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# Exploration of Teaching Reform and Innovation in Vocational Planting Majors Based on the Internet

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Abstract: The continuous development of the Internet not only has a huge impact on social production activities, but also gradually changes the conduct of education work. The implementation of teaching work in vocational planting majors is mainly aimed at conveying more agricultural talents to society. With the proposal of the "Internet+Modern Agriculture Action", vocational planting majors should also consider the impact of the Internet on teaching work and reform and innovate their teaching work. This article takes the teaching of secondary vocational planting majors as the research object. From the perspective of the Internet, based on a large number of relevant literature and previous teaching experience, it briefly introduces the current situation of secondary vocational planting majors teaching, and then proposes innovative measures for teaching reform of secondary vocational planting majors based on the Internet. It is expected to provide more ideas for the high-quality development of secondary vocational planting majors teaching work.

Keywords: Internet; Secondary vocational school; Planting majors; Teaching; Reform and innovation.

### 1. INTRODUCTION

China is a traditional agricultural country that requires a large number of agricultural talents. And now we are in the process of advancing towards agricultural modernization, and we need more modern agricultural talents as support to promote the reform and transformation of the agricultural economy. Vocational schools occupy an important position in China's agricultural education system, providing a large number of talents for agricultural development. Moreover, vocational colleges pay more attention to the cultivation of students' professional abilities and qualities. Through curriculum education and teaching, students can master more professional skills and contribute their professional value to agricultural development. In the context of the Internet, agriculture is also developing towards informatization. Therefore, higher requirements have been put forward for agricultural talents, who not only need to master professional agricultural knowledge, but also possess certain knowledge of internet agriculture. The current situation of teaching work in vocational planting majors is not optimistic, and teaching work should be reformed and innovated in combination with the needs of internet agriculture. This paper focuses on the predation strategy of dinosaurs with high IQ and sardines. The research focuses on the predator model based on search space and division of labor and its optimization. The main work is as follows: Firstly, this paper designs a kind of Particle swarm optimization algorithm based on predator search strategy. Secondly, in order to improve the particle swarm search range and avoid blind predation, a new particle swarm optimization algorithm based on division of labor is proposed. Finally, in order to further alleviate the problem that the particle swarm optimization algorithm has a slow convergence rate in the later stage, this paper uses the particle swarm optimization algorithm of dynamic search space to optimize.

# 2. CURRENT TEACHING SITUATION OF PLANTING MAJORS IN VOCATIONAL SCHOOLS

Throughout the teaching work of vocational planting majors, it can be found that there are still problems that cannot be ignored in the teaching work. Firstly, many vocational planting majors adopt outdated teaching models that cannot stimulate students' learning initiative. In the teaching of planting majors in vocational schools, both theoretical teaching and practical teaching cannot be lacking. Influenced by traditional curriculum teaching methods, many teachers still adopt a full classroom teaching method, lacking effective interaction between teachers and students. In this teaching mode, even if students have problems, they will not raise them in a timely manner, resulting in more and more problems accumulating. Ultimately, the difference between students' learning progress and teachers' teaching progress is becoming increasingly distant, seriously reducing the quality and efficiency of course learning. In practical teaching, students also lack active participation, and their overall learning enthusiasm and initiative are relatively low. In actual teaching work of secondary vocational planting

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majors, the teaching methods adopted by teachers are often relatively single, mainly to adopt fixed teaching methods to teach more knowledge within limited teaching time. Although it facilitates teaching management, students rarely participate in thinking activities in the classroom, ultimately limiting the improvement of learning efficiency [2]. Under the influence of a single teaching mode, the learning content mastered by students is relatively limited, and teachers have not unified theoretical and practical teaching, and have not provided corresponding practical platforms for students. It is also difficult for students to unify theory and practice in practical training courses. In addition, most vocational school students have a relatively weak foundation and lack correct learning concepts and methods. In the teaching of vocational planting majors, if teachers do not adopt effective teaching methods, it is difficult to attract students' interest in learning, and they are more likely to give up learning when encountering difficulties. Also Some vocational school teachers majoring in planting do not possess high literacy and relatively lack curriculum teaching experience, making it more difficult to proficiently apply internet technology to improve the effectiveness of curriculum teaching.

