to be comfortable in a multicultural environment, demonstrate high communication skills and etiquette. At the same time, the social evaluation system is also quietly changing. In the evaluation of science and engineering graduates, in addition to professional skills, society also increasingly values their humanistic qualities, especially communication skills and etiquette knowledge. A science and engineering graduate who can properly show himself, respect others, and effectively deal with interpersonal relations is often able to stand out in the job market and be favored by employers. This not only affects graduates' employment prospects, but also has a profound impact on their career development, as excellent communication skills and decent etiquette often mean stronger teamwork skills, better project execution efficiency, and broader career development opportunities. On the other hand, students' personal development needs are also calling for the reform of etiquette communication education. With the change of educational concept. Students are no longer satisfied with passively receiving knowledge, they are eager to acquire skills through practice and improve their abilities through interaction, rather than just listening to theories in class. They expect to be exposed to real social situations on campus so that they can quickly adapt to the workplace environment after graduation. Therefore, it is an important way to meet the needs of students and enhance their competitiveness to integrate general etiquette courses, adopt flipped classroom, multimedia teaching, situational simulation and role playing, and let students learn and improve in practice. The needs of society, the expectations of enterprises and the personal development needs of students are all promoting the reform of science and engineering education, and taking etiquette communication education as an important link in shaping all-round talents. Through comprehensive, practical teaching methods, science and engineering students can not

only improve communication skills, but also enhance cross-cultural understanding and cultivate good professional literacy, so as to better cope with the diversified challenges of society.

## 2. Analysis of current situation of science and engineering education

Although science and engineering education has made remarkable achievements in science and technology innovation, it has been relatively weak in etiquette communication education for a long time. The formation of this situation is not only due to historical reasons, but also closely related to the practical challenges of the education system. Science and technology colleges and universities are usually oriented by science and technology, emphasizing the teaching of professional knowledge and the training of experimental skills, and investing relatively little in the education of humanities and social sciences. This leads to the lack of teachers in etiquette communication education. Many science and engineering teachers may lack in-depth professional training in communication skills and cultural understanding, and it is difficult to provide high-quality etiquette education courses. The theoretical tendency in the curriculum is a major feature of the current science and engineering education. Etiquette communication courses are often classified as part of general education rather than professional core courses, so they may be at a disadvantage in course weight and teaching resource allocation. The content of the course focuses on theoretical explanation, and lacks case analysis and interactive practice of practical application, which makes it difficult for students to convert what they have learned into practical communication skills in the learning process. Moreover, the uniformity of teaching and learning methods is also one of the problems. Traditional teacher-centered teaching lacks students' active participation and interaction. This model may be effective in teaching complex scientific knowledge, but for improving etiquette communication skills, it often fails to stimulate the interest of students, so that students can experience and learn in simulated situations. Although there is a growing need for students to improve their etiquette communication skills, existing teaching strategies have failed to respond adequately. Students want the curriculum to be more practical, more practical and interactive, but the current curriculum design and teaching methods are not enough to meet these needs. The evaluation of science and engineering graduates by enterprises and society reflects the lack of etiquette communication skills, which is in sharp contrast to students' expectations for their own ability improvement, highlighting the need for reform. In order to solve

these problems, science and engineering education needs to reform in the curriculum, teaching methods and teacher training, so as to ensure that etiquette communication education can pay equal attention to professional knowledge education. For example, by setting up special etiquette communication general courses, introducing teachers with rich practical experience, and adopting teaching means such as flipped classroom, multimedia technology and situational simulation, students can learn and practice etiquette in simulated social scenes. At the same time, we cooperate with enterprises to provide internship and practical opportunities for students, so that they can apply what they have learned in a real environment and improve their communication skills. Through these reform measures, science and engineering education will be better able to produce future leaders who adapt to multicultural environments and have excellent communication skills.

