

Using the Case Method of Instruction in a University Child Care Entrepreneurship Course in Taiwan¹

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This study assessed the effectiveness of applying the case method of instruction (CMI) to an undergraduate course concerning child care management. As a collaborative action research project investigating child care entrepreneurship education and CMI pedagogy, its participants consisted of 4 experts from the field of child care, and 39 university students taking the course on child care management, which was taught by the author. The participants were divided into 8 entrepreneurship teams, each containing 4–5 students and an expert. The teams participated in a national competition in creative marketing planning. They discussed and made planning on administrative organization, business marketing, and public relations. The study collected data through a workshop, observation, interview, and documents, and performed qualitative and quantitative analysis. Results indicated that the use of the blended CMI has potential influence on the child care entrepreneurship. It can effectively guide students to actively learn and be more expressive in the discussion. It also encourages students to engage in diversity thinking and adopt a problem-solving attitude to support cooperative teamwork — capacities that help students develop competency of child care professional management.

Keywords: child care; case method of instruction (CMI); entrepreneurship education; cooperative teaching

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Introduction

According to estimates by Taiwan's National Development Council, the sub-replacement fertility and the acceleration of population ageing will cause the aged population to exceed 20% by 2026, turning Taiwan into a super-aged society — exceeding the agedness of the societies of European countries, the United States, and Japan (National Development Council, 2018). Although the demographic trend can be predicted, the rate at which it occurs is problematic (Xue, 2016). In July 2018, the Executive Yuan proposed the Sub-Replacement Fertility Plan (2018–2022), recommending that efforts be made to expand access to affordable early-year education and provide child care allowances to parents with infant to five-year-old children to increase people's willingness to have children (Executive Yuan, 2018). Though with its implementation, the anticipated results have not been achieved (Li, 2018). One notable deficiency is the shortage of child care professionals. In particular, suitable manager candidates for child care institutions are few in number. They are in a position to coordinate the administration and operations of these institutions, and therefore are critical to the quality of child care (Duan & Ma, 2013).

The author of this article has 8 years of experience as a preschool director and has taught a child care management course at universities for 20 years. The course aims to train professional child care managers and directors. Because teachers need to plan curricula, they are the means through which to achieve successful curricular reform (Chen, 2003). Teachers also have the responsibility for selecting and arranging student learning experiences (Schwab, 1978). With research funding from Taiwan's Ministry of Education, this study solicited the involvement of experts from the field of child care with the implementation of the case method of instruction (CMI) in child care entrepreneurship education to address the needs of child care settings and professional managers. The following summarizes the motive and aims of the research.

Managers Urgently Needed for Child Care Facilities

As stated in the Taiwan Executive Yuan Sub-Replacement Fertility Plan (2018–2022), 440 child care centers for children under two years old will be set up by 2022. For children of two to five years old, 2,500 classes will be established in publicly funded preschools between 2018 and 2022 (Ministry of Education, 2018). According to the regulation, only a nonprofit juristic person may apply to operate a nonprofit child care center. The local authorities are facing the challenge of limited nonprofit organizations. These nonprofit child

care centers are also short of professionals to manage the facilities (Shin, 2018). Owing to the shortage of global child care personnel, described as a “child care desert,” working families are having difficulty in finding child care facilities that suit their work and family needs (Sandstrom et al., 2018). As a result, schools in Singapore and China have been reaching out to Taiwan to recruit child care entrepreneurship talents by offering a higher salary than their local average salary (Y. C. Lin, 2017; Y. R. Lin, 2017). The first research motive of this study was to improve the effectiveness of child care management courses and entrepreneurship education in response to the demand of talents in the field of child care.

Management Courses Should be More Practical and Taught Jointly With Industry Practitioners

The top priority of technical and vocational education is to cultivate individuals with the ability to practically apply their expertise, and management courses must account for social realities. Besides acting as the president of student union, class representatives, or various other major roles during the time at university, university students still generally lack experience in organizational operations and management. Therefore, it is a challenge for students in child care management courses to understand the intricacy of families and social dynamics. Even if they have mastered various management theories in class, they usually still need time to learn to navigate society and families interactions, thereby gradually accumulating expertise in child care management. Thus, it is essential to have child care experts involved with cooperative teaching method to ensure the practicality of the entrepreneurial learning (Valdés & Fan, 2017). The second research motive of this study was to investigate the benefits, if any, of cooperative initiatives in which industry professionals contribute to management courses. This objective was achieved by examining practical child care management.

The Application of Entrepreneurial Case Teaching Method Promotes Autonomous Learning and Problem-solving Abilities in Students

University students studied three years in a high school and spent most of their efforts preparing the national entrance exam rather than engaging in practical experience. The core competence acquired by child care management students involves independent learning and problem-solving, which are essential to cope with changes in society or the educational

system and policies. The third motive of this study was an interest in using entrepreneurial case teaching method as a framework to encourage students to participate in a competition, which will inspire students to learn independently about entrepreneurship and guide them in problem-solving, hence to impart refined skills to create business proposals. In addition, an expected outcome is to increase students' awareness about entrepreneurship as a career choice (Piperopoulos & Dimov, 2015).

