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Article

Impact of climate change on Chinese college students' consumption behavior: A case study of Jilin University

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Abstract: This study investigates the impact of climate change on the consumption behavior of Chinese college students, especially their daily expenses. Using a survey method, data were collected and analyzed to understand the correlation between climate change awareness and consumption choices among students at Jilin University. The findings indicate that over 70% of respondents believe climate change significantly affects their daily lives and consumption habits. Particularly, changes in transportation choices were most prominent, with 68% of students opting for greener travel options. However, less willingness was observed in reducing online shopping or paying carbon taxes. These insights highlight the need for tailored educational interventions to enhance climate change awareness and promote sustainable consumption practices among college students.

Keywords: climate change; consumption behavior; Chinese colleague students; sustainable consumption; environmental awareness

1. Introduction

In recent years, the frequency of climate change and extreme weather events has become a focal point of global concern. On 20 January 2021, the first day of his presidency, Joe Biden signed 17 executive orders, including the re-entry of the United States into the Paris Agreement. Signed on 12 December 2015 and effective from 4 November 2016, the Paris Agreement is a milestone international legal text addressing climate change. It follows the Kyoto Protocol as the second legally binding international climate agreement. The United States' return to the Paris Agreement reflects the international community's emphasis on climate change, a significant non-traditional security issue affecting various aspects of human life.

To mitigate and avoid the risks climate change poses to human society, international cooperation is imperative. The global framework for addressing climate change has steadily improved. In 1988, the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) jointly established the Intergovernmental Panel on Climate Change (IPCC) to provide objective and reliable scientific information for decision-makers and other scientific fields globally. Subsequent milestones include the 1992 Earth Summit's United Nations Framework Convention on Climate Change (UNFCCC), the 1997 Kyoto Protocol, and the 2015 Paris Agreement, showcasing the international community's determination to combat global climate change. Furthermore, sovereign nations have implemented numerous measures to promote emission reductions and climate governance. For example, during the Climate Ambition Summit in December 2020, UK Prime Minister Boris Johnson announced the cessation of direct support for overseas fossil fuel projects [1],

and in January 2021, President Biden's administration rejoined the Paris Agreement and revoked the Keystone XL pipeline permit. China has also been proactive in addressing climate change, as highlighted in the 2017 report of the 19th National Congress of the Communist Party of China. The report emphasized the necessity of building an ecological civilization and pursuing green development to contribute to global ecological security. At the Climate Ambition Summit in December 2020, China reaffirmed its support for the Paris Agreement, pledging to reduce carbon dioxide emissions per unit of its Gross Domestic Product (GDP) by over 65% from 2005 levels by 2030 and achieve carbon neutrality before 2060 [2].

Encouraged by national policies, concepts like "low-carbon economy," "low-carbon development," "low-carbon life," and "low-carbon campus" have emerged. China has enacted laws and policies to promote low-carbon lifestyles and green living, which are crucial given its population of over 1.4 billion as of 2019. Fostering green consumption and low-carbon habits among the populace can significantly impact both national and global climate governance.

Addressing climate change is a long-term, arduous task that requires sustained effort and accumulation. Targeting key groups for breakthroughs is a viable strategy. According to the National Bureau of Statistics, there were over 28.31 million students enrolled in higher education institutions in China in 2018, making them a pivotal group for shaping future consumption trends [3]. Enhancing college students' awareness of green consumption and guiding their behavior can foster a low-carbon, environmentally friendly consumption trend across society, contributing green wisdom to building a prosperous, democratic, civilized, harmonious, and beautiful socialist modern country. Therefore, educating college students about climate change is crucial for sustainable development and improving national climate change response capabilities. Research on contemporary college students' green consumption behavior is increasingly important. In order to explore the influence of climate change on college students' consumption behavior through their awareness of climate change, the impact on their low-carbon consumption behavior, and intervention strategies to guide them, this study follows the basic logic of Marxist epistemology, collecting questionnaires on the consumption status of students at Jilin University, analyzing the result, and drawing conclusions finally.

2. Literature review

Domestic and international scholars have focused on the unique group of college students in climate change studies. However, research directly addressing "the impact of climate change on college students' consumption behavior" is scarce. Studies primarily concentrate on "college students' awareness of climate change" and "intervention strategies to guide low-carbon consumption among college students." According to Marxist dialectical materialism epistemology, awareness influences practice, and practice is the goal and ultimate destination of awareness. College students' awareness of climate change affects their consumption behavior, and guiding them towards low-carbon consumption is the objective of studying the impact of climate change on their behavior.

