Insight into Practical Teaching in Rural Planning in Colleges Based on the “Rural Innovation Workshop”

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Abstract

Based on demand and problem-oriented rural planning, this study proposes new requirements for rural planning education in colleges and universities. This study reflects on the problems and challenges of rural planning teaching and practice in colleges in China from the perspectives of experiential teaching and participatory planning theory. It takes an actual workshop case as its object of analysis to examine the effectiveness of a workshop-based experiential rural planning mode of teaching in response to the needs of rural construction. In this study, used Kolb’s analytical framework to classify the tasks and skills required in activities into four different learning processes: accommodation, divergence, assimilation and convergence. The feedback of students on the Rural Innovation Workshop mentions the improvement of all aspects of ability and indicates that individual comprehensive ability is improved in the process of practical participation in the workshop.

Keywords Rural planning · Workshop · Practical teaching · Experimental-based learning

Introduction

In the development of urban planning education, practical teaching experienced a recession from the 1960s to the 1970s. There has been a long-term debate on whether to reinstitute

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practical education, the core of which is to emphasize the related issues of learning in practice, including the emphasis of the curriculum and who will teach it (Alterman 1992; Senbel 2012).

The teaching and practice of planning in China has long been based on the “city” or “town” (Dong 2013). As the focus of national spatial planning gradually turns to rural areas, the government has proposed several rural revitalization strategies. A large amount of rural planning work has emerged in various forms, resulting in a huge talent gap in rural construction. This highlights the importance of rural planning education and practice. Due to the differences between the cultural characteristics of rural areas and those of the city, compared with traditional urban planning, rural planning is different in terms of its knowledge system, mode of organization, working method and implementation process, which poses new challenges to the urban and rural planning education system (Editorial Department of Urban Planning Forum 2017). Based on material space, planning education reflects a standard thinking mode and fixed planning process in its teaching. This cannot reflect the regional and cultural characteristics of rural areas, resulting in a serious homogeneity problem in village planning. However, with the transformation of planning, rural planning is developing into the comprehensive planning of social and economic life, and interdisciplinary cooperation is emerging as an increasingly popular trend as unidisciplinary planning cannot meet the needs of rural development. Full-time teachers in colleges lack relevant teaching experience, creating a gap between theoretical research and work practices. In terms of research methods, in addition to rational data prediction analysis, economic analysis and statistical analysis, rural people have begun to conduct in-depth field surveys and participate in planning and scheme design, which also encourages a re-examination of our understanding of rural issues. Therefore, the questions of how planning education will meet the needs of rural planning and how the planning education and curriculum should be reformed are important challenges faced by the planning education system.

The current planning education system in China is seriously lacking in practical and local experience and participation. Although there has been significant innovation in college education in the past decade, most of the methods to improve practical abilities and conduct in-depth participatory planning have been used in short-term workshops and in design colleges (Zhang 2009; Ye and Zheng 2010; Shao 2012; Wu et al. 2014). However, there are few workshop teaching models targeted at rural planning. Without proper planning, it is difficult to form sustainable development momentum in rural areas where the labour force is insufficient and relatively weak.

This study reflects on the problems and challenges of rural planning teaching and practice in colleges in China from the perspectives of experiential teaching and participatory planning theory. It takes an actual workshop case as its object of analysis to examine the effectiveness of a workshop-based experiential rural planning mode of teaching in response to the needs of rural construction.

The research framework of the paper is as follows. First, we present the development process of the relevant planning education and workshop models. Second, we analyse the experiential learning and participatory design concepts in the literature and propose a new model and framework combining experiential education and participatory planning. Finally, we suggest improving the teaching and practice of rural planning by taking the organization and operation of the “Rural Innovation Workshop” by the School of Architecture at Huaqiao University as an example.

The Importance of Practical Planning Education to Rural Planning Teaching

Practical planning education courses emphasize learning in practice, allowing students to identify and analyse problems and to design and evaluate solutions in the classroom. In the process, students are required to make predictions, think divergently and astringently, consider the relationship between different kinds of environments and planning processes, make decisions using their own values, cooperate with others and propose and defend their plans before an expert group. Most importantly, practical planning education can encourage students to understand the whole planning process. Because of its strong practicality, some people think that planning should be taught in courses outside school to strengthen students' thinking abilities in solving planning problems (Heumann and Wetmore 1984).

However, in the 1960s and 1970s, influenced by rationalism, approaches from economics, statistics and general behaviours were increasingly applied in the analytical techniques taught in planning methodology courses. The design of principles and solutions had environmentally decisive meanings. There were few courses on procedural theory and solutions to explicit procedural problems, and the curriculum lacked complex methods. In fact, many urban and rural problems cannot be solved by changing the natural environment, which made people doubt the methods of practical planning education courses. On the other hand, critics believed that there were often conflicts between the theory and method courses taught by full-time scholars and the workshop courses taught by part-time professionals, and professionals tended to be sceptical about the content of academic lectures (Lang 1983; Heumann and Wetmore 1984; Ye and Zheng 2010; Wu et al. 2014).