Overall, Quality Assurance Agency (2018) stated that entrepreneurship education is:

the application of enterprise behaviours, attributes and competencies into the creation of cultural, social or economic value. This can, but does not exclusively, lead to venture creation. (p. 7)

Entrepreneurship skills within the field should be emphasized. It is essential for child care experts since it is now examined in more detail and on a more delicate level. This study hypothesized that cooperative teaching method with industry practitioners and the introduction of practical CMI pedagogy integrated with an entrepreneurship competition could be feasible strategies to improving the quality and effectiveness of child care management teaching in universities. However, the implementation model, effectiveness evaluation, and analysis of student learning behaviors require further investigation. The purpose of this study was to establish a model using CMI for child care entrepreneurship education. Moreover, the research evaluated the learning process and teaching outcome from the course instructor, industry practitioners, and students forming entrepreneurship teams participating in an entrepreneurship competition. The findings are expected to serve as practical references for vocational courses on child care entrepreneurship.

Literature Review

Innovation and Entrepreneurship in Child Care

Early childhood development programs that provide health care, education, parental support, and other services to children before entering primary school have been demonstrated to produce considerable life-long benefits with respect to adolescent and adult well-being. This topic has grown in prominence because of its inclusion as one of the United Nations Sustainable Development Goals (United Nations, 2019).

Changes in innovative child care entrepreneurship can be discerned from information in the industry. In the United States, a group of investors, entrepreneurs, and influential leaders in society formed a philanthropy network called Social Capital Markets, which regards early childhood education as an emerging field of social innovation and entrepreneurship that faces the serious challenges of providing child care. Therefore, the introduction of new entrepreneurial talents into the field of early childhood education encouraged by various incentive programs is needed (Social Capital Markets, 2019).

The Global Director of ReadyNation — Council for a Strong America — suggested an innovative model of early childhood support. The priority is to diversify child care and support plans to develop high-quality early education programs (Social Capital Markets, 2019). One example is the cross-subsidies from the government that involved early childhood sector and different businesses in order to benefit both. For instance, people in nursing homes almost always do not want to be there and never have enough to do. Young children in child care centers always need more attention and want someone to play with. The Intergenerational Learning Center is a model case for the situation mentioned above. The Center enables elderly people to learn together with young children, which enhances intergenerational interactive learning capacity.

In Taiwan, parents expect a diverse range of child care services, for instance, temporary care for sick children, child care for children of parents with long working hours, on-site child care at companies, or parent-child play-and-learn-together areas. Diversification of child care services still needs much more efforts from the child care industry (Shih, 2013). The range of services provided by entrepreneurs in the child care field can be classified as childhood education businesses (e.g., infant centers, preschools, and after-school care centers), children's culture and arts businesses (e.g., children's art workshops, children's dance classes, and toy and clothing shops) (Y. C. Hung, 2012). The design of university-level early childhood education programs focuses on the training of teachers for daycare centers. More efforts must be put into enhancing students' prospect of being employed by diverse child care institutions and their core competence in entrepreneurship (Tsai, 2007).

Entrepreneurship offers individuals a chance to build successful careers without having to join large corporations as they are allowed to make most of the major decision solely. Nowadays, entrepreneurship education (EE) is one of the fastest-growing fields of education globally, but *what* should be taught in these programs and *how* to teach it are still subject to debate (Sirelkhatim & Gangi, 2015).

Implementation of CMI

CMI refers to a type of teaching method that uses real-life cases as the core medium of teacher-student interaction. Additionally, it enables teacher-student interaction through discussion and Q&A sessions (Levin, 1995). Through case discussions, dialogs, experience sharing and reflection, participants are led to construct their own ideas and beliefs. Practical experience as well as problem-solving and analytical abilities are enhanced. With its structural, contextual and individual characteristics, the implementation of CMI can reduce the gap between theory and practice. These characteristics are suitable for application in learning domains that involve complex settings, high variability, and decision-making (Kunselman & Johnson, 2004).

By applying CMI into university's entrepreneurship courses, it entails transforming theory into actual situations or cases suitable for university students to utilize their independent thinking and analytical skills. Case methods based on the premises of entrepreneurship can improve the ability of university students to solve practical problems in the workplace in the future, and if or when they undertake the process of starting a business (Neck & Greene, 2011). By using EE that has been practiced in Europe and the United States for many years as a template, it is evident that training programs and workshops for professors are needed in areas such as CMI and action-oriented innovative approaches (Rasmussen & Sørheim, 2006). University education is a crucial stage for students before they enter the job market. The level of innovation and entrepreneurial spirit emphasized by EE can be beneficial to students' future employment. In the past, entrepreneurship education-related courses were only available in business or management schools (Shinnar, Pruett, & Toney, 2009). Empirical studies (C. C. Hung, 2002; Levin, 1995; Yao, 2011) have indicated that the case method has the characteristic of being contextual, diverse and immediate, and these qualities can narrow the gap between theory and practice.