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# 2.1 Pre-Trial Program Diversion Function Is Not Obvious

With the drunk driving, false litigation, the use of false identity documents, cheating in exams, etc., the criminal concept of criminal law in China began to turn to activism and functionalism. The main feature is that certain preparatory behaviors and help behaviors are defined as enforcement behaviors, which are intended to prevent greater legal violations that may occur in the future. At the same time, the abolition of administrative control measures such as reeducation through labor has made the behavior originally regulated by it also included in the scope of penal adjustment. The number of criminal cases continues to grow as a result of the increase in physical charges and the reduction of double pressures in program diversion measures. "In 1995, the number of court first-instance cases was 495,741. In 2014, this number reached 1.04 million. In 2015, it reached 1,126,748, an increase of about 127.29%." [1] In addition to the increase in the number of cases, the type of case also showed a "military crime" trend. "In 1995, the number of prisoners sentenced to more than five years in prison, life imprisonment, death penalty (including death penalty) accounted for 63.19%, and by 2014 only about 11%... the proportion of sentencing under three years of imprisonment It has exceeded 80% by 2013."[2] The reason why there are so many cases entering the trial stage is that except for criminal cases, which do not have such multiple dispute resolution methods as civil cases, the main reason is pre-trial procedures, especially the diversion and digestive functions of the review and prosecution procedures. In particular, the handling of guilty confession cases in the entity and procedure does not reflect the difference between the case of pleading guilty and the case of pleading not guilty, and there is a problem of "overkill" in the allocation of judicial resources.

# 2.2 The Spirit of Lenient and Strict Policy Is Not Clear

The core of the lenient and lenient criminal policy lies in "be loose and strict when necessary, keep a balance between being loose and strict, and punish when necessary". The humanistic spirit and rational care advocated by the policy are concrete manifestations of humanism in the field of criminal justice. The criminal policy of tempering justice with mercy is not only reflected in the simplification of substantive penalties, but also in the simplification and timely termination of the proceedings, reducing the accusation of the prosecutors. However, the implementation of this policy in practice is not ideal, especially in the review and prosecution, the spirit of the policy is not obvious enough. In the review and prosecution process, the spirit of the policy can best reflect the relatively non-prosecution system. However, based on the data of recent years, it can be seen that the overall applicability rate is relatively low. The reason is that, besides the long-standing tendency of prosecution by the procuratorate, the cumbersomeness and complexity of the relative non-prosecution process have also affected Procurator's enthusiasm for applying the system. In order to prevent the abuse of the relative non-prosecution right, within the procuratorial organ, the case of relatively non-prosecution is required to be discussed by the procuratorial committee and reported to the higher-level procuratorate for the record. This kind of administrative internal control mode, while undermining the autonomy of Procurator, also hinders the realization of the function of lenient and strict relative to the non-prosecution system.

# 2.3 The Contradiction between A Large Number of Cases and Few People Is Increasingly Prominent

The increase in the number of Procurators is small compared to the spurt of the number of prosecution cases. [3] The post system reform, which is one of the goals of the "eliteization" of Procurator, has increased the pressure on handling cases with a large number of cases. On the basis of the number of existing Procurators, how to improve

the efficiency of litigation, reduce the burden of handling cases, and alleviate the pressure of handling cases is a problem that needs to be resolved in order to achieve effective results in the reform of the post system. One of the paths lies in the partial transformation of the traditional criminal litigation model in our country. Through the simplification and differentiation of the litigation procedure, the accused person is encouraged to plead guilty and punish, thereby improving the applicability of the summary procedure and the expedited procedure. By establishing such a program incentive mechanism, the cost of Procurator's investment in pleading guilty cases is reduced, and the flow of case-solving resources is not pleaded guilty and major, difficult, and complicated cases are promoted, and the rational and optimal allocation of case-handling resources is promoted, and the pressure on Procurator is reduced.

# 3. INNOVATIVE MEASURES FOR TEACHING REFORM OF VOCATIONAL PLANTING MAJORS BASED ON THE INTERNET

In the face of many problems in the teaching work of vocational planting majors, we should use internet technology to reform and innovate the teaching work of vocational planting majors, and improve the current teaching situation of vocational planting majors. Dolphins swim fast, usually at a maximum speed of 30~40km per hour. Individual species of dolphins can exceed 55km/h per hour and can last for a long time. In the vast sea area, the goal of sardines is to find warm ocean currents. The clever dolphins usually have a group of hundreds of sardines that chase a group of sardines into the warm waters set by the dolphins and lure or scare them. When sardines are in danger, they will rely on each other. Usually, billions of sardines are assembled into a group of seven kilometers long, one-five kilometers wide and thirty-meter deep shaped like giant meatballs. When the dolphins prey on sardines, once the dolphins have locked in the position of the sardines, they will arrive in droves. The sardines will be systematically besieged by the dolphins, and only the fastest and most responsive part of the tour will live. Come down. In order to improve the predation efficiency of dolphins, dolphins with higher IQ will cooperate with the action to establish a reasonable mathematical model to study how the cooperative strategies should be adopted when multiple dolphins cooperate with predation. With market competition becoming fiercer, retailers start building their own brands in order to enhance competitiveness and increase varieties. This behavior has existed for a long time abroad: Walmart has been developing its own brand as an important global strategy. Its sales of Great Value brand in 2017 accounted for a continuous increase of 30%. Manufacturers set up direct distribution channels to reduce the dependence on retailers and make direct contact with consumers. Dell has established this way where customers can get customized personal computers, lowering inventory costs heavily meanwhile getting better customer satisfaction.