In addition, the decline and cancellation of practical planning education had consequences that included students' lack of basic planning process knowledge, students' lack of the ability to solve specific problems and schools' inability to test students' abilities in practical planning solutions. There was no curriculum that could replace design process education in the practical curriculum, in which students learned to coordinate planning methods, evaluate the selection of various planning methods, communicate and coordinate with others, and even develop or create new skills (Lang 1983; Heumann and Wetmore 1984). Therefore, people realized that one of the core functions of planning education was to improve the skills relevant to the practice of planning, enabling planners to address problems and design and evaluate action plans. Later, a practical planning curriculum was reintroduced in a meaningful way (Long 2012).

The development of a practical planning curriculum can demonstrate that practice is indispensable in planning education. It is necessary to pay more attention to interactions that occur outside the campus and ease the disconnection between the curriculum and actual planning. In view of this, we combine experiential learning theory to integrate practical experience in teaching to cultivate talent matching with planning practices.

A New Model of Rural Planning Education Practice – Integration of Experiential Learning and Participatory Planning

Experiential Learning and its Application in Practical Planning Education

In 1984, Professor David Kolb of Harvard University published the famous book *Experiential Learning*, which laid the foundation for the theory and practice of experiential teaching. In experiential learning theory, learning is defined as “the process of creating knowledge through

experience transformation”; that is, knowledge is regarded as the product of mastering and transforming experience, and the theory provides a model of the whole learning process (Kolb et al. 2001). The process of learning can be described as a four-stage cycle in which, based on observation and thinking, learners experience direct or specific events that are absorbed and refined into abstract concepts from which new meaning for action can be drawn. Learners are thus induced to actively test and create new experiences (Fig. 1).

The model proposed by Kolb et al. (2001) experiential learning theory describes two opposite patterns of experience acquisition: concrete experience (CE) and abstract conceptualization (AC). Some people tend to rely on their senses to obtain information by experiencing specific, tangible and perceptible characteristics, while others prefer to perceive, grasp or master new information through symbolic representation or abstract conceptual thinking, analysis or system planning. Kolb’s theory also describes two opposing modes for transforming experience: reflective observation (RO) and active experiment (AE). Some people are good at carefully observing other people and reflecting on what happened, while others choose to start doing things immediately and making reflective observations while doing, which belongs to the positive experiment type (Kolb and Kolb 2005).

In Kolb’s theoretical model, experiential learning theory is conceptualized as a cone. The bottom of the cone is divided into four quadrants corresponding to the different modes of acquiring and transforming knowledge. They each represent four different learning types: diverging, assimilating, converging and accommodative. Lying between CE and RO, people of the diverging learning type are good at observing and reflecting on specific situations from many different perspectives. Lying between AC and RO, people of the assimilating type are good at understanding a wide range of information and transforming it into a concise and logical form. Assimilating-type learners pay less attention to people and are more interested in ideas and abstract concepts as they think that the logic of a theory is more important than its actual value. Lying between AC and AE, people of the converging type are good at discovering the practical use of ideas and theories and make decisions based on the solutions to problems. Lying between CE and AE, people of the accommodative type learn mainly from

Fig. 1 Diagram of experiential learning of workshops in promoting rural planning education

“practical” experience, tend to act on intuition, and like to implement plans and participate in new and challenging tasks (Kolb and Kolb 2009).

In the repeating process of experience, reflection and induction to action, learners react to the process and content of their learning to form the complexity of learning, including behavioural complexity, symbolic complexity, affective complexity and perceptual complexity. Following the vertical upward dimension of the model from the bottom of the cone, it shows the development of experiential learning theory, which can be divided into three orders, from divergence to assimilation to convergence and accommodation at the top. The vertex of the teaching development cone represents the integrated learning concept, which can achieve the goal through an idealized learning cycle and upward spiral. Kolb proposed a so-called balanced learning style and further subdivided it into three balance mechanisms. First, in the acquisition of knowledge, the mechanism is the ability to achieve a balance between concrete experience and abstract concepts; the second is to seek a balance between reflective observation and active experiment; and the third is to achieve balance between both the acquisition and the transformation of knowledge (that is, the most ideal position in the cone vertex). Follow-up empirical research has shown that people with a balanced learning ability along these two dimensions are more mature learners (with more flexible adaptability), which has a positive correlation with high-level self-development (Kolb and Wolfe 1981; Boyatzis and Kolb 1993).

Learning types and abilities dynamically change in the process of individual experience and learning. Kolb contended that personality, professional education, career choice, current professional role and the skills required by tasks are all important factors that affect individual learning types. In particular, the individual learning type may be re-shaped by work experience due to the need for new skills and based on the type of work. For example, when people are engaged in general management and administration, it is necessary to carry out specific actions to complete tasks and have the ability to make timely decisions in response to problems. This cultivates leadership, initiative and action, which encourages the learner to move closer to the accommodative learning type. When people are engaged in consulting and personnel management, it is necessary to establish personal relationships and effective communication with others and to help solve coordination problems using interpersonal skills. People in this role often need the ability to observe specific facts and respond in time based on other people's response feedback. In this process, they tend to move closer to the diverging learning type. When engaged in information-related work, such as planning and research, people need to have skills for information collection, analysis, theoretical construction and conceptual modelling. In the process of reading, speaking and exploring analysis, individuals tend to move closer to the assimilating learning type. Finally, when engaged in technical work, such as engineering, people require technological and problem-solving skills. In the process of trying new ideas, simulations, laboratory work and practical applications, individuals find practical uses for ideas and theories and tend to move closer to the converging learning type (Kolb and Kolb 2005).

