

A Study on the Business Operation and Profit Model of an Online Knowledge Payment Platform for Agricultural Science: The Example of "Learn Agriculture Every Day"

Xin Hu, Wang He *

School of International Business and Economics, Jiangxi University of Finance and Economics, Nanchang, 330013, China

* Corresponding author: Wang He

Abstract: Internet knowledge payment is an emerging business form in which enterprises provide various knowledge products and services to paying users through the Internet platform, and its business model in the field of agricultural science popularization is worthy of in-depth study. In this paper, the business operation and profit model of a paid agricultural science knowledge platform is explored by using the case study method, taking the first agricultural science education service platform "Learn Agriculture Every Day" in China as a case study. The results of the study show that farmers' demand for quality agricultural science popularisation is huge; targeted product positioning, quality customer acquisition channels and perfect marketing strategies can help agricultural science popularisation education service enterprises develop rapidly.

Keywords: Pay for knowledge; agricultural science popularisation; business operation; profit model

1. Introduction

The widespread existence and interactive dissemination of information in the Internet era has become the norm, and the deepening of social informatization has brought profound impacts on people's psychology, Thinking, learning, life and the way society operates. Faced with the challenges of the Internet era, science popularization enterprises must understand the "people" of the Internet era, grasp the laws of communication in the Internet era, innovate traditional science popularization and accelerate the development of science popularization informatization.

"Mobile Internet+" science popularization has the characteristics of diversification of science popularization subjects, popularization of science popularization objects, Three-dimension of science popularization contents and diversification of science popularization dissemination channels. Moreover, the integration mode of "mobile Internet" + science popularization can effectively

increase the breadth of science popularization information dissemination, deepen the depth of science popularization information dissemination, and enhance the efficiency of science popularization [1]. In order to break through the constraints of traditional technologies, concepts, institutions and mechanisms, science popularization information technology must focus on new thinking and concepts of the times such as "user-centered" and "attention economy", and fully utilize big data to promote accurate decision-making and services [2].

In the Internet era, the impact of new media on science popularization is all-round and far-reaching, bringing new vitality to science popularization, changing the spatial and temporal structure of science popularization communication, and making science popularization more interactive, participatory and experiential. However, the government-led path of agricultural science popularization is still the main science popularization mechanism, and China's current science popularization system has formed an institutional arrangement that is not compatible with the development of new media [3].

In the field of agriculture, most of the traditional dissemination of agricultural science and technology relies on agricultural science and technology journals, and this approach is currently encountering bottlenecks. Firstly, although China is a large agricultural country and agriculture is a basic industry, the level of scientific research in domestic agricultural disciplines is lower compared to physics and medicine[4]; secondly, current agricultural science and technology journals are set to serve professional researchers in agricultural disciplines, neglecting the majority of farmers' groups, especially new agricultural business subjects with large-scale operation and specialised subdivision[5]; thirdly, the quality of agricultural science and technology publications varies. The reason for this is the influence of the current evaluation system[6]. Most of the papers published in agricultural science and technology journals are used for title evaluation, project completion, declaration of awards, etc., resulting in low academic level and application value of the content of the papers.

In short, many current agricultural science and technology journals do not really serve agricultural science and agriculture for the three farmers, but for the authors and for the benefits [7].

Under the general trend of digitisation, agricultural science journals are also seeking new outlets. Some agricultural journals have opened WeChat public websites. Research has shown that the main factor affecting WeChat user stickiness is information needs, with incentives and relationship costs coming second, and registration information, satisfaction levels and time costs having little impact on user stickiness. In the management of WeChat users, it is important to hold on to the three key elements of push content, user experience and user service. Attract people with quality content, move them with comfortable experience and retain them with convenient service [8].

In addition to WeChat Public, some have explored further in the form of expression of agricultural science popularisation. In the book *The Current Situation and Application Prospects of Digital Film, Television and Animation Technology*, the authors found that applying film and animation technology to agricultural science popularisation can not only give full play to the application advantages of film and animation technology such as informatization, intelligence and digitization, reshape the form of agricultural science popularisation, optimise the agricultural science popularisation system and provide intelligent support for the current development of the new countryside, but also enhance the agricultural science popularisation and the promotion of intelligent agricultural technology. It can also enhance the viewing effect of agricultural science popularisation and the promotion of intelligent agricultural technology, improve the understanding and awareness of the majority of farmers of the content of agricultural science popularisation, and strongly promote the work of agricultural science popularization [9].

