

Cultivation of College Students' Low-Carbon Consumption Behaviours based on Mobile Education: A Behavioural View

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Abstract: With the increasing emphasis on sustainable development, low-carbon education has become an important work in colleges, emphasizing the practice of low-carbon life and letting students know that low-carbon is a good living habit. Under this guidance, the ideological and political workers in colleges need to combine education with low-carbon background, cultivate and develop their life planning, direction and values, which is of great and long-term significance to improve the living environment quality, moral quality and social responsibility of college students. We attempt to use the theory of behavioural science, starting from professor Fogg's behaviour model, with the convenience of digital tools in the internet era, focusing on the motivation improvement, difficulty reduction and trigger factors of low-carbon consumption of college students, to explore the path of using mobile education to do a good job in low-carbon education, hoping to provide innovative education methods and useful suggestions for ideological and political education in colleges.

1 INTRODUCTION

With the increasing emphasis on sustainable development, the concept of "low-carbon society" emerges as the times require. It means to create a low-carbon life, develop a low-carbon economy, cultivate a low-carbon cultural concept of sustainable development, green environmental protection and civilization, and form an "olive shaped" fair society with low-carbon consumption awareness. In colleges, low-carbon education has become an important work, emphasizing the practice of low-carbon life, so that students know that low-carbon is a good living habit. Under this guidance, the ideological and political workers in colleges need to combine education with low-carbon background, cultivate and develop their life planning, direction and values, which is of great and long-term significance to improve the living environment quality, moral quality and social responsibility of college students. In the context of college students becoming an important consumption force, it is more important to promote college students to form the concept of low-carbon consumption behavior. In the digital era, mobile education can help colleges better carry out this kind of low-carbon consumption education. From the perspective of behavioral science, this paper aims to explore how to effectively play the advantages of mobile education, promote low-carbon education of college students, and promote the formation of low-carbon consumption behavior of college students.

2 THE CONNOTATION OF LOW-CARBON CONSUMPTION AND LOW-CARBON EDUCATION IN COLLEGES

According to the report "Analysis of Low-Carbon Consumption Potential of Residents in Large Cities" in 2020, under the same circumstances, if domestic residents gradually change from the existing way of living to the corresponding low-carbon consumption mode, the per capita annual emission reduction of first and second tier cities with a population of more than 10 million in 2030 will reach at least 1.1 tons per person per year, The city can reduce its carbon emissions by at least 11 million tons a year through residents' choice of low-carbon consumption. Low-carbon consumption mode is a civilized, scientific and healthy ecological consumption mode, which is the responsibility of contemporary consumers to nature, society and future generations. Low-carbon consumption mode reflects people's mood, value and behavior, and represents the harmonious coexistence of human and nature, social economy and ecological environment.

Scholars have carried out a small amount of exploration on college students' low-carbon consumption behavior, and found that college students' low-carbon awareness directly affects their low-carbon behavior. According to the research on ecological footprint and ecological efficiency of college students, it was proposed that college students should be encouraged to consume moderately, reduce waste discharge, and jointly build a

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green campus. An empirical research on college students' low-carbon consumption behavior under the Internet economy shows that the network economy attracts college students to produce more non-low-carbon consumption behavior, and the monthly cost of living, low-carbon consumption behavior ability, consumption convenience, low-carbon consumption publicity and education, low-carbon consumption policy and other variables affect college students' low-carbon consumption behavior under the network economy.

Under the background of the popularity of smart phones in colleges, Wechat, Microblog and other app applications constitute the "micro space" of people's life. The huge amount of information provided by these applications potentially affects the information preference of contemporary college students, reshapes their perception and experience, and further affects their way of thinking and behavior[1]. On the one hand, college education needs to compete with the unbounded information on the mobile internet for the dominant power of shaping college students' behavior habits; on the other hand, the great convenience of mobile learning brought by smart phones also provides a good opportunity for university education to make good use of college students' fragmented time and scattered attention. Besides classroom education and communication between teachers and students, it also provides a good opportunity for college students to give full play to their learning autonomy and realize self-education through mobile learning[2]. The question is, where can we start from in order to fully tap the potential of mobile learning and improve the effect of low-carbon education? This study attempts to use the concept of behavioral science, starting from Professor Fogg's behavior model of Stanford University, to explore the path of using mobile education to do a good job in low-carbon education, hoping to provide some micro beneficial suggestions for the innovation of educational methods in Ideological and political education in colleges.