2.1. College students' awareness of climate change

Empirical research on college students' awareness of climate change typically involves surveys to collect data samples and analyze the findings. For example, Pan et al. [4] surveyed undergraduates at Nanjing Agricultural University, assessing their awareness of climate change, attitudes towards actions, and willingness to act. They found significant awareness of the relationship between climate change and agriculture but noted variations across different aspects of climate change awareness and among students of different grades and majors. Individual students exhibited varied attitudes towards participation in climate change actions, with overall awareness and participation attitudes showing a weak correlation with grade levels. The study suggested enhancing climate change education in higher agricultural education institutions by introducing relevant courses.

Huang's [5] survey revealed that although college students were highly concerned about climate change, their understanding was superficial. While they were willing to contribute to mitigating climate change, actual implementation was limited, reflecting a "gap between knowledge and action." This discrepancy was attributed to a lack of systematic climate change education, prompting suggestions for improving students' awareness and behavioral capabilities regarding climate change. Chen and Xie's [6] study at Nanjing University of Information Science and Technology used questionnaires to survey 6643 students, analyzing the data with SPSS18.0 software. The binary logistic regression results indicated that students' awareness of the severity of climate change-induced environmental deterioration significantly influenced their willingness to act. They concluded that students with greater knowledge about climate change were more willing to take action, highlighting the importance of understanding the negative impacts of climate change in studying its influence on students' consumption behavior.

Internationally, Wachholz et al. [7] conducted a survey of freshmen and seniors at a university, exploring their awareness and attitudes towards climate change, intentions to reduce personal greenhouse gas emissions, and satisfaction with current climate change education. The majority acknowledged climate change as real and human-induced, expressing concern about its impacts. However, there were misconceptions about its basic causes and consequences, suggesting a need for higher education to enhance climate change education. Panno et al. [8] investigated the relationship between climate change perception and responsible environmental behavior, emphasizing the link between individual thinking styles and environmental awareness. Grothmann and Patt [9] developed the Model of Private Proactive Adaptation to Climate Change (MPPACC), exploring its effectiveness in explaining adaptive behaviors in German cities and Zimbabwean rural areas and discussing the feasibility of promoting adaptation through external interventions.

Overall, both Chinese and overseas scholars have conducted extensive research on college students' awareness of climate change, often supported by empirical studies. These studies indicate that there is still room for improvement in students' awareness, which influences their environmental actions. Guiding students towards low-carbon, environmentally friendly behavior can begin with enhancing their awareness, with higher education playing a crucial role.

2.2. Impact of climate change on college students' low-carbon consumption behavior

Scientific advancements and evidence increasingly support the view that "climate change is a scientific issue," not a "false proposition," and that human activities, particularly since the Industrial Revolution, have exacerbated climate change. Changing human behavior to mitigate or improve climate change is a common global challenge. The "low-carbon consumption" model has emerged, aiming to fundamentally reduce carbon emissions and promote sustainable development. College students, as a special group, have significant influence on society and the potential to become role models for low-carbon consumption. Domestic and international scholars have researched the impact of climate change on their behavior.

Li and Ma [10] surveyed MBA students at Northwestern Polytechnical University, using questionnaires, factor analysis, and regression analysis. They found that highly educated youth are more likely to be green consumers, willing to pay higher prices for green products. This aligns with Zhao et al.'s [11] study on students' willingness to pay for carbon-labeled food, indicating that students are willing to accept a premium for such products. Wang [12] highlighted the issue of energy utilization in universities, noting prevalent wasteful practices like leaving lights and water running, using disposable utensils, and food wastage. Zhu and Zhang's [13] survey of 120 students from several universities in Nanjing and Yangzhou found that students lacked sufficient attention to environmental and sustainable development issues, exhibiting poor consumption habits such as excessive consumption, conspicuous consumption, one-time use, and convenience consumption, leading to significant pollution and waste.

Internationally, Toma et al. [14] studied energy consumption among students at the University of Bucharest, noting the need for students to recognize their residential electricity consumption's impact on the grid and participate in creating sustainable local energy communities. This mirrors Liu's [15] findings on electricity waste in Chinese universities, suggesting designing responsive systems to improve classroom utilization and promote low-carbon campuses.