One kind of literature is related to retailer's own brand: there is a well - accepted definition about it, " it is owned by the retailer, but the distribution channel is non - exclusive" (Koskinen 1999[1]. The reasons why retailers choose to establish own brands, Caprice's [2] opinion was for retailer to improve negotiating power to gain higher profit ratio with manufacture; Chen Ruiyi[3] further studied on it, finding out that not only the quality of the retailer's own brand products, but also the profit distribution ratio in the whole supply chain would change with the negotiating power of retailer. Retailer can also increase its profit and supply chain profit by founding own brand whether selling these products directly or not(Li Kai[4]). And compared with the unified wholesale pricing mechanism, retailer has a higher incentive to introduce its own brand under the flexible pricing mechanism(Yannan Jin[5]); this strategy aims at a more competitive advantage among retailers in the same industry horizontally, and intended to limit the charging ability of the manufacturer vertically(Li Hui[6]); To consider the current Internet environment, online retailer has more significant advantages in building its own brands than traditional retailer(Yang Fanjing[7]).

Another is related to the manufacturer's direct distribution channels. In the aspect of manufacturer, when it has a cost disadvantage, direct distribution channels cannot increase its own profit if manufacturer does not rely on original equipment manufacturer(OEM) distribution of famous brands(Li Lin[8]). In the aspects of multiple parties, when manufacturer mixes direct and indirect distribution channels, both its own profit and the supply chain profit increase. However at this time it will reduce the profit of retailer (Park and Keh t[9]). To mitigate the conflict between retail channels and direct distribution channels, manufacturer can adjust the quality of products in direct distribution channels or ensure distribution productivity (Albert[10]), Andy and Narendra[11]). In addition, when the retailer's shareholding ratio is moderate, manufacturer can establish direct distribution channels to achieve a win - win situation between retailer and manufacturer. But after the ratio has increased to a level, a good choice is

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not to establish direct distribution channels and lower wholesale prices(Nie Jiajia[12]). Dumrongsiri[13] stood on the perspective of performance, concluding that opening up direct distribution channels has a positive impact of every unit in supply chain when the overall supply chain was coordinated. Zhao Lianxia[14] pointed out that when the compensation rate reaches a certain value, manufacturers are more inclined to establish direct distribution channels, which would improve the performance of the entire supply chain too.

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Unfortunately, little research results have been reported at this aspect when the retailer and the manufacturer both take actions simultaneously instead of just analyzing one participant action. Moreover, it is difficult to obtain satisfied reports about how the ratio of manufacturers' loyal consumers influences the upshot, and rarely discuss the direct distribution channel of manufacturer and the consumers' perceived value of retailer's own brand on the impact of supply chain profits.

This paper will focus on retailer's and manufacturer's actions at the same time, and then establish a game model based on profit maximization in the four situations where retailer does not establish/establish its own brands and manufacturer does not establish/establish direct distribution channels. Furthermore consider the impact of manufacturer's direct channel costs, retailer's own brands perceived value, and the proportion of manufacturers' brand loyal customers.

# 3.1 The guiding role of the new concept

Analyzing students majoring in planting in vocational schools, it can be found that most of them have a very weak foundation in agricultural knowledge, and even many students have zero professional knowledge. Many students choose this major out of curiosity. Therefore, in the initial learning classes of planting majors, most students remained curious and serious. Teachers should grasp the psychological characteristics of students and instill new agricultural concepts such as "Internet+modern agriculture" to promote the development of smart rural areas. Teachers should innovate teaching methods in their teaching work, applying new teaching methods such as multimedia, physical displays, and mobile terminals to teaching, so that students can intuitively experience the "Internet+modern planting industry". In addition, some interesting phenomena in real life are introduced into the classroom, and the way of asking questions is used to ask students "Why is it not appropriate to water plants at a hot noon?" to induce students to think actively, so as to stimulate students' curiosity, take the initiative to enter the active learning state of planting knowledge, and make them face the problems encountered in the learning process.

# 3.2 Emphasize the cultivation of students' internet learning abilities

The teaching content of planting majors in secondary vocational schools mainly includes plant physiology, soil and fertilizer science, crop cultivation science, agrometeorology and other disciplines. At the same time, the knowledge of different disciplines is mutual penetration, and the knowledge of different disciplines is closely related to each other. Teachers should use information technologies such as the Internet in the teaching process to endow noun explanations and book knowledge with interest, thereby improving the quality of teaching in planting majors. That is to say, teachers should adopt an open teaching approach, strictly follow the talent cultivation ideas of consolidating the foundation, broadening the scope, emphasizing practicality, and cultivating according to needs, and integrate internet concepts and technologies in professional teaching. For example, when guiding students to learn about the nutritional organs of plants, such as roots, stems, and leaves, teachers can take students to the campus to collect different shapes of plant roots and stems. In the classroom, they can combine textbook knowledge and online search for information to observe, record, discuss, and summarize the problems they encounter. Teachers play a role of on-site guidance in this process. Using this open teaching method to activate the classroom teaching atmosphere, Integrating mobile terminal and other interconnecting technologies throughout the entire teaching process before, during, and after class to enhance students' learning depth.