3 AN OVERVIEW OF FOGG'S BEHAVIOR MODEL

A behavior is influenced by many factors. Whether college students can form the habit of low-carbon consumption is also not a single factor. The behavior model proposed by Professor B. J. Fogg of Stanford University can help us analyze the behavior of college students and point out the direction of solving problems.

According to Fogg[3], behavior model, the change of human behavior is formed by the combination of motivation, ability and triggers. Without motivation, there is no willingness to change behavior; without the corresponding ability to change behavior, it means that the cost of changing behavior is too high and there will be no behavior change; in the case of both motivation and ability, it is necessary to remind the target at the right time before they enter the task of behavior change.

Fogg believes that, compared with motivation, the target object is more concerned about the cost of completing the task, so simplifying the process of the task

is an important way. Trigger factor refers to the user doing what he can at the right time and with the right motivation, which is mainly reflected in three types of triggers, namely spark, facilitator and signal. When the target object has the ability to implement the behavior, but the motivation is insufficient, specific sparks, such as text description, video, are used to stimulate the motivation; secondly, when the target object has motivation but thinks it is too difficult to complete the task, it can provide assistance to reduce the difficulty of behavior; thirdly, when the target object has both motivation and ability, it should release a signal at the right time to remind it to take action. Only when there are enough motivations, the ability to carry out behavior and the trigger factors of carrying out behavior at the same time, people's behavior will happen; if a behavior does not occur, at least one element is missing.

According to the two dimensions of motivation and ability of the target object, we can draw the Fogg behavior model as Figure 1. In the two-dimensional coordinate graph composed of motivation and ability, the behavior line is the combination of the matching points of motivation and ability. According to the success of triggering behavior, the coordinate graph is divided into two intervals with the behavior line as the dividing line; below the behavior line, it is an invalid trigger.

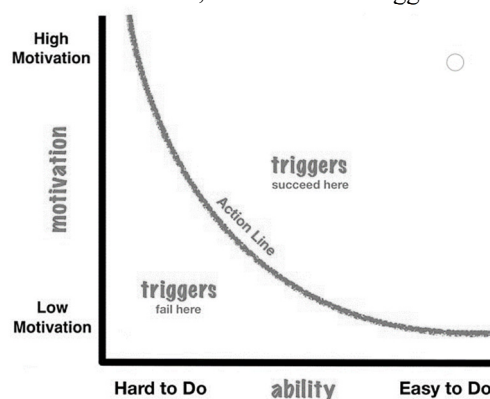


Figure 1. Fogg's behavior model

4 USING MOBILE EDUCATION TO CULTIVATE COLLEGE STUDENTS' LOW-CARBON CONSUMPTION BEHAVIOR: BASED ON FOGG MODEL

As Fogg behavior model reveals, the generation of a behavior needs motivation, ability and trigger factors at the same time. There are too many non-low-carbon behaviors in college students' consumption behavior. It can be considered that at least one of the above three factors to promote the implementation of low-carbon consumption behavior is insufficient, that is, lack of motivation, mismatching of consumption ability, or absence of trigger factors. We can use the way of mobile education, with the help of Wechat, Microblog, video website, intelligent application and other platforms that college students always pay attention to, strengthen the role of motivation, ability and trigger factors of low-carbon consumption, and help college students gradually reduce non-low-carbon consumption behavior and develop a low-carbon consumption mode.

4.1 Strengthen the network publicity to improve the motivation of low-carbon consumption

Learning from Schuck, et al.[4], in order to carry out low-carbon consumption mobile education with the help of the Internet and improve college students' low-carbon consumption motivation, one-way publicity and education should be avoided, and the principles of personalization, authenticity and social connection should be followed.