As a mode of knowledge generation and accumulation, learning determines the individual's adaptation, survival and growth in an organization and becomes the necessary condition for success in work (Corbett 2005). Experiential learning can take advantage of the planned perception of physical objects and systematic social practices to enrich students' cognition, improve their thinking and social practice abilities and emphasize learning methods and activities that have students' personality and social development at their core (Zhang 2004). Through different practices, students can master the use of different types of learning and apply different thinking modes more comprehensively.

Since the theory of experiential learning was proposed in the 1970s, scholars in various countries have conducted research on this topic in many different disciplines, including education, management, computer and information science, psychology, medicine, nursing, accounting and law. Experiential teaching is regarded as a framework for educational innovation, a means to match learning style with teaching method and teaching style and the course and program design of experiential teaching (Claxton and Murrell 1987). Since the 1990s, China has applied the experiential teaching concept, including in fields related to urban and rural planning. An architectural design course was reformed to help students experience the built environment (Cheng and Fang 2013; Zhang et al. 2014), the international workshop experiential teaching mode was applied to an urban design course to stimulate students' innovative thinking, and the experiential teaching method was used to improve a course on historical and cultural heritage protection (Shi et al. 2011). Although these examples show that experiential teaching can supplement the shortcomings of traditional classroom (Zhou et al. 2016) teaching and provide the basic theoretical basis for extracurricular practical teaching, they fail to combine classroom education with rural planning and local culture, and most of them are conducted as short-term workshops rather than long-term experiential teaching practice mechanisms.

Participatory Planning as an Important Means to Deal with Rural Planning Practices

Collaborative planning theory, which emerged in the 1980s, integrates the concepts of interaction and multiple participation. It places communication, participation and interaction at its core, emphasizing the planning concept of practical significance. Collaborative planning theory holds that “planners no longer work for the people, but with the people.” This significant turn in planning theory requires interaction between the speaker and the listener. Listening involves learning and creating practical consensus through communication and interaction.

In addition to “practical participation” in planning theory, because the space between planning and reality is minimal, planners must be able to clearly understand the local culture and economy and residents' problems, needs and vision. Therefore, in the process of planning, the participation of different interest groups is essential so that their understanding of the situation is deepened and their demands are met. It is from this process that the concept of participatory planning is derived. In the discussion on how to teach planning, some academics have emphasized the learning experience of community service in planning workshops. Constructivism, empiricism and social learning theory in problem-based and student-centred learning are particularly relevant to participation in community service, which enables students to increase their personal experience in the process of participation, cultivate unique life experiences and acquire new knowledge (Kotval 2003; Hardin 2006; Senbel 2009a, b).

Currently, the practice of rural planning in China faces several important problems. There is significant homogeneity in planning and design and a “top-down” mode of thinking (derived from urban planning). Rural planning often fails to reflect rural values or solve practical problems (Editorial Department of Urban Planning Forum 2017). There is also a lack of interdisciplinary cooperation, which suggests that planners need not only professional knowledge but also understanding of real rural areas. All of these problems are occurring against the backdrop of rural planning changing from simple improvement of the material environment to a more comprehensive planning of economic and social institutions based on experience and participation in rural life.

In the late 1970s, some researchers proposed using a rapid rural appraisal (RRA) for planning in rural areas. As an alternative and supplement to traditional sampling surveys, RRA is a method to learn from villagers, investigate, analyse and evaluate the advantages and disadvantages of the area together with the people, and propose a reasonable and timely decision-making method for the project. The planning team can collect information in a rapid and systematic manner to make an overall analysis of specific themes or problems. The purpose is to understand and evaluate the complexity of rural areas, promote feasibility studies and prioritize projects (Alam and Ishan 2012).

In current research and practice, the application of participatory planning can help planners better understand the complex environment, local cultural characteristics and use needs of rural areas and provide targeted planning and design to solve local practical problems. As a specific form of participatory planning, workshops are also widely used in planning in China and form a series of operable and adaptable action plans (Huang et al. 2015), such as urban renewal (Li 2017), campus planning (Wang and Zhong 2012) and community planning (Huang et al. 2015).

Although workshops vary in their purpose and method of operation, they are mainly combined teaching workshops in colleges. They can run for different lengths of time, which may be long or short cycles (Zhang 2009; Ye and Zheng 2010; Shao 2012; Wu et al. 2014). In workshops, students from different colleges, majors, grades and even countries participate to achieve certain teaching goals or training purposes through the design of joint research, collaborative thinking, process repetition and result display (Zhou and Yuan 2006; Tan and Zhang 2018).