In summary, research on college students' consumption habits reveals widespread deficiencies in low-carbon consumption, with students showing potential to be role models but low-carbon consumption not yet mainstream. Their consumption habits require further improvement.

2.3. Intervention strategies to guide low-carbon consumption among college students

Given the importance of college students' low-carbon consumption behavior for societal low-carbon development, guiding them towards such practices is essential. Domestic and international scholars have explored various strategies, focusing on internal factors (cultivating climate crisis awareness and environmental consciousness) and external factors (school, corporate, and government policy interventions).

Cultivating climate crisis awareness is crucial for guiding low-carbon consumption. Educational institutions play a significant role. For example, Sinatra et

al. [16] designed an experiment where students read a persuasive article on human-induced climate change, leading to statistically significant changes in their attitudes and willingness to act. Liu [17] emphasized the importance of incorporating environmental management courses into all university curricula and suggested campus activities and technical measures to promote low-carbon behavior. Family influence is also significant, with environmentally conscious families better able to guide students' low-carbon habits [3]. Schools, as core institutions, can utilize various means to encourage low-carbon practices. Successful examples include the "Environmental Learning Institute" at universities, encouraging students to participate in environmental protection and volunteering activities. Schools can also adopt low-carbon construction and green campus projects. Corporate and governmental policies are also critical. Integrating government regulation with corporate social responsibility can lead to broader changes in consumption behavior. For example, initiatives like carbon labeling and carbon credits can incentivize low-carbon practices [18].

In conclusion, the theoretical foundation and empirical studies suggest that climate change awareness and targeted interventions can significantly influence college students' consumption behavior. Comprehensive strategies involving education, institutional policies, and broader societal measures are essential for promoting low-carbon consumption among students.

3. Methodology

Despite the geographical dispersion and varied living and learning environments of Chinese college students across China, this demographic exhibit notable similarities. For instance, students within the same academic year are generally of similar age, and teaching methodologies are consistent across institutions. Furthermore, universities often enroll students from diverse provinces, making it feasible to conduct a representative study within a single university.

This study was conducted at Jilin University in northeast China using an online questionnaire targeted at undergraduate, master's, and doctoral students. The questionnaire design drew on the New Ecological Paradigm scale developed by Cotton et al. [19]. The questionnaire was refined to address the specific focus areas and characteristics of this study's target population. It included objective questions such as single-choice, multiple-choice, and Likert scale items, as well as subjective questions like fill-in-the-blank and open-ended responses. To accommodate both domestic and international students, the questionnaire was bilingual in Chinese and English. To protect respondents' privacy, all questionnaires were anonymous.

Survey design

The questionnaire design (see Appendix) was informed by the New Ecological Paradigm scale by Professor Debby Cotton from Plymouth Marjon University, covering four main areas: sample characteristics, knowledge, attitudes, and actions. Fifteen questions were developed, including two on sample characteristics (see **Table 1**), two on knowledge (see **Table 2**), five on attitudes, five on actions, and one screening question for effective responses.

Table 1. Sample characteristics.

Question	Result
What is your gender?	Male
	48.48%
What is your academic year?	Freshman
	7.58%

Knowledge-Related Questions:

Table 2. Knowledge-related questions.

Question	Options	Results
Are you aware of climate change?	Very aware	Very aware
	4.55%	51.52%
Through which medium do you mainly learn about climate change?	School education	Discussion with friends and family
	22.73%	6.06%

Attitude-related questions:

1) Do you think climate change impacts the daily lives of college students?
2) Do you think climate change affects the consumption behavior of college students?
3) In what ways do you believe climate change influences the consumption behavior of college students?
4) Do you think it is necessary to offer courses on low-carbon consumption concepts in universities?
5) Have you ever attended a course on low-carbon consumption concepts during your university studies? If so, did it benefit you?

Action-related questions

6) What methods do you think can be used to instill low-carbon consumption concepts in college students?
7) Which of the following low-carbon consumption practices are you willing to adopt? (Multiple choices allowed)
8) If you notice behaviors around you that contradict low-carbon consumption principles, what would you do?
9) On 1 January 2021, the "Plastic Straw Ban" was officially implemented, prohibiting the use of non-degradable disposable plastic tableware in the catering industry. What is your opinion on this regulation and the introduction of alternatives like "paper straws" and "wooden spoons"?
10) What suggestions do you have for guiding college students towards low-carbon consumption?