The study of innovation and entrepreneurial abilities can help to improve the quality of child care centers and related industries. For students who aspire to start a business, learning entrepreneur-related abilities can also help to increase the chances of their success in entrepreneurship. Therefore, implementing EE and related courses in departments of child care in universities is potentially necessary and important (Tsai, 2007).

Application of Cooperative Teaching With Industry Practitioners

Entrepreneurship courses offered by Australian universities usually have industry

experts with rich entrepreneurship and investment knowledge participating in guest lectures, case discussions, and entrepreneurial forums (Crispin, McAuley, Dibben, Hoell, & Miles, 2013). The *Technical and Vocational Education Act* was passed in Taiwan in 2015 (amended in 2019) and mandates that schools can invite experts in the industry to assist with teaching (Ministry of Education, 2019). The Act aims to improve the practical teaching ability of teachers, strengthen the link between university and industrial practices, vitalize the teaching model, and enrich course content. This can enhance students' learning effectiveness, cultivate students' employment competitiveness and practical ability, and narrow the gap between higher education and the skills and talents demanded by the industry. Several studies have presented concrete examples of the effectiveness of cooperative teaching with industry experts (Turkich, Greive, & Cozens, 2014). With respect to teaching material development, teaching strategies such as experiential learning, the case method, and information technology application used by teachers in the industry were shown to be more conducive to student learning (Gentelli, 2015).

This study applied the entrepreneurship case method and introduced industry experts into the classroom to provide entrepreneurial case materials and models in the field of child care. In addition, the study introduced cooperative teaching method together with the researchers and formed a community discussion, thereby undertaking a hybrid case method (C. C. Hung, Shih, Wang, Tung, & Wang, 2018). By using innovative entrepreneurship, the case experience of others was transformed into own experience of the learning team.

Some perceive entrepreneurship as an innate talent and is unteachable. However, this can also be seen as other professions like engineering or medicine, and no one will dispute the need to teach students these subjects (Fayolle, 2013). This pedagogic practice integrated the teaching strategies and used competition instead of training settings commonly seen in skill-oriented learning.

With the mimic reality of an entrepreneurial competition, the goal of learning was achieved. Brentnall, Rodríguez, and Culkin (2018) explore the effectiveness of EE programs through the lens of realist evaluation (RE). In this novel application of RE to EE, competitions has revealed the extent to which competitions and competitive pedagogies are handed down as a method which delivers significant short-term and long-term benefits. Research has indicated that this type of teaching method is extremely helpful for teaching marketing courses in technical and vocational colleges and guidance as an effective approach for all students (Brentnall et al., 2018). However, some argue that considering the nature of competitions, too much focus on winning may discourage students' interests in

entrepreneurship, and mislead them from examining the essential topics from a real-world perspective. Despite the fact that it is the most commonly used method in teaching entrepreneurship (Brentnall, 2020; Fan, 2018; Wang, 2016), it is emphasized to integrate cooperative learning method to ensure the maximization of the potential learning capacity. Moreover, for university students, conducting presentations in small groups is already a highly common method of presenting learning outcomes. Research has suggested that cooperative learning is a systematic and structured teaching strategy (Goodman, 2011; Jalilifar, 2010). Randomly assigning students to sit together cannot be regarded as cooperative learning. In cooperative learning, teachers lead students to support each other and discuss or share their own views in small and heterogeneous groups before eventually sharing learning outcomes. This method can be used to expand students' thinking and lead them to a higher level of cognition. More importantly, the goal of such a process is to subtly cultivate more cooperative behavior. The focus on studying entrepreneurs as the starting point for designing EE programs is appreciated because it will contribute to providing learner-centered programs that better engage students than teacher-centered ones (Jones, 2010).

Methodology

Research Participants and Teaching Action

The research participants were students taking the course on child care management. Two weeks before the semester, the course syllabus in the study was posted on a Website and how the course was involved with research was described. Students could decide whether to be the participants (research governed by applicable research ethics). The course involved teams working toward participation in national competitions. A total of 39 students were divided into eight groups. Four experts from child care institutions participated — one being the director of an early intervention center, one being a preschool's head teacher, and the remaining two founders of infant care centers. A class curriculum meeting was held at the beginning, middle, and final stages of the study.

This was a cooperative action research project that emphasized the interactive and cooperative relationship between (1) entrepreneurship case teaching teams formed by the researcher and elite experts in the field of child care, and (2) students participating and taking national entrepreneurship competitions. The study targeted participation in nationwide entrepreneurship competitions as the course outcome. Additionally, the author

incorporated entrepreneurship theories and resources into entrepreneurship and management instruction in the field of child care. In addition to providing topical reading materials, the formal teaching content also encouraged discussion and cooperative learning in small entrepreneurship study groups. This enabled observation of each group's entrepreneurial thinking and their gradual formation of business plans on the theme of child care.