Workshops as the Driving Force for the Integration of Experiential Learning and Participatory Planning

From the previous review, we know that education on urban and rural planning in China has attempted to incorporate the practical elements of experiential teaching and participatory design, mostly in the form of short-term workshops without establishing a long-term experiential teaching practice mechanism. On the other hand, since current rural construction is still based on the education and training system of urban construction, rural reconstruction and design are mostly performed from the urban perspective. There is a lack of exposure to rural and local culture in rural planning education, and there is no mature teaching system to provide training for skills in rural planning. As a result, the training provided by the planning education system cannot effectively match the skills required for the practice of rural planning, meet the needs of rural development, or solve the problems faced by rural areas.

As a flexible organizational form, workshops can have different forms with varying institutional affiliations, training methods, personnel composition and cycles, and training purposes (Zhou et al. 2016; Tan and Zhang 2018). Therefore, the introduction of workshops in the planning curriculum can enable students to effectively participate in the practice of rural planning. Workshops guide students through the process of “practice, understanding, re-practice and re-understanding” (Mao 1952) to enhance and reconstruct the natural and human knowledge of rural areas through direct experiential learning. They reflect multi-cultural values and respect different cultural views, experiences and contributions (Peng 2008). The design of workshops is based on experiential teaching. While they focus on professional function learning, it is necessary to integrate local cultural education and provide a set of feasible ideas and methods for teaching in rural areas. The flexible and diverse organizational forms of workshops are conducive to adjustment and reform, giving play to the role of education in rural construction and achieving the purpose of deepening design teaching and activating the

local community (Zhou and Yuan 2006; Shen et al. 2018). In addition, as a model of participatory planning, workshops are considered an effective model to provide positive results for students and society in carrying out rural planning education, cultivating students' respect and love for local culture and imparting practical skills in rural planning. They can also enhance the cultural confidence of rural residents and community vitality, help guide regional people in understanding local culture and promote the preservation and continuation of local culture (Wan 2001).

In view of the problems of rural planning and the characteristics of experiential learning and participatory planning, we have established a “Rural Innovation Workshop” with a theme of rural planning. The workshop uses an experiential learning theory analysis framework, supplemented by the theoretical connotation of participatory design, to build a virtuous learning cycle for rural planning education. Using the workshop as a catalyst for experiential learning, students engage in a series of related practical activities. They can have multiple impactful experiences in the process of interactive learning, such as professional cooperation, successful rural case visits, off-campus salon lectures and volunteer service.

At the theoretical level, we abstract the learning methods provided by the experiential learning theory model into several categories (as shown in Fig. 2) and classify the activities held by the workshop: acquiring new skills in tasks, recognizing different personalities and styles in interactions, obtaining new perceptual stimulation from the experience of place and grasping more professional norms in the practice of work. According to the dynamic learning process in Kolb's theory, teaching can address more complex behaviours, symbols, emotions and perceptions to cultivate students' learning abilities in different directions and improve coordination and integration in acquiring and transforming knowledge to achieve a more comprehensive learning model (model vertex).

New Mode of Rural Planning Education – Rural Innovation and Entrepreneurship Workshop

The development of the planning education curriculum proves that practice is indispensable in planning education. In view of this and combining experiential learning theory, we integrate practical experience into teaching to cultivate talent matching current planning practices.

Fig. 2 Organizational structure of “Rural Innovation Workshop”

Establishment and Operation of the Workshop

Our goal is to promote rural construction and sustainable development and cultivate talent. For rural construction. To do so, we combine the workshop teaching mode and experiential teaching concept, encourage college teachers and students to participate in rural construction, improve integration with local resources through flexible teaching forms and pay attention to the process of experiential learning and the combination of teaching and local culture.

Founded in July 2017 with 12–20 participants, the “Rural Innovation Workshop” organized by the School of Architecture at Huaqiao University is a participatory workshop open to junior students of the school. The design of the “Rural Innovation Workshop” follows the model of experiential teaching. It not only pays attention to the method of local education but also takes the workshop as the medium. As a supplement to classroom teaching, the Rural Innovation Workshop enables experimentation and flexibility. It can link current social problems in a timely manner and conduct strategy research to produce more diversified combinations of communication and thinking. By guiding students to participate in various projects and activities related to rural construction, the rural innovation and entrepreneurship workshop combines teaching and practice to achieve the purpose of strengthening participants’ foundation for professional knowledge, improving the quality of innovation and entrepreneurship, and cultivating comprehensive skill training.

There are three roles in the organization of the Rural Innovation Workshop, namely, “main participant,” “guide” and “project participant.” As “main participants,” students are the main component of the workshop. Its organizational structure is shown in Fig. 2. The organizational structure has three main characteristics: (1) rural revitalization involves all walks of life; the guides of the workshop are a combination of university tutors and off-campus tutors from the disciplines of rural operation, planning, architecture, landscape and construction, which allows collaborative cooperation of talent from different disciplines to guide students; (2) the main participants are students of different majors from three departments of the School of Architecture, which breaks from previous workshop practices of including only a single major for professional complementarity and discipline co-construction (in plans for future development, the workshop will also recruit students majoring in marketing, finance, and culture); (3) project participants include external teams, governments, villagers and enterprises, from whom students can understand the need for comprehensive coordination and team cooperation in rural construction, learn to think objectively about the cut-in point of rural planning and further improve the comprehensive ability of the team.