## Teaching reform strategy and method

### 1. Flipped classroom and multimedia teaching

1. The application of flipped classroom and multimedia teaching in etiquette communication education is an important strategy to reform the general education of science and engineering. Flipped classroom, a teaching model, subverts the traditional teaching model. It transfers theoretical explanation to pre-class, and enables students to independently learn basic knowledge before class through multimedia resources such as videos, PPT and online tutorials, while classroom time is used for discussion, practice and deep learning. In etiquette communication education, flipped classroom provides a more flexible learning space, and students can learn basic etiquette knowledge at their own pace, such as business etiquette, table etiquette, and norms of behavior in public places, so as to improve practical communication skills more targeted in class. The introduction of multimedia teaching makes etiquette education more attractive and interactive. Through multimedia means such as animation, video, audio and interactive software, various etiquette scenes can be vividly displayed to help students intuitively understand the norms of behavior in different situations. For example, by watching video presentations, students can observe the correct behavior in meetings, banquets, interviews, and at the same time, they can practice and evaluate their own performance through simulation software, so as to constantly revise and improve in the virtual environment. Multimedia teaching can also promote personalized learning. Students can choose different learning paths according to their interests and needs, for example, science and engineering students who are interested in international communication can focus

on cross-cultural etiquette, while students who are more concerned about career preparation can focus on business etiquette. In this way, students can find their own interest points in the learning process and participate more actively, thus improving the learning effect. In order to support flipped classroom and multimedia teaching, schools should provide necessary hardware facilities and software resources, such as upgrading network facilities to ensure that students can smoothly watch online teaching videos, purchase or develop interactive learning software, and establish a systematic resource library to facilitate teachers and students to obtain the latest etiquette education resources. The role of teachers also needs to change to that of facilitators and facilitators of learning, who need to design effective pre-class learning tasks, organize class discussions, and provide personalized feedback and guidance. The combination of flipped classroom and multimedia teaching can not only satisfy students' desire for practice and interaction, but also help teachers devote more energy to paying attention to students' individual differences and providing personalized guidance. The reform of this teaching mode makes the etiquette communication education closer to reality, and helps the students of science and engineering to improve their interpersonal skills while mastering professional knowledge, so as to meet the needs of the society for compound talents.

## 2. Situational simulation and role play

Situational simulation and role playing are effective teaching methods to improve the etiquette communication ability of science and engineering college students. By creating a realistic communication environment, they allow students to learn and apply etiquette knowledge in practical operations, thereby deepening understanding, enhancing memory, and developing practical social skills. This approach encourages students to move from theoretical learning to practical application, enabling them to be comfortable in different situations and demonstrate good professional literacy. Situational simulation activities usually involve a series of elaborate scenarios, such as business meetings, academic seminars, social gatherings, etc., in which students are asked to play specific roles and follow specific etiquette rules. For example, in simulated business negotiations, students play the role of buyer and seller respectively, and through role-playing, they can learn how to ask politely, how to respond effectively to the other side, how to remain professional in negotiations, and how to have appropriate social interactions after the negotiation is over. This immersive learning experience allows students to experience the real scene in the simulation, so as to better grasp the etiquette knowledge. Role-

playing is more personalized, allowing students to play freely in set situations and create their own communication strategies. For example, in a scenario simulating an international academic conference, students may need to choose a foreign language to introduce themselves and participate in a discussion of professional topics in a group discussion. Role-playing activities encourage students to experiment and innovate in a safe environment, learn from mistakes and gradually build confidence in their performance in different situations. In order to implement situational simulation and role play, teachers need to carefully design activities to ensure that each link closely revolves around the core content of etiquette communication, while taking into account the abilities and needs of different students to ensure that the activities are challenging and adaptable

Sex. The role of teachers will change to that of observers and instructors who will need to provide immediate feedback during activities to help students identify and correct mistakes, while also encouraging them to think and analyze the reasons behind their actions to promote deep social understanding. With the help of multimedia technology, situation simulation and role playing can further enhance the interactivity and fun. For example, virtual reality technology can be used to create holographic conference scenes that allow students to practice in a realistic environment. Alternatively, remote role-playing through online platforms allows students to interact with classmates from different regions, which not only helps to improve their intercultural communication skills, but also exercises their network communication skills. Situational simulation and role play enable science and engineering college students to learn and interact in practice by providing real communication experience

Improving their etiquette and communication skills, thereby cultivating their adaptability and flexibility, will not only help them succeed in academia and the workplace, but also lay a solid foundation for building harmonious interpersonal relationships in a globalized society. Such a teaching reform strategy will undoubtedly inject new vitality into science and engineering education, promote the all-round development of students, and better adapt to the diversified needs of society.