The experts enhance the quality of the activity by creating the competition platform and capture relevant and feasible child care education ideas. The activity is to let students come up with idea creatively with no intervention to ensure the innovation of the activity. However, the competition results will define the likelihood of the business idea to be successfully used in the current child care education field.

In this cooperative team learning, the experts and course instructor help students in small and heterogeneous groups to support each other and discuss and share their views before sharing learning outcomes.

Hannon (2005) summarizes a more commonly applied conceptualization of EE, which is often presented as being “about” (as academic study), “for” (preparation for an entrepreneurial life and business startups or ventures) or “through” (as learning and/or taught through core capabilities embedded across curricula) entrepreneurship. This study was the very first step that child care major students can gain new experiences of entrepreneurship learning. All 10 teaching units were divided into 3 stages (Early, Middle and Final), and students have 2 hours per course per week for 18 weeks:

Stage 1: Introduction and lecturing (Weeks 1–4)

- CMI is applied via student-teacher interactive teaching team;
- Innovation and entrepreneurship: What, why, how;
- Building entrepreneurial teams, each consisting of 4 to 5 students and a coach with expertise.

Stage 2: Team learning and expertise coaching (Weeks 5–16)

- Conducting multiple meetings to achieve goals, including: understanding of curriculum, the competition, roles delegation and business proposals;
- Selecting high-potential projects, entrepreneurial marketing;
- Defining and implementing the strategic logic of the organization;
- Developing business models in early and mainstream markets;
- Sales forecasting and market roll-out for innovative projects;
- Financial plans: the basics, structuring deals;
- National competition: Valuation of entrepreneurial and innovative projects.

Stage 3: Final phase — presentation and reflection (Weeks 17–18)

- Business plan presentation;
- Reflection: What did I learn from innovation and entrepreneurship education?

Data Collection and Analysis

The discussion of students' learning perception can help elucidate their learning effectiveness (Dassa & Derose, 2017). This study used entrepreneurship archive evaluation as a formative assessment. The entrepreneurship competition outcome presentation, business proposal writing, and personal reflection were used for evaluation and analysis. Moreover, the author used quantitative analysis to evaluate a total of 35 end-of-term teaching assessment questionnaire surveys of course instructors. Other than the open-ended qualitative feedback collected in the middle and at the end of the semester, a qualitative data analysis was conducted on 38 anonymous open-ended self-report designed by the researcher for the students to assess their participation in the entrepreneurship competition, the abilities they gained, and any questions they encountered while learning entrepreneurship. Other information sources such as discussion within small groups on LINE app better reflected the actual interactive conditions.

The author classified all data and gave a code to each datum and data class. Specifically, the data were given sequential numerical codes (i.e., 1, 2, ... etc.), whereas data classes, which corresponded to the open-ended questions, were given alphabetical codes (i.e., A–E). The fragmented data were assembled into meaningful arguments in this manner, and a framework of the open-ended questions came into shape. The coding framework is as follows:

- A. Participation in an entrepreneurship competition
 - A1. how to work in teams
 - A2. how to manage time
 - A3. how to write business proposals
 - A4. how to make presentations
- B. Abilities gained from entrepreneurship learning
- C. Challenges in entrepreneurship learning
- D. Mid-term open-ended feedback
- E. End-of-term open-ended feedback

Taking code 14A1 as an example, 14 indicates the students' number and A1 refers to question A1.

Analysis and Discussion

Instruction of Case Method for Child Care Entrepreneurship Course Evaluation

The 39 students divided into eight teams were enrolled in the university's healthy and happy entrepreneurship project competition and creative innovation entrepreneurship competition. All teams received an award, and the entrepreneurial themes and outcomes of the teams are listed in Table 1.

Table 1: National Entrepreneurship Competition Results

Team	Theme	Competition	Award
Happiness Doggy Family	Developing intimate interactive relationship between dog(s) and family members; creating child care and parent-child center that is happy and pet-friendly.	Healthy and happy entrepreneurship project competition: a total of 56 groups from 31 schools participating in the	Nationwide championship
Loving Young Caring Elders App	CALL Caring app is multifunctional and reminds caregivers about key tasks regarding child care and elderly people care through messages.	competition	Ranked third place nationwide
Come Cheerful Exchange	Fulfilling the social responsibility of loving the Earth; promoting provision of children's toy rental service through Internet platforms.		Excellence award
BubuGu Story House	Integrating compound operations and providing visual and bodily experience of diverse story presentation in VR, 4D stereo, enabling family to enjoy happy childhood.	Creative innovation entrepreneurship competition: a total of 165 groups from 64 schools in 4 countries	Ranked third place in nationwide final competition
Toy Dream Factory	Providing various customized parent-child co-play spaces such as parent-child DIY toys and parent-child parties.	participating in the competition	Excellence award in final competition
Nature Forest Infant Care World	A living area that is completely environmentally friendly and organic.		Excellence award in final competition
Happy Art Play Restaurant	Expanding the function of parent-child restaurants and incorporating diverse artistic and creative activities.		Excellence award in final competition
Family Way	Providing ways for family gatherings through diverse activity arrangements from birth to 100 years old.		Excellent work in final competition