The Rural Innovation Workshop has several important connotations in rural planning. The first is to emphasize “process” and “practice.” As far as design teaching is concerned, short-term joint design teaching may not be as comprehensive as daily course training or as efficient as the actual practice of professional planning and design. However, participants in the “Rural Innovation Workshop” can learn through personal contact and direct experience. With more flexible teaching settings and more targeted teaching content and methods, it emphasizes teaching students according to their aptitude and can stimulate learning initiative and creativity in participants. Therefore, “process” and “result” are equally important in the teaching design of short-term joint design teaching. It is necessary to plan the content, method and stages of the workshop as a whole from the perspective of practice, record the process of participation, and pay attention to and collect suggestions on the experience of participants.

The second emphasis is on learning from villagers and rural areas. As a supplement to college teaching, the Rural Innovation Workshop focuses not only on teaching activities of

college teachers and students but also on the impact and role of teaching activities on the rural community. In the process of rural modernization in China, the recovery of cultural self-confidence by rural residents is the basis for the construction of rural community. Affirmation by others and themselves is very important for villagers, and it is the key to promoting local education and rural cultural conservation. Therefore, in the process of organizing the workshop, we need to pay attention to diversity in teaching forms and to encourage the villagers to actively show and talk about the value of the village and their enduring rural life experience. Through the design of teaching links, older people, children, women and youth in the village can participate in cultural construction, cultural heritage and communication in their own way.

Finally, the workshop emphasizes breaking barriers and promoting communication and interaction between different groups of people. In contrast to classroom teaching or vocational skills training, one of the characteristics of short-term joint teaching is to establish “unity” among different groups of people through teaching activities. In the process of ideological collision between different groups of people, college students can change their thinking patterns and understand the diversity of society and values more clearly, especially with regard to rural areas with complex problems and difficult construction processes. Rural areas require more comprehensive and multidimensional understanding and in-depth analysis of their social contradictions. Therefore, in the design of teaching activities, we should pay attention to the interaction of different groups of people, including communication between teachers and students, students and students (between senior and junior grades, between students of the same age), teachers, students and tourists, teachers, students and villagers (older people, younger people and children), and designers and builders.

Experiential Teaching Promoted by a Series of Activities in the Rural Innovation Workshop

Since its establishment, the workshop has conducted more than 10 activities in various forms. Based on the concepts of innovation and entrepreneurship education, workshop teaching is mainly composed of three parts: basic rural understanding, advanced practical teaching and teaching effect evaluation (Table 1).

(1). Basic rural understanding.

In view of the main problems related to skills in rural planning, such as “far from rural areas,” “not settled” and “weak comprehensive coordination ability,” the Rural Innovation Workshop designs and presents a curriculum of professional knowledge and local education. The professional knowledge curriculum focuses on the promotion of rural knowledge and training in spatial environment design ability. The junior students of the School of Architecture can strengthen their understanding of rural concepts, interpretation of rural customs, analysis of rural revitalization policy and knowledge of rural revitalization cases. Rural education focuses on supplementing students’ current knowledge of rural society, culture and industry to help them obtain a comprehensive understanding of rural areas.

By means of “scene introduction” and “interactive participation,” the workshop leads students deep into the villages of Xiamen and cultivates their interest and love for rural areas through on-site research, interviews and lectures. The workshop has conducted short-term activities in Duishan Village, Aotou Village and Tianyang Village to encourage students to participate in important folk activities in villages, such as the Dashe Lantern Festival and the

Table 1 Teaching Activities and Learning Types of Rural Innovation Workshops

Teaching Types Purpose	Workshop	Contents Learning	
Activities Understanding of rural natural and human Resources	Village fieldwork	Go to Tianyang Village, Aotou Village, Duishan Village and Changbing Village for photography, interview and field observation; visit the History Museum of Aotou Village in Xiamen	Diverging learning style
Advanced Teaching	Participation in folk activities	Dashe Lantern Festival, International Dragon Boat Race	Diverging learning style
	Participation practical projects	General survey of historical buildings of Jimci Dashe repair of buildings built by overseas Chinese, improvement of block environment, cultural, creative and tourism block project, planning and design of village construction	Diverging Practical learning style, assimilating learning style, converging learning style
	Exploration of rural culture	Lecture on architecture and cultural public welfare, workshop on oral history of overseas Chinese architecture, exchange about hand painting with sketch enthusiasts in China	Accommodative learning style, diverging learning style Rural
on activities Teaching	construction	Rural construction salon, rural micro-landscape construction competition, rural public welfare classroom activities, participation in voluntary community construction services ¹	Accommodative Practice learning style, diverging learning style, learning style Feedback
	Participation in research projects	Research project of Xiamen humanities and social sciences base in 2019	Converging learning style, assimilating learning style
	Summary of activities and Feed back on	Establish the process log and results summary, compile relevant records for the teaching materials, discuss how to further improve and upgrade, and publish the results in combination with scientific research topics.	Assimilating learning style
	Participation in the rural-related discipline competition, entrepreneurship competition and extracurricular practice	Have participated in more than 10 competitions and won various awards ²	Assimilating learning style, converging learning style

¹ The volunteer service of hand painting, volunteer activity in martial arts in the community, collaboration between two universities in sketching, etc.