## Implementation and evaluation of teaching reform

### 1. Implement policies and procedures

To carry out the reform of etiquette general education, we should first make structural adjustment to the existing curriculum system to ensure that etiquette communication courses occupy an appropriate position in general education. This means putting enough weight on the curriculum to ensure that students have enough time and opportunities to learn

and practice these key skills. At the same time, schools should set up special etiquette communication courses to cover students of different grades and majors to meet their diverse learning needs. The construction of teaching staff is the key to reform. Universities of science and technology should actively introduce or train teachers with deep background in the field of etiquette communication, or arrange existing teachers to participate in professional training to improve their humanistic quality and teaching ability. In addition, you can invite business mentors, industry experts or social etiquette experts to give regular lectures or guidance to ensure that the teaching content is closely connected with the actual needs.

## 2. Practice of diversified teaching methods

The implementation of flipped classroom requires the establishment of high-quality online course resources, including explanation videos, case studies, interactive exercises, etc., for students to preview before class. At the same time, class time should be based on group discussion, role play and situational simulation, so that students can learn and use etiquette knowledge in practical operation. The role of the teacher will change to that of a mentor, providing real-time feedback and solving problems that students encounter in practice. The application of multimedia teaching is not limited to video and audio, but can also include interactive software, simulation software, virtual reality, etc., to enhance the fun and immersion of teaching. Teachers should encourage students to use these tools for self-assessment and improvement, so as to improve the initiative and effectiveness of learning.

## 3. Construction of interactive learning platform

Schools should establish dedicated online learning platforms with forums, discussion boards and collaboration tools to allow students to communicate and collaborate in and out of class. The platform can include features such as course resources, assignment submissions, discussion topics, and online tests to facilitate students' autonomous learning and peer assistance. At the same time, teachers can use the platform to collect feedback from students and adjust teaching strategies in time.

## 4. Expansion of cooperation and practical opportunities

Schools should cooperate with enterprises and institutions to provide opportunities for students to experience and apply etiquette communication skills in a real workplace environment, such as internships, visits, internship programs, etc. Enterprise cooperation not only helps students understand the practical application scenarios of theoretical knowledge, but

also broadens their vision and improves their problem-solving ability.

## 5. Support for teacher professional development

Schools should set up regular teacher training programs, pay attention to the professional development of etiquette communication education, and update teaching concepts and methods. This includes seminars, workshops, and online courses to help teachers improve their teaching skills and keep abreast of the latest etiquette research and practice.

## 6. Establishment of evaluation and feedback mechanism

In order to monitor the effectiveness of the reform, a comprehensive evaluation system should be established, including student satisfaction surveys, assessment of learning outcomes, and feedback from teachers. Through regular evaluation, we can understand the effect of teaching reform and adjust teaching strategies in time. At the same time, feedback from students and teachers is introduced to continuously optimize course content and teaching methods.

## 7. Continuous reflection and improvement

Teaching reform is an iterative process. Schools should encourage teachers and students to actively participate in teaching reflection, find and solve problems in the implementation process, and continuously optimize the teaching mode. At the same time, pay attention to the latest research on etiquette communication education at home and abroad, and introduce new teaching concepts and technologies in a timely manner to ensure that the curriculum is forward-looking and effective. Through this series of implementation strategies and steps, the university of Science and technology will be able to effectively promote the reform of etiquette communication education, create a student-centered teaching environment that attaches equal importance to theory and practice, and train diversified science and engineering talents to meet the needs of society. Such reforms will not only enhance students' social skills, but also lay a solid humanistic foundation for their future careers and better serve the diversified development of society.

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