Individualization emphasizes students' customization of educational content and their sense of control over the process of receiving education. That is to say, with the help of the characteristics of different platforms, rich and diversified publicity and education materials should be provided, and the connotation, form, impact and other elements of low-carbon consumption should be presented in a more interesting form to attract students' attention. At the same time, students should have the right to choose how to learn and when to learn, and they should be able to control the rhythm, time and place, so that they can feel that they are the leader of learning activities and the undertaker of responsibility. Accordingly, let college students deeply perceive the long-term significance of low-carbon consumption, let low-carbon consumption deeply rooted in the hearts of the people, and gradually become the consensus of college students.

Authenticity emphasizes the combination of publicity and education with meaningful practical situations[5]. Only in this way can students truly feel the value of low-carbon consumption, and truly grasp the contribution of their participation in low-carbon consumption. The traditional ideological and political education in colleges is usually lacking in this aspect, which is less related to students' personal experience, which leads to the lack of enthusiasm of students. Therefore, it is necessary to combine college students' consumption scenes in real life to promote them to understand the essence of low-carbon consumption and realize "learning and using flexibly" in the real sense. In addition, colleges or competent departments can cooperate with e-commerce platform to convert low-carbon consumption behavior of college students into points, and then exchange points for low-carbon products, so as to turn low-carbon consumption into behavior that has certain economic benefits for college students.

Social connection emphasizes the formation of community through the connection of mobile intelligent devices[6]. Break the boundaries between physical space and virtual space, highlight the cooperation and discussion between students, so as to gradually form a driving role with the practice of some people. Because the influence of students as peers is far greater than that of teachers. Therefore, promoting the communication, joint discussion and cooperation between them to carry out low-carbon consumption can enhance the mutual influence and spiritual dialogue among students, and then form a culture.

4.2 Reducing the Difficulty of Low-carbon Consumption Implementation

It is very difficult to establish a new behavior pattern, which is also the reason why most of the propaganda of

behavior cultivation only plays a temporary stimulating role, and can't make the educational objects form long-term stable behavior habits[7]. Moreover, we need to pay attention to the fact that it is not always the same thing to make the education object feel that it is simple or not. No one really cares how hard it is before they do it. What they care about is how hard it looks. Therefore, when the motivation of education objects is not stable enough, we need to turn some difficult consumer behaviors into baby steps one after another, so as to help college students accumulate a lot of successful experience unconsciously, so it is not far from the next big change. For example, through the Internet community, we can mobilize college students to start from daily small things and implement low-carbon consumption, such as reducing takeout ordering, shopping by mail, supermarket shopping without shopping bags, green travel, so as to change consumption behavior bit by bit.

4.3 Cultivating Low-carbon Consumption Environment to Trigger Behaviours

The key to trigger college students' enthusiasm for low-carbon consumption is to construct students' sense of significance and value of low-carbon consumption. It is an effective way to give full play to students' initiative and explore the form of low-carbon consumption. For example, with the help of the Internet community, we can build a real consumption situation from real life in the form of projects, introduce students into it in the form of teams, give full play to students' autonomy, creativity and cooperation ability, and make them the main body to explore new forms of low-carbon consumption, help students to produce innovative and unique ideas for specific consumption scenarios.

5 Conclusion

Based on the above analysis, from the perspective of behavioral science, we can help college students form low-carbon consumption habits from three dimensions of motivation, ability and trigger factors with the help of Internet mobile education, so as to contribute to the national goal of "carbon neutral" and "carbon peak". Teachers can also play a role in this process, especially in the Internet community, but the effective role of teachers is no longer the traditional supervision and evaluation, but to participate in the role of interest lovers, so that college students can recognize them as experienced peers rather than teachers[8]. Through active communication with students, teachers can gradually guide and guide students Help students to explore the way and path of low-carbon consumption, correct the behavior of non-low-carbon consumption, so as to speed up the formation of students' habits.

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