² The team members have participated in more than 10 competitions, winning first prize in the 2017 wall painting competition of Jimci Dashe, the 2018 Jinjiang experience social practice award from the School of Architecture, the “school level excellent team award,” third prize in the 2018 villager + college students micro-landscape design competition of Xiamen Tong’an District, the “rural revitalization award” and first prize in the Huaqiao University community public space decoration and beautification competition of 2018

International Dragon Boat Race, to enhance students' engagement with people, society and culture in the villages.

In the course on basic rural understanding, through participation in village research and activities, students can directly stimulate their experience through their senses and improve their communication abilities in the process of communicating with the villagers. It is necessary to establish personal relationships and effective communication with others in the process of interacting with people. The task of communication and interaction with villagers requires observing other people's words, expressions and body movements and then responding to them. It engages the modes of concrete experience (CE) and reflective observation (RO) and corresponds to the diverging learning style. According to feedback from students, those who participate in in-depth and on-the-spot investigation and rural interaction have different experiences in their learning of the planning process, change their views on the planning and design scheme, understand the characteristics of each village, truly pay attention to local needs and believe that they can improve their common ability:

"We need to renew a large community, that is, demolish and clean it up and then re-design it by ourselves, different from local culture, for example, clan association, because you do not know what they need if you have not had a long-term understanding and research of the village."

"The needs of each group are different. For example, the first thing for residents to consider is living environment and personal interests, the first thing for enterprises to consider is how to make money, the first thing for artists to consider is personal pursuits and interests, and the first thing for the government to consider is livelihood issues."

"Practical experience can enrich university life, and we often need to communicate with other people. Interviews with villagers can also improve our language expression ability and are useful for future work."

Therefore, in the practices of "scene introduction" and "interactive participation" and in the process of communication and interaction with residents, students can feel the values and goals of different groups, and their divergent learning ability can be greatly stimulated.

(2). Advanced practical teaching.

To prevent the school's professional knowledge and theoretical teaching from bleeding into the workshop process, on the basis of their understanding of rural life, students can approach the complex problems encountered in real practice through advanced practical courses. The purpose of advanced practical teaching is to improve practical skills and promote the development of rural areas and students' abilities in organization and management through various project practices and activities. The practical teaching of the workshop is mainly conducted in combination with the vertical and horizontal topics of the tutor by means of problem-oriented training. This type of training raises problems for each case through on-site investigation and multiparty opinion interviews, proposes solutions to problems using a combination of social, economic and cultural thinking and presents solutions based on the design of the spatial environment.

The content of the workshop's practical education can be divided into three categories: participation in practical planning projects, exploration of rural culture and rural construction. The first category is participation in practical planning projects. The Rural Innovation Workshop carries out cooperation among schools, enterprises and villages in the form of

base co-construction, mainly focusing on three themes of base construction: industry-university-research cooperation, talent training cooperation, and brand co-construction cooperation. Practical planning projects include the general survey of the historical buildings of Jimei Dashe, the repair of buildings built by overseas Chinese, the improvement of the block environment, the cultural and creative tourism-block project and village construction planning and design. Practical projects help students discuss and observe specific and practical people and things in the design field, and they promote students' diverging learning ability. For the assimilating learning ability, students research and plan according to the second-hand data collected by the project, acquire knowledge through these symbols or abstract conceptual thinking, conduct analysis and system planning based on planning principles, data analysis and cases for reference, and make appropriate practical plans based on reflection and observation. Finally, specific technologies are adopted in practical projects to promote converging learning. For example, in terms of building repair, it is necessary to master building materials and skills and principles and knowledge of technology and to actively experiment and apply abstract knowledge in practice.

The second category is the exploration of rural culture. The workshop has instituted a series of activities, such as practical architecture and cultural public welfare lectures, an oral history workshop on Chinese overseas architecture and exchange about hand painting with sketch enthusiasts in China, which are planned through activities related to rural areas. On the one hand, in the activities initiated by colleges, students play an important role in organization and activity management. They aim to plan activities that promote local culture based on the needs and problems in rural areas, work out appropriate programmes through the perception of specific experiences and organize and manage activities actively and effectively. This can promote their accommodative learning abilities. On the other hand, students absorb the experience of experts in lectures and workshops. on cultural exploration, exchange and interact with different participants in the activities and coordinate and communicate with all parties, which is conducive to enhancing their divergent learning.

