

Effects of a Strength-Centered Career Course on Career Adaptability of College Students Who Experienced LEGO® SERIOUS PLAY®

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Abstract

This study explored the effects of a strength-centered career course on the career adaptability of Taiwanese college students in a course using LEGO® SERIOUS PLAY® (LSP). The participants of this study were 32 college students who completed a “Career Knowledge and Development” course at the case university. The results revealed that the participants’ post-test scores were significantly higher than their pretest scores with respect to “career agency,” “career pathway,” “career concern,” “career confidence,” and “positive problem-focused coping.” Furthermore, the weekly reflection logs the students were required to complete increased their career adaptability and their stock of psychological resources. The results were used to develop suggestions for higher education and future research.

Keywords: LEGO® SERIOUS PLAY®, strength-centered, career course, career adaptability



樂高認真玩優勢職涯課程 對臺灣大學生生涯適應的效果研究

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摘 要

本研究旨在探討透過樂高認真玩優勢職涯課程，臺灣大學生在生涯適應的改變。研究以個案大學選修「職涯知能與發展」課程的 32 名大學生為對象。藉由本課程的介入，學生在「生涯意志」、「生涯途徑與方法」、「生涯關注」、「生涯信心」、「積極問題焦點因應」、「積極情緒焦點因應」有顯著提昇。另外，藉由學生所撰寫學習週誌與期末回饋，本課程有助於促進學生正向心理資源與生涯適應。據此，本研究針對高等教育與未來研究提出建議。

關鍵詞：樂高認真玩、優勢、職涯課程、生涯適應



I. Introduction

College students are in the exploration stage of Super's career development theory and the stage of identity and role confusion in Erickson's psychosocial development stages. College students began to enter the training of professionals. At this stage, students' professional identity will influence their motivation and career orientation. At this time, if college students can deepen their career concepts and professional identity through career exploration, this will help them adapt to their careers (Erickson, 1968; Super, 1980).

In response to the rapid changes in the global social environment, the current trend of career development is to shift from the past model of person-environmental fit to emphasize that individuals should be able to cope with changes. The FDES Career Learning Model of the British Education Department and the Career Skills Program of the Canadian BCLSP strengthen the ability to manage career changes (Hsieh, 2008). This trend also echoes the post-modern theory of career counseling, which holds that career adaptability is sufficient to cope with the rapid changes and unexpected challenges of today's society, rather than just completing the linear task of career development (Savickas, 1997). Therefore, career adaptability should include in instructional objectives.

Traditional vocational teaching or career counseling mainly adopts methods including teaching ideas, professionals' sharing, or audio-visual media materials, which may be able to inspire college students to think. However, it will be challenging for college students who do not have complete career experience to deepen the recognition and planning of career goals if only abstract thinking is used. If career goals and challenges can be concrete, it will help students think deeply about their career situations, develop coping strategies, and reduce their career anxiety (Harn, 2019).

In recent years, many scholars have advocated using visual and operational methods, complemented by oral sharing, which promotes career reflection depth and speed, with the effect of clear career goals. Among them, scholars and working professionals began to use LEGO® SERIOUS PLAY® (LSP) to develop the career program, which has achieved good results in clarifying self-identification, visualized career concepts, and concretized career goals (Harn & Hsiao, 2018; Harn, 2019; Peabody,

2015; Peabody & Noyes, 2017). Follow-up, LSP will be used to refer to LEGO® SERIOUS PLAY®.

LSP is a facilitation method of problem-solving orientation. Participants construct symbolic and metaphorical LEGO® bricks in response to the assigned task and use LEGO® model story-telling patterns to present to other participants. LSP is a precise goal-oriented “play and work” process, using building bricks to construct solution strategies for life and work issues, promoting flow and positive emotions (Kristiansen & Rasmussen, 2014; Mads & Ilona, 2017). LSP’s “real-time for you” explores self-identity and influence factors. At the same time, “real time strategy” presents possible change factors and forms counter-strategies, which can help individuals establish career decisions and develop career coping abilities.