After collecting questionnaires, we confirmed the number of questionnaires, sorted out and counted the questionnaire responses, and removed the invalid data. We then classified the available data by type of problem for subsequent data analysis. Finally, the proportion is calculated according to the results of various types of questions.

4. Data analysis and results

This survey collected a total of 70 questionnaires, with 66 valid and 4 invalid responses, resulting in an effective response rate of 94.3%, which meets statistical requirements. The selection of respondents was random, comprising 63 undergraduates (5 freshmen, 9 sophomores, 42 juniors, 7 seniors), 2 master's students, and 1 doctoral student.

4.1. Awareness and understanding of climate change among college students

Awareness influences practice and affects decision-making. College students' perception of the climate crisis and awareness of low-carbon consumption significantly impact their behavior. The influence of climate change on students' consumption behavior heavily relies on their awareness and understanding of the climate crisis. Therefore, promoting low-carbon consumption on campuses requires a high level of awareness and rational understanding of the current climate situation among students. This study designed four questions to assess students' awareness and understanding of climate change, considering their perception of environmental changes and extreme weather phenomena. **Table 3** is based on our collected results from interviewees, which show students' awareness and understanding of the climate change issue. The following part will introduce more detail about the results and findings.

Table 3. Awareness and understanding on climate change.

Awareness		**Supportive policies for public low-carbon consumption**		**Understanding**	
Non-low-carbon consumption behaviors	69.7%	Support	69.69%	Fairly knowledgeable	51.52%
Promoting low-carbon consumption concepts	24.24%	Opposition	25.76%	Not very knowledgeable	43.94%
Others	6.06%	Strong opposition	4.55%	Very knowledgeable	4.54%

From the perspective of awareness, it can be further divided into attitudes toward non-low carbon consumption behaviors and attitudes toward promoting low carbon consumption concepts. According to the survey data, 69.7% of respondents would choose to remain silent and reflect on the behavior of others violating low-carbon principles, 24.24% would dissuade others and try to influence them towards low-carbon consumption through their actions, and only one person would join others in violating low-carbon principles. However, attitudes toward supportive policies for public low-carbon consumption were less consistent. 69.69% supported such policies, while 25.76% viewed the "plastic straw ban" as more detrimental than beneficial. Two students expressed strong opposition to paper straws, citing significant functional and sensory drawbacks.

Thus, students at Jilin University exhibit a certain level of awareness regarding the severe consequences of climate change and generally recognize and support appropriate consumption concepts to combat it. However, the attitudes expressed in some responses suggest that overall awareness is still at a lower stage, characterized by insensitivity to current climate deterioration and a low level of proactive

engagement. Without heightened awareness, students will struggle to genuinely practice low-carbon consumption principles.

From the understanding perspective, it can be further divided into the level of understanding of the current state of climate change and the methods of understanding it. The results show that 51.52% of respondents consider themselves fairly knowledgeable about climate change, 43.94% are not very knowledgeable, a small number claim to be very knowledgeable, and none consider themselves completely uninformed. Analysis of student demographics reveals that freshmen, sophomores, master's, and doctoral students generally rate their understanding highly, while more than half of juniors and seniors feel their understanding is insufficient. In terms of information sources, freshmen, master's, and doctoral students primarily use the internet and school education, with school education being more significant than in other years. Sophomores, juniors, and seniors also rely on discussions with friends and family and print media.

These findings indicate significant differences in the self-perceived understanding of climate change and preferred information sources among students of different academic years. These differences may correlate with education levels, suggesting that intervention strategies should be tailored to the educational backgrounds and preferences of different student groups to enhance their understanding and promote low-carbon consumption behavior.

4.2. Impact of climate change on low-carbon consumption behavior of college students

The impact of climate change on students extends beyond psychological awareness to manifest in specific behavioral changes. To verify whether climate change influences students' consumption choices, the study analyzed the relationship between the two through four questionnaire items. The results provide theoretical support for proposing recommendations to promote low-carbon consumption among students.

First, the influence of climate change on students' daily lives and consumption choices shows a consistent trend. Over 70% believe that climate change significantly impacts life and consumption on campus (both questions scored a mode of 7 on the Likert scale, indicating a high level of impact).