The third category of practical education is rural construction (Figs. 3 and 4), which includes a rural construction salon, a rural microlandscape construction competition, rural public welfare classroom activities and community construction volunteer service. Through the planning of activities related to rural areas, students' initiative and enthusiasm are mobilized. The micro-landscape competition of Tongan Tianyang, for example, is an activity sponsored by the Tongan District Rural Revitalization Office and Datong Street, organized by the Tianyang Village Revitalization Cooperative and Weiyinke planning and co-organized by the School of Architecture at Huaqiao University and Zaozuo youth team. Members of the workshop participated in the entire planning and process of the activity, from preliminary investigation to competition venue design, pre-competition training courses, competition activities and logistics services.

The experience of participating in these activities can promote three different types of learning, which are reflected in the tasks completed by the students. First, the planning and organization of activities can shape the leadership abilities and initiative of students and promote the generation of specific actions, which engages the accommodative ability produced by management tasks. Second, students must master the skills of interpersonal interaction and effectively communicate with others during collaboration with different groups, such as enterprises, villagers and experts, which requires the ability of value assessment. Third, they must complete tasks of architecture and engineering in the process of community construction,

Fig. 3 Rural practical teaching

which requires the use of technology and problem-solving skills, and they must actively practice according to professional knowledge and principles of architecture and planning, which promotes their converging learning abilities.

According to student feedback, learning from practical projects provides more comprehensive and relevant training:

"The compilation of the planning case of Xinqiao community construction has helped me to learn a lot of knowledge about community construction –comprehensively considering the connection between community construction and ‘people’ and ‘local history,’ the specific arrangement of the activities, the feasibility of the activities, and so on, and the meticulous thinking is like making a network. At first, I wanted to increase my course knowledge, but later I found that I improved social skills and other comprehensive abilities through attending the workshop, such as the ability to plan and manage. Finally, these abilities could be well reflected in my course learning: thinking about problems in a more detailed, more comprehensive, more rational and more mature way. I felt at ease when I planned some activities later, and I considered much more than before in a more logical and holistic way when doing some course reports and professional class assignments."

Fig. 4 Microlandscape design competition of “villagers + college students” in Tianyang village, Tong’an, Xiamen

"We have learned a lot, like experts. We have held some lectures and learned new professional knowledge, which we could not learn in class. It refers to professional improvement, and what is beyond my expectation is the improvement of my comprehensive ability, including how to communicate with others, which is the improvement of communication skills. Gao Xiang and I were the first to enter the workshop and then led a group of students to learn how to operate the workshop, which greatly improved our leadership and team cooperation ability. In fact, I think this is what I need more."

In addition to the text analysis of the activity, students' experience and feedback in the workshops are helpful to improve their logicity and sense of integrity, communication ability, operation and organization management ability. Students believe that they improve their overall comprehensive ability.

(3). Feedback and results of practical teaching.

Finally, practical theory and reflective learning guarantee healthy and orderly operation of the workshop. This includes several aspects. First, students participate in research projects and add their experience to scientific research, reflect on their experience and improve their assimilating learning abilities. Second, students' summaries of and feedback on the activity are evaluated after participation in projects and activities as well as the submitted works. The tutor team compiles relevant records of the teaching by establishing process logs and a summary of results, discusses how to further improve and promote them and publishes results in combination with scientific research. From the current overall impression, the Rural Innovation Workshop is conducive to improving students' overall understanding of rural areas, establishing correct values and design concepts and further improving comprehensive professional abilities. Similarly, it embodies the promotion and application of professional ability by encouraging the team to participate in rural-related discipline competition, entrepreneurship competition and extracurricular practical activities. So far, the team has participated in more than 10 competitions, which can improve participants' assimilating and converging learning abilities.

The Effect of the Rural Innovation Workshop on Teaching

In the promotion of different activities in the Rural Innovation Workshop, students are encouraged to learn different skills, play various roles in different tasks, cooperate and interact with different groups and continuously experience learning in activities.

In this paper, we use Kolb's analytical framework to classify the tasks and skills required in activities into four different learning processes: accommodation, divergence, assimilation and convergence. We use participatory observation as the research method to deeply participate in various stages of the teaching activities. Combined with the interviews of students, we analyse the experiential teaching promoted by the Rural Innovation Workshop. Specifically, we analyse the teaching forms and activities and observe what types of results the students obtain from experiential learning in terms of the implementation of tasks, the reserve of knowledge and the improvement of skills. Therefore, we classify and summarize the learning types relevant to different activities. According to Table 2, participation in practical planning activities and rural construction practice engage the most diverse learning types, with three different learning types each. Participation in practical planning activities promotes divergent,

Table 2 Summary of Learning Types Targeted by Rural Innovation Workshop Activities

Workshop activities	Types of learning			
	Accommodation	Divergence	Assimilation	Convergence
Village fieldwork		√		
Participation in folk activities		√		
Participation in planning projects		√	√	√
Exploration of rural culture	√	√		
Rural construction practice	√	√		√
Participation in research projects			√	√
Summary of and feedback on activities			√	
Participation in rural related discipline				
Competitions, entrepreneurship				
Competitions and extracurricular			√	√
Practice activities				
Gross value	2	5	4	4

assimilative and convergent learning, while rural construction practice promotes accommodative, divergent and assimilation learning. From the different activities, we sum the total times each learning type is engaged. From a vertical view of Table 2, we can see that the accommodative learning type is stimulated in rural cultural exploration and rural construction practice. The divergent learning mode is most reflected in teaching and experiential activities. There are five types of activities that can improve divergent learning abilities, including village field investigation, participation in folk activities, participation in planning projects, rural cultural exploration and rural construction practice. Therefore, the total score is also the highest.