Mads and Ilona (2017) illustrate that LSP can use to build psychological capital such as strengths, hopes, self-efficacy, optimism, and resilience. Strength is the core discourse of positive psychology, which holds that the main reason why individuals are trapped is that strengths are not enough to cope with the present difficulties. Therefore, it is necessary to assist individuals in identifying and applying their strengths. Strength is the buffer against psychological distress, and a resource used to deepen the sense of hope and develop adaptation (Smith, 2006).

Based on the strength-centered strategy of Wong (2006) and the facilitation method of LSP, this study developed the strength-centered career course by constructing four career aspects, namely “orientation and adaptation,” “evaluation and exploration,” “goal setting and reality test,” and “preparation and self-responsibility.”

The research objective was to explore whether this strength-centered career course can substantially affect college students’ career adaptability. More specifically, the study aimed to answer the following questions:

1. Can the strength-centered career course significantly affect college students’ career adaptability?
2. What is the change connotation of strength-centered career courses on college students’ career adaptability?

A. LEGO® SERIOUS PLAY®

LSP is based on play, constructivism and flow, hand-mind connection, and imagination. Two critical elements in the LSP are story-telling and metaphors. A metaphor is a story-telling device that uses metaphors to generate new ways of understanding events to promote constructive and creative cognitive thinking. The idea of LSP is to construct knowledge, thoughts, and feelings by hands and build them into three-dimensional models.

Hands-on thinking improves the analogy reasoning between meaningful experiences in the past, and unknown things in the future, the stimulation of the brain can enhance the ability to think abstractly through hands-on activities (Liu et al., 2017). Furthermore, flow is at the core of LSP, referring to the “hands-on” process in which members often experience concentrated concentration and complete commitment to an activity. When flow occurs, it enhances positive emotions (Frick et al., 2013).

LSP systematically uses its technology, including four core processes and seven application techniques. The core process of the LSP is the syntax of the language, which helps participants put their known and unknown ideas into it, including posing the questions, construction, sharing, and reflection. LSP developed seven application techniques to build from dots to lines to form contextual mental images, including building individual models and stories, building sharing models and stories, creating a landscape, making connections, building a system, playing emergence and decisions, extracting simple guiding principles, etc. (Kristiansen & Rasmussen, 2014).

In recent years, there has been an increasing number of academic research that use LSP as an interventional strategy for teaching or counseling. Nolan (2010) aims to help college students integrate their career development with LSP. The 327 students who took part in the research said that LSP helped them explore their own career needs, interests, attitudes and develop their career plans. Peabody (2015) applied LSP to the supervision of play therapy to develop the individual professional identity and institutional identity of psychotherapists. By constructing individual models, creating images, emergence and decisions, Peabody explores the core identity of therapists, the perceptions of others, the factors that influence the professional development, and the ways to cope with them.

Peabody and Noyes (2017) employed LSP in reflective practice pedagogy with 29 occupational therapy graduated students and faculty members. Peabody and Noyes found that the benefits of LSP included: accelerated group cohesion, improved inclusive learning, a language for emotional expression and more profound meaning-making, led up to various learning styles, and accelerated deeper thinking compared to conventional reflective learning.

Chen et al. (2016) inspired the LSP strategy to promote children's learning as the research topic and discussed the learning benefits of the design strategy based on the concept of LSP as game teaching for children. The results indicate that children can express and communicate through LEGO® bricks construction activities, promote problem-solving ability and establish learning strategies. Subsequently, Harn (2019) used the LSP guiding method to conduct a six-hour career workshop for Taiwan college students and graduate students. The results show that "negative emotion" presents a significant delay effect; In the "critical positivity ratio," there was a significant immediate effect; There was no significant change in "positive emotion" and "career hope." This mode has the effects of improving the positive, expanding the multiple thinking, eliminating the negative, summoning the original intention, multi-party balancing, and deepening the empowerment (Harn, 2019).