# 3.3 Emphasize the implementation of project-based teaching

A major pillar of vocational colleges is the practical teaching base, which mainly utilizes methods such as on campus training, off campus cooperative internships, and enterprise on-the-job internships to strengthen practical teaching, ensuring that students can have a general understanding of the basic procedures, operational requirements, operating standards, and safety knowledge in the production operation of experimental internships during this process, It is also necessary to enable students to master basic operational skills and complete systematic and rigorous operational training. Spatial information management is the foundation of precision

agriculture and has been widely applied in many agricultural enterprises with a certain scale. With the support of internet technology, precision agriculture can solve many agricultural industrialization planting problems. When guiding students to learn the knowledge of soil testing, formula and fertilization, teachers can apply the task driven teaching method to teaching work. First, guide students to learn relevant knowledge independently, then combine the Internet to investigate the local soil type and organic matter content, and calculate the suitable planting crops of the local soil based on the measurement of soil fertility. In short, it is guided by the agricultural market, closely combined with books, the internet, and agricultural production practices, to improve students' teamwork spirit and comprehensive abilities on the basis of enhancing their ability to actively explore and apply knowledge.

### 3.4 Pay attention to the application of online learning platforms

At present, China is in a critical process of transitioning from traditional agriculture to modern agriculture. It can be understood that global agriculture will achieve internetization in the future, which mainly has four major characteristics: technology driven, vertical innovation, channel integration, and ecological integration. By analyzing the teaching materials of planting specialty in secondary vocational schools, it is found that the content is mainly based on traditional theory teaching and experimental verification methods, and has obvious complexity and abstraction, and does not involve too much "Internet+reality".

The knowledge of 'substitute agriculture' cannot meet the needs of the current 'Internet+agricultural industry structure'. The teaching content of planting majors has a large span between disciplines. In order to make up for the shortcomings in theoretical teaching, multimedia teaching methods such as micro courses, MOOCs, and the Internet can be applied. Multimedia teaching can provide students with more intuitive and vivid teaching effects, simplify and concretize abstract theories in books, and significantly expand the amount of teaching information. For example, when guiding students to learn knowledge about "photosynthesis and respiration of plants", teachers can use micro courses and mobile terminals to carry out online teaching, providing a promoting role for students to master the principles of photosynthesis and respiration. When providing students with internet learning websites, teachers should fully analyze the actual production and information technology teaching needs, expand the amount of planting knowledge information received by students, and promote the improvement of students' learning breadth and depth. In addition, teachers should effectively integrate online resource learning platforms to innovate teaching models. At the same time, they should establish an educational resource co construction and sharing model, and encourage students to use the internet for learning. In addition, the internet should also be used to increase the distance between schools and students' parents, providing guidance for students to scientifically and reasonably use online resources.

# 4. EPILOGUE

In summary, the teaching of planting majors in vocational schools has an important impact on the cultivation of agricultural talents and will also have an indirect impact on the development of modern agriculture in China. Faced with a series of problems in the teaching of secondary vocational planting majors, we will focus on the guiding role of new concepts, the cultivation of students' internet learning abilities, the implementation of project-based teaching, and the application of online learning platforms in future teaching work. We will reform and innovate the teaching work of secondary vocational planting majors to promote the improvement of teaching quality, Enable students to master the relevant knowledge of "Internet+Modern Agriculture", cultivate agricultural talents that meet the needs of agricultural development, and provide strong talent support for China's agricultural development. Rockburst is a dynamic phenomenon in coal mine, and it is one of the most serious natural disasters in coal mine in the world. It releases the deformation energy of coal and rock mass in a sudden, sharp and violent situation, and the coal and rock mass are thrown into the mining space, resulting in the damage of support and other equipment in the mining space, as well as the deformation of mining space, such as roof fall, roadway blockage and so on. When serious, it causes casualties and the destruction of the shaft and roadway, and even causes the collapse of the ground surface. An earthquake. Often accompanied by loud noise, vibration and air waves. The time of vibration is from several seconds to tens of seconds, and the coal and rock thrown from several tons to several hundred tons. In recent years, with the increase of mining depth, dynamic disasters become more obvious, which has brought great threat to mine production and safety. Therefore, it is necessary to conduct a systematic and in-depth study on the prevention and control of these dynamic phenomena.

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