Teaching appraisal was conducted by the university as a teacher evaluation to ensure the quality of the curriculum and teaching methods. Student feedback suggested that teachers' teaching effectiveness was highly recognized. Descriptive statistics were used in the appraisal. Students rated their satisfaction of the course on a 5-point scale. Among 39 students who enrolled in the course, 35 responded to an anonymous end-of-semester teaching appraisal, yielding a response rate of 89.74%. Of the 10 teaching evaluation items, the top two that students strongly agreed with were "had professional knowledge regarding the course," "ability to clearly explain course content," and "used teaching materials that met learning needs." The detailed analysis of the end-of-semester survey are shown in Table 2.

Table 2: Teaching Appraisal (End of the Semester) (N = 35)

	Strongly Agree <i>n</i> (%)	Agree <i>n</i> (%)	Adequate <i>n</i> (%)	Disagree <i>n</i> (%)	Strongly Disagree <i>n</i> (%)
1. Taught according to lesson planning	24 (68.57)	7 (20.00)	4 (11.43)	0 (0.00)	0 (0.00)
2. Used teaching materials that met learning needs	26 (74.29)	6 (17.14)	3 (8.57)	0 (0.00)	0 (0.00)
3. Clear teaching goals	25 (71.43)	7 (20.00)	3 (8.57)	0 (0.00)	0 (0.00)
4. Earnest teaching attitude	25 (71.43)	8 (22.86)	1 (2.86)	1 (2.86)	0 (0.00)
5. Had appropriate interaction with students	23 (65.71)	9 (25.71)	3 (8.57)	0 (0.00)	0 (0.00)
6. Had professional knowledge regarding the course	28 (80.00)	6 (17.14)	1 (2.86)	0 (0.00)	0 (0.00)
7. Ability to clearly explain course content	26 (74.29)	6 (17.14)	3 (8.57)	0 (0.00)	0 (0.00)
8. Had fair and objective grading method	23 (65.71)	10 (28.57)	1 (2.86)	1 (2.86)	0 (0.00)
9. Ability to inspire my learning interests in the course	24 (68.57)	8 (22.86)	3 (8.57)	0 (0.00)	0 (0.00)
10. Teaching quality was excellent overall	24 (68.57)	8 (22.86)	3 (8.57)	0 (0.00)	0 (0.00)

Industry Experts' Cooperative Teaching Expanded Entrepreneurship Small Groups' Learning Perception and Experience

Cooperative learning in small groups encouraged in-depth interaction between team members and promoted interpersonal relationship learning

Research has indicated that cooperative team learning is a systemized and structured teaching strategy (Goodman, 2011). Randomly assigning students to sit together does not qualify as cooperative learning. Therefore, consensus and cooperation among group members are the core of small-group cooperative learning in this study:

Do not omit assigning work to certain team members simply because you do not know their abilities, and then in retrospect criticize them for not participating in teamwork. Responsibilities and work should be allocated to each team member. (14A1)

Universities are places for free academic studies; as such, they are teaching and learning communities in which students act as autonomous learners (Beach, Sorcinelli, Austin, & Rivard, 2016). In cooperative team learning, teachers help students in small and heterogeneous groups to support each other and discuss and share their views before sharing learning outcomes. This method can be used to expand students' thinking and lead them to a higher level of cognition. More importantly, the goal of such a process is to subtly cultivate more cooperative behaviors, thereby building the foundation of entrepreneurship and management abilities:

When team members are communicating with each other, friction can occur frequently, and we must continually learn to adapt to the communication habits of each other; this enables faster comprehension of the meaning that team members are trying to convey. (13A1)

Teachers from diversified professional backgrounds enriched the cooperative learning environment

Gillies and Boyle (2010) considered that a teacher's attitude and professional knowledge are key factors that determine whether cooperative team learning can be conducted smoothly. Attitude refers to a teacher's willingness to adopt a learner (student)-centered approach rather than the conventional teacher-centered approach, and to

devote effort to course planning. Professional knowledge refers to a teacher's ability to create a warm and friendly learning-support environment, so that:

whether it is a big or a small question, the professor and the teachers from industry, who will provide critical thoughts and suggestions. (13A4)

Furthermore, professional knowledge also refers to a teacher's skills in facilitating cooperative learning, thereby promoting teacher-student communication and students' problem-solving abilities. The researcher with experts from the industry forms a practical entrepreneurial cooperative teaching. Through their guidance and encouragement, the students started to build confidence and exhibit independent thinking abilities.