2. Case Presentation

Ltd. (APP, WeChat public number and headline number name: "Learn Agriculture Every Day") as the object of case analysis, mainly based on the following reasons: (1) Representativeness. "Learn Agriculture Every Day" is the first agricultural science education service platform for professional farmers in China, and it is also the agricultural science knowledge service platform that serves the largest number of farmers, covers the largest area and has the most complete curriculum system in China. (2) Richness. Through cooperation with more than 1,000 agricultural experts, "Learn Agriculture Every Day" has launched more than 50,000 courses, which include a full range of agricultural courses such as variety selection, cultivation and management, pest control, nutrition and fertilization, harvesting and gardening, etc. Through course teaching, expert consultation, online

and offline training and public welfare activities, "Learn Agriculture Every Day" provides multi-dimensional services to professional farmers and agriculture-related practitioners, helping farmers improve their cultivation level and achieve (3) Promotability. As a technology-based small and medium-sized enterprise, the findings of the study are more replicable than those of other enterprises in this field.

This paper adopts the case study method because the study of the business model and marketing strategy of online agricultural science knowledge payment platforms is not only related to the strategic deployment and management philosophy of enterprises, but also closely related to the organizational structure and cultural construction of enterprises, etc. If the quantitative research method is adopted, it is difficult to reveal the essence of the operation model of online agricultural knowledge payment platforms through quantitative indicators. At the same time, the case study method is more suitable for studying the questions of "what", "why" and "how", and this paper mainly explains how the online agricultural science knowledge payment platform the main focus of this paper is to explain how the online agricultural science knowledge payment platform constructs its operation model.

3. Case Studies

3.1. Analysis of the Business Model of "Learn Agriculture Every Day"

3.1.1. Value proposition

As the first professional education platform for farmers in China, "Learn Agriculture Every Day" mainly brings functional value to its users, i.e. the platform provides paid knowledge products and services that meet users' needs in terms of content and help them solve specific problems encountered in practice. The products and services provided by "Learn Agriculture Every Day" are well suited to the needs of its users in terms of scenario, accuracy, timeliness and acceptability. "Learn Agriculture Every Day" expects users to not only learn about farming, but also to cultivate the right agricultural thinking, so that new and experienced farmers can understand the potential of agriculture in a comprehensive and objective manner and create higher value by improving their own abilities.

3.1.2. Target markets

Vocational education has been absent from China's farmers for a long time, who follow an ancient tradition of farming and have been living off the sky for decades. According to a report published by the China Bureau of Statistics in 2017, there are more than 300 million people working in agriculture in China, of which only 8.3% of the total number of agricultural workers have a high school or higher diploma. The field of vocational

education for farmers, however, is almost unattended. Although the government is constantly promoting education for new types of professional farmers, its coverage is still quite limited for the vast and numerous Chinese countryside. Chinese farmers are generally poorly educated, lack the agronomic knowledge to grow on a large scale and, crucially, are unable to find channels of learning to empower themselves. The traditional channels for farmers to acquire agronomic knowledge are generally two: firstly, they consult with commercial shops selling agricultural fertilisers and other agricultural materials, but often the shopkeepers are sales-oriented in making recommendations for farmers, and what they get in the end is not necessarily the best solution; secondly, they consult with agronomists, but the agronomists have no practical experience and are not very willing to take the initiative to provide services, and their ability to provide services varies. Since 2010, the second wave of farmer education has been on the rise. The acceleration of land transfer, the reform of the farming structure and the upgrading of the consumption end of urban agricultural products have created a large number of modern farmers among the country's 260 million growers who are seeking to maximise their profit by pursuing agricultural production and management as a profession, and who have an urgent need to improve their knowledge of agricultural technology and production and management. The rapid growth of "green-collar" farmers, who have been selected by the combined efforts of native farmers (such as family farms) and returning farmers, has given Everyday Farming a historical opportunity to educate professional farmers in agricultural science.

3.1.3. Profit model

The product range of "Learn Agriculture Every Day" includes online courses, offline teaching courses and books on a single crop type. In terms of courses, "Learn Agriculture Every Day" has divided its online and offline courses into 17 sections on citrus, grapes, strawberries, kiwis, aquaculture and agribusiness. Users who want to learn about a single crop or multiple crops can simply select a specific section on the website. In terms of books, the same categorisation has been applied to Everyday Farming. Unlike most agricultural journals and newspapers, which contain advanced techniques for growing a wide range of crops, each of the company's books contains knowledge about only one type of crop and provides guidance on growing only one type of crop. This technical guidance for farmers is one of the reasons why the company has grown so quickly.

"Learn Agriculture Every Day" has tapped and contracted a large number of IPs in the field of agriculture, including agricultural colleges, research institutes, agricultural technicians from plant protection stations and front-line growers, to collaborate in the development of agricultural knowledge and skills service courses, such as variety selection, field management, pest control, water and fertilizer management, etc. The platform has established cooperation with more than 200 experts, and has set up a rating system for experts,

according to their overall ability and applicable values in specific fields. Professional farmers can learn free or paid courses through APP, small programs and WeChat public number. The courses are video-based and each course is divided into small sections of about 10 minutes according to knowledge points, making it convenient for farmers to use fragmented time for learning.