Second, climate change prompts students to engage in low-carbon consumption behaviors across clothing, food, housing, and transportation, though the extent varies. The survey indicates that changes in transportation behavior are most significant, with 68% willing to adopt green travel options to combat climate change. Additionally, nearly half support considering energy consumption as an important factor when purchasing products.

However, there are less optimistic aspects: only 36% believe that understanding climate change effectively promotes energy and water conservation, and although students recognize the benefits of low-carbon products, they are reluctant to restrict their choices significantly. Only 8% are willing to pay a carbon tax, and just 12% believe reducing online shopping can effectively contribute to environmental efforts.

Lastly, acceptance of specific low-carbon consumption methods varies. Over

60% are willing to sacrifice some personal satisfaction in clothing, utilities, and transportation for low-carbon consumption, but only 19.7% are willing to make dietary compromises. Some explicitly oppose replacing meat with soy products, indicating a need for nuanced evaluations of low-carbon methods to ensure practicality and acceptance.

4.3. Coping strategies and recommendations

The analysis of survey results highlights the positive impact of awareness and understanding of climate change on promoting low-carbon consumption among students. To externalize internal awareness and understanding, it is essential to deepen students' comprehension of climate change through diverse and enriched educational channels, catering to different student groups' characteristics and preferences.

Universities are uniquely positioned to educate all students on the importance and methods of low-carbon consumption through coursework. This study designed questions on the necessity and expectations of such courses. Results show 71.21% support the idea, though only 33.33% have received relevant training, predominantly favoring practical, life-related content. All surveyed freshmen had no course exposure, while most master's and doctoral students had received relevant education.

These findings suggest two main deficiencies: limited accessibility of low-carbon consumption courses and delayed course offerings mainly to upperclassmen. To ensure comprehensive and deep understanding among all students, courses should be compulsory, preferably integrated into the freshman curriculum as foundational courses.

Additionally, this study collected open-ended responses for broader suggestions, such as reducing unnecessary purchases, setting credit or item exchange rewards for low-carbon behaviors, and installing low-carbon consumption reminders on campus. Effective low-carbon consumption among students requires a multifaceted approach involving self-awareness, educational curriculum, campus culture, and supportive policies.

5. Conclusion and discussion

This study, using Jilin University in China as an example, investigates college students' awareness and understanding of climate change, their consumption concepts and behaviors, and the correlation between these factors. From a theoretical perspective, it is clear that awareness and cognition are prerequisites for behavior and significantly influence students' willingness to adopt low-carbon consumption practices. This understanding can effectively promote the implementation of low-carbon consumption concepts in university settings.

Additionally, given that school education is a primary means of helping students develop low-carbon consumption views, this research examines the current status of low-carbon consumption knowledge courses within the university education system. It also assesses students' understanding and satisfaction regarding the purpose and significance of these courses. Based on the survey results, feasible strategies and recommendations for students' specific consumption behaviors in response to climate change are proposed:

5.1. Current awareness and understanding of climate change among college students

- High Level of Awareness: College students generally exhibit a high level of concern about recent climate changes, make relatively accurate judgments, and possess rational cognition.
- Understanding the Current Situation: Students have a certain degree of understanding of the current state of climate change, its causes, and its negative impacts. This may be related to the higher educational level and cultural literacy of the student group. However, the overall level of understanding and cognition remains low, and the knowledge system lacks comprehensiveness.
- Education Background Impact: Graduate students (master's and doctoral) generally have a higher level of understanding of climate change compared to undergraduates, indicating that the higher the education level, the greater the awareness and more rational the cognition of climate change.

5.2. Impact of climate change on college students' low-carbon consumption behavior

- Correlation with Awareness: There is a correlation between students' willingness to choose low-carbon consumption and their understanding of climate change. The higher the level of understanding, the more inclined they are to accept low-carbon consumption.
- Behavioral Variations: Students' low-carbon consumption behaviors are evident in clothing, food, housing, and transportation. However, their willingness to adopt low-carbon practices varies across these aspects. Most students are willing to practice low-carbon principles in clothing and daily necessities, but fewer are willing to do so in food consumption. Therefore, promoting low-carbon consumption should balance pros and cons, encouraging thrift in clothing and daily use while avoiding dogmatic approaches that force compromises in food consumption.