Small-group EE conducted with industry experts improved learning effectiveness

Learning effectiveness is determined by learning participation, and learning engagement is an important indicator of learning achievement (Linnenbrink & Pintrich, 2003). Students' participation in school has been widely considered to affect their learning achievement, emotions, and behavior (Fredricks, Blumenfeld, & Paris, 2004). Learning is an interactive process, and the psychological responses generated toward the learning environment and content during interactions can be referred to as learning perceptions (Peterson & Swing, 1985):

Team members exchanged opinions, coordinated and made choices, and avoided conflict; the aim was to create the center of "Nature Forest Infant Care World" that we envisioned. Tasks were allocated to team members according to their abilities. Even though we experienced considerable setbacks during the process, we faced the setbacks and overcame them without giving up. We made full use of our strengths and realized that teamwork and negotiation abilities are really important. (9B)

Hennessey and Dionigi (2013) indicated that factors to be considered with respect to implementing cooperative learning include the professional knowledge of teachers, age and development stage of students, number of students in the course, and teaching time. Moreover, whether both teachers and students understand and agree to engage in cooperative learning is a key factor, too. In the early stage of this study, students still have a teacher-centered disposition, and the learner passively learns from textbooks. Students were

accustomed to the teacher-centered mode of teaching and thus exhibited uneasiness with a learning method that emphasized extensive discussion and proactive learning:

I hope that teacher would provide more guidance and instruction on assignments.(9D)

Hertz-Lazarowitz (2008) contended that to implement cooperative team learning, teachers must have a command of skills such as the ability to prepare learning subjects and subject content and to teach students interactive communication and learning methods; additionally, teachers should participate in group interactions, clearly explain and allocate learning tasks, arrange challenging learning tasks, and understand their own role in promoting course transformation and output. According to the mid-term anonymous open feedback, the researcher and expert teachers from the industry used LINE groups or formal courses to add motivational article or pictures and share actual experiences to inspire students' creativity, thereby building their confidence and expanding the learning experience:

This is a fascinating course that gives us opportunities to come up with business proposals, with teachers from the industry or entrepreneurship instructing the course, which enables us to learn deeper and quickly. (8D)

The Entrepreneurship Case Method Contributed to the Business Proposal Writing Ability of Students

Hsiao (2013) established that entrepreneurship abilities must be part of the EE curriculum in technical institutes and universities, indicating three categories of entrepreneurial competencies: prerequisite skills, preparative skills, and operational skills. Business plan evaluation emphasizes commercial viability. Students can learn business operations and business strategies for marketing products and services through drafting business plans. The factors of how, who, and what of entrepreneurship influence one's ability to identify, evaluate, and utilize opportunities (Shane & Venkataraman, 2000):

When it came to expected returns, we ran into a lot of trouble because we had a relatively weak conception of cost calculation and budgeting. However, we did not give up easily. We asked teachers about the parts that we did not understand and learned how to calculate our cost before helping each other to calculate other expenses in detail. (7A4)

The content of this course aims to provide a portfolio of techniques to encourage entrepreneurial practice. The topics include generating ideas, team building, business planning, creativity, innovation, inspiration, opportunity recognition, selling, networking, the unpredictable and contingent nature of entrepreneurship, adapting to change, and expecting and embracing failure (Fayolle & Gailly, 2015; Piperopoulos & Dimov, 2015):

To use specialized terms in business proposals and achieve a high degree of professionalism, we must consider business proposal writing from various sources and then integrate the lessons learned into our own ideas (we are no longer imitators!). (11A4)

The concept of “learning by doing” and experiential teaching methods have been discussed in the literature (Fayolle & Gailly, 2015). Simulation is a prominent tool (Honig, 2004); other discussed teaching methods include self-directed activities, team teaching by academics and practitioners, and mentoring and networking with entrepreneurs (Piperopoulos & Dimov, 2015). This study used business proposal writing as the formative evaluation. The excellent results achieved in competitions were reflected in students’ feedback such as:

[I] became adept at writing business proposals. (11B)

I gain the skills for writing entrepreneurial business proposals, team working ability, and communication skills [which are essential to success]. (20B)

Students writing down their reflections for the learning process was not merely iterating the common goals that teachers and students endeavored to achieve; more importantly, it planted the seed of future entrepreneurship in students.