3.1.4. Distribution channels

In the early stages of development, "Learn Agriculture Every Day" was able to gain precise customers through offline promotion and online placement of local numbers at the county level. One event could attract 100-300 farmers to participate, and the first batch of seed users was accumulated through more than 100 offline events and the promotion of local numbers. In everyday life, part of the new user base is also drawn in by old users through word-of-mouth marketing. As the scale of the "Learn Agriculture Every Day" enterprise continues to expand, a number of professional agronomy experts and professors have also joined the "Learn Agriculture Every Day" faculty. This part of the faculty itself carries its own influence in a section of the population, and it is likely that some of these people are potential users of "Learn Agriculture Every Day". As a result, the experts themselves become a channel to develop new users. In addition, in the age of self-publishing, "Learn Agriculture Every Day" has also built up a community of nearly 1,000 people through a matrix of new media such as WeChat and Today's Headlines, and has been able to gain customers through the marketing of small gifts.

"Learn Agriculture Every Day" has opened a series of official accounts on WeChat, including Learn Agriculture Everyday, Learn Agriculture Strawberry Everyday, Learn Agriculture Citrus Everyday, Learn Agriculture Farming Academy Everyday and Learn Agriculture Earth Academy Everyday. The accounts cover a range of free or paid courses from planting, management, picking to fruit business sales. In addition, "Learn Agriculture Every Day" Certification Centre account also provides users with a channel for training on certificates related to the agricultural field, making the whole public number matrix a convenient one-stop service for users.

In today's headlines, "Learn Agriculture Every Day" has not only opened a series of accounts for individual crops, but has also invited experts to open a series of expert accounts, including university professors, senior farmers, technical consultants and marketing consultants, who are often experts in a particular type of crop or farming technology. These experts include university professors, senior farmers, technical advisors and marketing consultants, who are often experts in a particular crop or technology, and who publish occasional articles or videos on new cultivation techniques or sales experiences, which further expands the range of options available to users and enhances their experience. Thus, in today's headlines, "Learn Agriculture Every Day" is a two-way diversion through authoritative lecturers and single-crop accounts, increasing the rate of user purchases.

Both Shake and Rastler are short-form video platforms, and the marketing strategy of “Learn Agriculture Every Day” on both platforms is very similar, as they both provide useful information to potential users and attract them to follow their accounts through the short videos they post on a daily basis. At the same time, Shake and Rastler are also e-commerce platforms, and “Learn Agriculture Every Day” has made good use of this attribute of the platforms. Some of the short videos posted by “Learn Agriculture Every Day” are accompanied by links to online courses, agricultural books, agricultural tools and even agricultural fertilisers to attract users to buy them. In addition, “Learn Agriculture Every Day” also carries out live broadcasts on the two platforms from time to time, which is also very effective.

3.2. Future Development Potential of “Learn Agriculture Every Day”

3.2.1. Upgrade teaching and research teaching capacity

“Learn Agriculture Every Day” is preparing to set up the “Learning Agriculture Research Institute”. The structure of Learn Agriculture Every Day’s own expert team is to form a multi-level expert model of chief + lecturer + assistant teacher, with the chief responsible for building the framework of the crop curriculum, the lecturer responsible for writing the content of each module and recording the curriculum, and the assistant teacher responsible for the production of the curriculum and practical training assistance. “Learn Agriculture Every Day” has an ample reserve of external experts, with over 1,000 exclusively contracted experts at present. At present, “Learn Agriculture Every Day” has cooperated with a number of bases in Guangxi, Sichuan, Shaanxi, Shandong and other regions to jointly build teaching bases, and the teaching bases will take on more functions in the future. In the planning of the teaching and research team, “Learn Agriculture Every Day” is also trying to combine the offline “teaching and research bases” with the “plant protection outposts”, while effectively combining “teaching” and “research” according to the training plan. “Research”: during the free time of the training, the teaching and research team is required to go to typical regions to conduct research and publish forward-looking regional plant protection and solution guides.

3.2.2. Enriching the systematic curriculum

At the beginning, the course length was set at 10-15 minutes, with easy-to-understand content, graphics, audio and visuals, outstanding knowledge and an overall light learning experience. However, with the higher demand of the head users, the course system of “Learn Agriculture Every Day” was gradually clarified, i.e. built around two dimensions: special techniques and year-round planting management. Compared to the skillful, tool-based mini-courses developed in the past, the structured courses focus more on the combination of theory and experience, which helps farmers learn and understand in a step-by-step manner, enabling students to integrate and

integrate with the local climate, soil, terrain and other specific conditions. At present, “Learn Agriculture Every Day” has gradually started to offer “online training camps”, “offline practical classes”, “overseas study tours” and other courses that focus on content and services. The teaching scenario has also shifted from purely online to a combination of “online + offline”, and the unit price of education products has increased significantly.