From the perspective of Kolb's learning theory, the more students use different types of learning, the more easily they can accommodate and transform different types of experiences to achieve a balanced learning type and improve their overall ability. The feedback of students

Fig. 5 Learning effect of Rural Innovation Workshop

on the Rural Innovation Workshop mentions the improvement of all aspects of ability and indicates that individual comprehensive ability is improved in the process of practical participation in the workshop. Finally, we respond to the experiential learning theory from the actual experience of teaching effects and confirm that the activities of the workshop enable the conversion of learning types. After experiencing different learning types, students have a deeper understanding of these different types of learning so that they can balance different learning methods and achieve more comprehensive learning. According to Fig. 5, in the activities of the Rural Innovation workshop, the divergent learning type is most stimulated with a high score of 5 points, while the score of the accommodative learning type is only 2 points. In future curriculum design, the training of accommodative learning can be added to the activities or teaching of rural innovation workshops to balance the learning types, promote the overall teaching effect and make students' learning abilities spiral upward.

Conclusion

Currently, the largest problem in rural areas is the problem of “people.” Only by promoting talent for the future development of rural areas can we fundamentally solve the shortage of talent in rural areas; only by cultivating “new villagers” with “nostalgia” in mind can we obtain a foothold in rural areas and look into the future. Rooted in rural areas, the “Rural Innovation Workshop” by the School of Architecture at Huaqiao University improves the practical teaching system, promotes the combination of undergraduate rural planning teaching and practice, strengthens interdisciplinary cooperation and provides a platform and bridge for training in rural innovation and entrepreneurship. In the past two years of practical teaching, the workshop has followed the basic principle of “taking the rural areas as the teaching plan and the villagers as the teachers,” refined the concept and method of integrating rural planning education into rural areas by paying attention to the process, promoted communication between different groups and established a systematic practical teaching plan.

The contribution to theory lies in the provision of a dynamic process of experiential learning theory, in which researchers can observe the changes of learners with different learning styles and experiences in how they accommodate and master these different characteristics to develop a comprehensive learning type. By taking the form of the workshop as a case, this paper investigates whether students can achieve balance between the learning method and learning style through the workshop after experiencing different learning methods and whether the experience brought to students by the activity types in the case is balanced.

This paper takes the Rural Innovation Workshop as a case study to provide ideas and inspiration for rural planning practice teaching and makes modest contributions to rural revitalization.

1. Traditional practice is that college students educate villagers. Now, students learn from villagers. Cities and villages are equal. Villagers focus on life and place, while college students pay attention to theory and ideals, improving students' understanding, changes to the teaching system, and advanced learning.
2. The characteristics of sustainability are involved in the workshop model. New topics are constantly generated, and new non-prescribed work and practices are created. They are not completely divergent but involve guidance within a certain range. The sustainability of the results is reflected in several aspects: the school and teachers establish workshops with

various villages; workshops drive students to participate; students participate in knowledge acquisition and self-worth realization; senior students guide junior students; senior students continue to serve workshops and rural revitalization after graduation; and students direct their careers to realize social value. The workshop has also been deeply integrated into local and village communities in the process of self-circulation (to transform the environment and develop industries). School teachers make use of the local rich human and ecological environment to carry out diversified teaching practices to help students apply their knowledge and achieve the win-win-win combination of industry, learning and research.

Response and dialogue: Following the vertical dimension of the model from the bottom of the cone upward, the experiential learning theory can be divided into three orders, from divergence to assimilation to convergence and accommodation at the top. The vertex of the teaching development cone represents the concept of integrated learning, which can achieve the goal through the idealized learning cycle and upward spiral. Kolb proposed a so-called balanced learning mode and further subdivided it into three balanced modes. The first is to achieve balance in the acquisition of knowledge between concrete experience and abstract concepts; the second is to seek a balance between reflective observation and active experiment; and the third is to achieve balance between acquiring and transforming knowledge (i.e., the most ideal position of the cone vertex). Subsequent empirical studies have shown that people with a balanced learning ability in these two dimensions are more mature learners (more adaptive and more flexible) and have a positive correlation with high-level self-development (Kolb and Wolfe 1981; Boyatzis and Kolb 1993).

Some data, models, or code generated or used during the study are available from the corresponding author upon request.

1. Participation in planning projects.
2. Participation in research projects.
3. Summary of and feedback on activities.

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Code Availability Some data, models, and code generated or used during the study appear in the submitted article.

Authors' Contributions Huang Yinglu performed the workshop and contributed significantly to analysis and manuscript preparation.

Zhang Jiarui performed the analyses and wrote the manuscript.

Sang Xiaolei and Ou Haifeng led students to village fieldwork and kept teaching records, provided Summary of and feedback on activities for the paper.

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