The Experience of Participating in Entrepreneurship Competitions Had Potential Influence on Students

Competition learning is a new concept that has emerged in the study of entrepreneurship. Competition learning refers to learning that occurs during the process of participating in competitions and the learning outcomes achieved through the process (Brentnall, 2020). This method inspires students to endeavor upon tasks and improve themselves to satisfy their need for pride and achievement. Learning motivation can thus be positively influenced. Most studies that addressed the topic have also indicated that

participation in competitions positively influences students (Fisanick, 2010). EE is centered on the idea of gaining entrepreneurial competencies through experience — entrepreneurs learn by doing (Cope & Watts, 2000) because experience exposes them to routinized activities (Cope, 2005), contingencies, noncontiguous events (Harmeling & Sarasvathy, 2013), failure (Minniti & Bygrave, 2001), and reflection (Cope, 2005) that comprise entrepreneurship. According to the research outcomes, the positive effects of students' exposure to entrepreneurship case teaching and learning improved (a) expression and communication, (b) team work, (c) problem-solving, (d) entrepreneurial confidence, and (e) reflective thinking.

Expression and communication

Through frequent and close peer discussion, students can experience in-depth learning and recognize the difficulty and importance of thinking from other people's perspectives:

My largest challenge in this learning process was achieving mutual understanding and communication with peers. I felt I had explained one thing extremely clearly and straightforwardly, and I also asked them if there was anything unclear and they answered that it was clear. However, the explanation still needed to be reconfirmed and modified eventually. Consequently, I started to doubt my expressiveness and think about things that I needed to reflect on and improve! Teachers are my role models and I must learn from them! (38C)

Teamwork

The contingency model exposes students to entrepreneurial problems early in their education for them to contemplate and learn to cope with. This can reduce the likelihood of negative peer assessment of entrepreneurial and venture activities. Moreover, this helps them to cope with different practical situations and risk assessments in venture capital and to develop the critical and dialectical integration of thinking (Honig, 2004):

In teamwork, I always follow other people's pace; however, I am impatient and constantly urge and press my peers to show results or complete their work expeditiously. However, everyone has their own pace, and I ended up helping other people to complete the parts that were unfinished instead of pressing them. (36B)

Problem-solving

Researchers have suggested methods on how entrepreneurs and adults in general learn, such as role-playing, real business experience, discussions of case studies, and business simulations. It is assumed that a high proportion of active learning is vital for developing problem-solving, self-reliance, and self-reflection (Klapper & Tegtmeier, 2010):

Aim to achieve quality of a certain level. In the process, we constantly used LINE to communicate with each other and give suggestions. During each communication session, one team member was asked to record the meeting (this was done in rotation). A meeting ended only after a consensus was reached. In the later part of the modification process, we further divided our group into subgroups of two to three members to modify the business proposal. Discussion and cooperation through this method can further enhance team morale and achieve highly effective team operation through ability complementation, mutual cooperation, and problem-solving. (15A1)

Reflective thinking

The teaching strategy of cooperative learning in entrepreneurship education emphasizes students' active participation in the process of learning entrepreneurial activities rather than merely absorbing knowledge from books. Through this teaching strategy, students' creative, critical, and proactive thinking attitude can be cultivated (Jones & English, 2004):

In this course, I gained the abilities of reflection and thinking. I learned to reflect on the learning process to identify places that I needed to work harder. I learned to recognize the difference in opinions. I also learned how to utilize information flexibly and actively for learning, which expanded my method of learning and helped me discern the credibility of information. (35B)

Sometimes, I would not take action because it was troublesome. I would procrastinate and finish my work the day before the deadline — I must improve this aspect of myself. (2B)

Entrepreneurial confidence

Entrepreneurial competencies include: opportunity recognition, opportunity assessment, risk management, creative problem-solving, value creation and building, and using networks. EE focuses on exploring how entrepreneurs gain these competencies (Cope, 2005; Morris,

Webb, Fu, & Singhal, 2013). Brinckmann, Grichnik, and Kapsa (2010) demonstrated that business proposal writing is positively correlated with entrepreneurial performance:

In the process of writing business plan, I learned how to utilize information: using information flexibly and actively for learning, which expanded my method of learning and helped me discern the credibility and authenticity of information. (35B)

Carefulness, patience, communication skills, and presentation method; competition participation experience; and estimation and calculation of the sum of money using Excel. These are what I learned from this course. (24B)

Summary

Overall, this study reflected key elements of learning: behavioral engagement, cognitive engagement, and motivational/emotional engagement (Finn & Zimmer, 2012; Fredricks et al., 2004). Students' partial and full participation represents behavioral engagement. Teachers can readily observe some behavioral engagement indicators in class, for example, effort, persistence, help-seeking, and self-directed learning that students exhibit during the participation process (Linnenbrink & Pintrich, 2003). Students were not participating in nationwide competitions for the first time. However, competitions that were based on the topics of entrepreneurship and innovation were an unprecedented and highly challenging experience for them. Through the competition experience, students showed more support and appreciation for the application of the entrepreneurship case method in management courses:

This course opened my mind and enlightened me! (14C)

I hope all students have the opportunity to participate and experience these types of activities next semester. How can people who never walk in the road of darkness have a bright future! (34C)

Conclusions and Suggestions

We are grateful that teachers gave us the opportunity to participate in competitions. We have learned and benefited considerably from the process, overcome our weaknesses, and enhanced our stress endurance. (10E)

The above feedback from an anonymous student contrasts sharply with the ominous warning clearly stated in the course syllabus:

This is a Pedagogic Practice research study funded by the Ministry of Education, and in conjunction with the research plan, students must participate in nationwide innovation competitions. In addition to lecture hours, a considerable amount of extra hours will be required in which students will convene with teachers employed in industry and peers in teams. Please do not take the course if you cannot comply with the requirements.