3.2.3. Digging deeper into teaching aid services

In addition to planning for teaching and research and curriculum, “Learn Agriculture Every Day” also has a clear plan for teaching aids. According to the founder of Tiantianzhu farming, the most distinctive feature of vocational education for farmers is the unity of buyers, learners, testers and beneficiaries, therefore, digging deeper into the teaching and support services is the key to the sustainability of vocational education for farmers. At the same time, because agricultural crop growth is seasonal and repetitive, there is no obvious age limit or stage difference in farmers’ vocational education, varieties are always being updated, markets are always being eliminated, and verification of results is challenging. The solution given by Tiantian Learn Farming is the “dual teacher tracking system + practical testing system + feedback system”, in which lecturers + teaching assistants will continue to follow the learning stages of users, and further delve into the “teaching, learning, practicing and testing” aspects in practical classes and base teaching. “The feedback system will be used to track the results, and ultimately, after the users have sold their produce, a survey will be conducted to obtain a horizontal and vertical comparison of their income. The feedback from the existing users of “Learn Agriculture Every Day” is that they have learnt more about farming techniques in the platform, and that both the quality of crops and the efficiency of farming have been improved.

4. Conclusion

With the development of modern agriculture, farmers are in urgent need of knowledge on the standard use of agricultural equipment, planting management and the transport and marketing of crops. So far, in the field of agricultural science and technology, agricultural science and technology journals are generally under-digitised, over-academic and not very relevant to specific areas. The growing popularity of the internet in rural areas has created sufficient conditions to address these needs, while the low cost of online education has made the farmer community willing to accept payment for knowledge. In the face of this situation, this paper has studied the operation and profitability models of online platforms for paying for agricultural science knowledge, “Learn Agriculture Every Day” as a research object, and has come to the following conclusions.

(1) In the early stages of commercial operations, for companies wishing to enter the field of agricultural science and technology, they first need to fully understand their target users and then provide targeted

products and services to meet their needs. In this regard, "Learn Agriculture Every Day" has set its target consumers as new professional farmers and provided them with lecture courses on the standard use of agricultural equipment, planting management and crop transportation and marketing.

(2) In the middle and late stages of commercial operation, for the long-term development of the online agricultural science knowledge payment platform, continuous upgrading of teaching and research capabilities, improvement and enrichment of the systematic curriculum and deepening of teaching and support services are the core of the platform's development.

(3) In terms of profit model, the profit model of online agricultural science knowledge payment platforms is to pay for knowledge, and it is extremely crucial to make users willing to pay. In the digital era, creating IP in the field of agriculture, attaching a professional label and increasing users' willingness to pay is a crucial profit-making tool.

Acknowledgment

This project is supported by Jiangxi Provincial Innovation and Entrepreneurship Training Program for College Students (Project No. 202110421024), Jiangxi Provincial Education Department Educational Reform Project (Project No. JXJG-17-4-12).

References

- [1] Chen, H.L; Yuan, Y.H. Research on the innovation of "mobile Internet+" science popularization integration model - taking financial science and technology science popularization activities as an example. *Science and Technology Management Research* 2020, Volume. 40, no. 05, pp. 146-151.
- [2] Wang, K.Y; Xie, X.J; Zhou, Y.M. Popularization of science in the Internet era. *Science popularization research* 2017, Volume. 12, no. 05, pp. 5-9+106.
- [3] Zhang, J.C. Path dependence and breakthrough of science popularization in the context of new media. *Science popularization research* 2016, Volume. 11, no. 04, pp. 18-26+44+94.
- [4] Du, H. Analysis of the reasons for the low influence of agricultural science and technology journals and countermeasures for their improvement. *Journal of editing* 2019, Volume. 31, no. S2, pp. 26-28.
- [5] Yu, K; Zhao, Y.F; Liu, Z.J. On the development strategy of agricultural science journals in the context of cultivating new agricultural business subjects. *Journal of editing* 2017, Volume. 29, no. 02, pp. 186-188.
- [6] Yan, H.G. Exploring the publication of agricultural science books in the context of rural revitalization. *Library construction* 2020, no. S1, pp. 62-66.
- [7] Lu, B; Wu, X.T; Li, M.L; Tan, P. How agricultural science and technology journals can help rural revitalization in the context of the new era. *Journal of editing* 2019, Volume. 31, no. S2, pp. 108-109.
- [8] Jin, H.P; Lu, M.X. Influencing factors of user stickiness and its measurement of agricultural science journal WeChat public number. *China Journal of Science and Technology Research* 2017, Volume. 28, no. 06, pp. 526-531.
- [9] Peng, B. Film and animation technology in agricultural science - a review of the current situation and application prospects of digital film and animation technology. *Journal of Tropical Crops* 2020, Volume. 41, no. 12, pp. 2607.