5.3. Guiding college students to establish low-carbon consumption concepts

- Role of Educational Courses: School courses related to climate change are not only crucial for enhancing students' awareness and understanding of the issue but also for formalizing their cognition of low-carbon consumption concepts.
- Broad Implementation: Establishing low-carbon consumption views through school education is essential for the widespread adoption of low-carbon consumption concepts within campuses.
- Collaborative Efforts: Promoting low-carbon consumption concepts and encouraging low-carbon consumption behaviors in universities require the collaboration of students, educational departments, campus management, and national education policymakers. It is the result of comprehensive efforts from multiple sectors.

In a nutshell, this research highlights the importance of increasing students' awareness and understanding of climate change as a foundation for promoting low-

carbon consumption behaviors. It also emphasizes the critical role of education and the need for a multi-faceted approach to achieve widespread adoption of low-carbon consumption practices in university settings. However, there are still shortcomings in the article. One is the lack of using quantitative methods in the data analysis part, which makes the illustration seem unconvincing. The other is that the paper does not use any social psychological theories or hypotheses about behavioral factors, which leads to a lack of scientific and theoretical depth. The authors will take them into account for the future study.

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Appendix

Survey questionnaire a questionnaire survey on the impact of climate change on college students' consumption behavior

Dear friends,

Greetings! We are undergraduate students from Jilin University. It has been a while since we left campus; how have you been spending your time? As the Spring Festival approaches, we take this opportunity to extend our sincere regards to you. It is widely recognized that climate change profoundly affects our daily lives. In order to gain deeper insights into the impact of climate change on college students' consumption behavior, we are conducting a survey titled "The Impact of Climate Change on College Students' Consumption Behavior" using Jilin University as a sample. Our questionnaire will be completed anonymously, and we assure you that your personal information, preferences, and responses will remain confidential. The data collected will be used solely for the purposes of concluding and analyzing this survey report. We sincerely appreciate your assistance and hope that, together, we can contribute to global climate governance.

- Your Gender (Select one)
  - A. Male B. Female
- Your Grade Level (Select one)
  - A. Freshman B. Sophomore C. Junior D. Senior E. Graduate student F. Doctoral student
- How much do you know about climate change? (Select one)
  - A. A lot B. Quite a bit C. Not much D. Nothing
- How do you learn about climate change? (Select one)
  - A. School education B. From friends and relatives C. Newspaper and magazine D. From the Internet
- Do you think climate change affects college students' daily life? If yes, please rate the extent of its impact (Scale of 1 to 10).
- Do you think climate change affects college students' consumption behavior? If yes, please rate the extent of its impact (Scale of 1 to 10).
- In what aspects of college students' life do you think climate change affects consumption behavior? (Select all that apply)
  - A. Reduce the purchase of high-energy-consuming products B. Increase the purchase of environmentally friendly products C. Be more thrifty in daily life (e.g., buy fewer new clothes) D. Change dietary habits (e.g., less meat, more vegetables) E. Change means of transportation (e.g., use green transport) F. Save electricity G. Save water H. Buy products with a carbon tax I. Reduce online shopping J. Other changes (please specify)
- Do you think it is necessary to introduce courses promoting the concept of low-carbon consumption in universities? (Select one)
  - A. Yes B. No C. Not sure
- Have you attended any courses promoting low-carbon consumption during your university studies? If yes, has it been beneficial? If so, why? (Select all that apply)
- If you are answering this questionnaire seriously, please choose A. (Select one)
  - A. Global warming B. Rise of sea levels C. Destruction of the ozone layer D. Sharp decline in biodiversity
- How can college students establish a concept of low-carbon consumption? (Select all that apply)
  - A. Offering courses or lectures B. Carrying out low-carbon consumption activities (e.g., clothing recycling) C. Organizing low-carbon environmental knowledge quiz contests D. Other methods (please specify)
- Among the ways of low-carbon consumption listed below, which ones are you willing to accept? (Select all that apply)
- If you find others' behaviors contrary to the concept of low-carbon consumption, what would you do? (Select one)

- What do you think about the restaurant industry's ban on non-degradable disposable plastic utensils from 1 January 2021, and their replacement with degradable alternatives like paper straws and wooden spoons? (Select one)
- What suggestions do you have for guiding college students to engage in low-carbon consumption? (Open-ended)

Note: The original survey was conducted online via software and in Chinese, this is only a translation for the survey content.