As an elective course, this course was not a course that leads to easy credits. Nevertheless, participation in nationwide entrepreneurship competitions and the awards won by all teams surely demonstrated the value of more than 2 credits for students. Specifically, the entrepreneurial confidence that the students built and their strengthened stress endurance are core abilities of managers, which the students hope to be in the future.

Conclusions

CMI and teaching effectiveness

The author and experts from child care institutions looked into entrepreneurial cases and established entrepreneurship teams, which were operated systematically to facilitate an innovative learning organization that integrated practical experiences into the teaching in child care management. Cooperative teaching was applied to instruct entrepreneurial planning. Students discussed their entrepreneurial ideas with the experts, who provided feedback to enhance students' ideas. A media platform, LINE, was used to ensure instantaneous communication to improve learning effectiveness at any time, anywhere. This improved learning effectiveness. Pedagogic practice action research endeavors to create multiple learning opportunities and experiences for students, and this study ably demonstrated the effectiveness thereof.

Participating in the entrepreneurial business proposal competition promoted problem-solving and teamwork

The author guided students to engage in cooperative learning through hands-on learning, comprising competition and training. Sharing a common goal, students fully utilized their strengths, exchanged opinions with other team members, coordinated efforts,

made choices, and solved problems, all of which enabled them to complete tasks and missions. Additionally, such cooperative learning built a foundation of professional management ability in these students aiming to work in child care in the future.

The case method can effectively lead students to engage in autonomous learning and participate in discussions

CMI used entrepreneurial business proposal writing as the learning framework. By providing entrepreneurship theories and contextual cases, students were encouraged to fully utilize their creativity. However, under the time pressure of competitions, self-management and pro-activeness played an even more crucial role. This was particularly true when only two course hours were given weekly for 18 weeks and each member had a role and task in the team. The given time was insufficient to conduct business proposals for entrepreneurship competitions. Students were the primary agents of the entrepreneurship projects, with child care industry experts available for assistance as needed. They were able to assist the students in analyzing and evaluating the advantages, disadvantages, and risks of their business proposals and help drafting an optimal plan. Such a learning environment effectively promoted student-centered learning and optimized the effectiveness of autonomous learning.

Suggestions

Teaching

Participating in groups that consisted of students and teachers and entering an entrepreneurial business proposal competition effectively led students to engage in autonomous learning and participate in discussion. Moreover, problem-solving and teamwork skills were exercised, which contributed to the cultivation of professional management ability for child care. Therefore, interdisciplinary cooperation is recommended; that is, selecting relevant subjects and expanding cooperation between teachers in different domains would be beneficial. Additionally, more efforts can be devoted to child care cross-sector talent cultivation according to students' specializations in nursing, data management, and long-term care.

Future research

This study implemented cooperative teaching in a one-semester course that included

the participation of industry professionals. The author used entrepreneurial cases of child care to lead students to develop their problem-solving and autonomous learning abilities. Future study can investigate: (a) the long-term effect of implementing the entrepreneurship case method on students' future employability; it would be useful to explore the results of EE programs with respect to the graduates who actually start or grow a business and to link the findings to the teaching process; (b) the value of theoretical and practical applications can be assessed from the perspective of experts from the industry; (c) the experimental design or quasi-experimental design for both control group and experimental group for further investigation.

Notes

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案例教學法於大學兒童托育創業課程之教學實踐

段慧瑩

摘要

本研究旨在探討案例教學法實踐於大學幼保系兒童托育經營課程的教學影響。研究者亦是課程教學者，和 4 位兒童托育機構主管專家合作教學，39 位修課大學生為研究對象，分成 8 組創業合作團隊，每組 4-5 名學生和 1 位專家，以行動研究方法，實際參與全國性創業競賽。教學實踐歷程融入經營理論與創業案例，進而形成各類兒童托育服務主題的創業企劃書。研究工具以兒童托育創業檔案作形成性評量，參與創業競賽、企劃書編撰和個人省思作總結性評量；創業小組討論、觀察與紀錄文件、教師教學評量等為分析資料。研究結果發現：結合案例與合作教學組成創業小組方式，實際參與創業企劃競賽的實作歷程，對引導學生主動學習、參與討論有影響；同時，能發揮多元思考解決問題和支援團隊合作等態度，有助養成兒童托育服務經營與管理專業的創業能力。研究建議未來能擴及其他課程，並追蹤學生畢業後的就業影響。

關鍵詞：兒童托育；案例教學法；創業教育；合作教學