Harn and Hsiao (2018) used Six Bricks and LSP to conduct a three-hour strength-based career workshop with 29 college students as participants. This model significantly affects "career agent" and "career pathway." Harn and Yu (2018) conducted a three-hour LSP career counseling program for 11 Hong Kong middle school students, and the study participants showed significant improvement in their "career agent" and "career pathways and methods." Participants showed positive effects of deepening self-identity, clarifying career vision, and promoting career displacement.

According to previous studies, LSP has been used in career counseling in higher education or high school, mainly in a centralized model. Its effect can promote a sense of hope in career, diversified learning, professional identity, etc. However, attention to career adaptation remains rarely explored. This study attempts to develop long-term courses and discuss career adaptation to explore the application effect of LSP in career courses of higher education.

B. Strength Career Counseling

“Building” and “sharing” are the core process of LSP. In the building process, the flow experience of total devotion and the pleasure of creative thinking generated. LSP emphasizes that group dialogue can produce multiple contributions and generate shared knowledge, which echoes the positive psychologist Peterson’s statement that “positive psychology is others” (Mads & Ilona, 2017). In the past, the case study LSP was more playful than its traditional manipulative tools (Schulz et al., 2015). “Play” allows individuals to explore the world and develop social adaptation by using their imagination to construct the knowledge schema (Nakamura & Csikszentimihalyi, 2014). As mentioned above, it can use to explain the origin of LSP and positive psychology.

Strength is the cornerstone of positive psychology. It helps individuals feel satisfied with life, have a sense of meaning, and have the strength to cope with life. At home and abroad, the career counseling model centered on strengths began to develop. According to the strength-centered therapy of Wong (2006), knowledge generated from social constructionism and strength actions applied to future life developed through the identification and application of personal strengths (Smith, 2006). Schutt’s (2007) strength-based approach to career development, combined with Cooperrider and Srivastva’s (1987) appreciative inquiry, uses a positive perspective to help clients explore and discover their strengths.

Fitzpartick and Stalikas (2008) pointed out that the strength orientation counseling’s broadening and building function of positive emotions is the change mechanism. Positive emotions can broaden people’s immediate thinking and action assets, build long-term personal resources, and develop coping strategies for surviving the impact of life. Positive emotions can eliminate the negative effects brought by negative emotions, which is called the “undo hypothesis” (Fredrickson, 2009). Strength counseling believes that positive emotion can promote the interaction of cognition, emotion, and action and produce changes.

Ward and Reuter (2011) mentioned that the generation and awareness of hope is a vital change experience in strength counseling. The sense of hope is a psychological mechanism generated by the interaction between individuals’ cognitive thinking to detect whether they have the motivation and methods to reach the desired goal when they pursue it (Snyder et al., 1991). Establishing goals is the primary thing to promote a sense

of hope. Previous studies have pointed out that having career goals is conducive to improving well-being and self-efficacy (Wang, 2013; Verbruggen & Sels, 2010). In conclusion, positive emotion and a sense of hope are essential changing mechanisms and experiences of strength counseling.

Wang et al. (2011) pointed out that strength-centered career counseling had a significant immediate effect on the self-growth and feelings of well-being of Taiwanese women with dual careers. Wang (2013) found in her research that constructing meaningful career goals positively impacted the participants. In addition, Wang (2015) used strength-centered career counseling to junior high school students, and found that strength-centered career counseling had immediate and delayed effects on improving adolescents' well-being, but had no significant effects on all aspects of career development.

In the form of strength counseling in the past, it is rare to promote positive psychological capital through the intervention of "play." However, LSP is a kind of play to enhance hands-on thinking, with a positive psychological context. This also prompts the researcher to develop an innovative career education model. Furthermore, previous studies on strength counseling have focused on the promotion of well-being and self-efficacy but failed to show significant changes in career aspect. In this study, strength-centered career therapy and other strategies will integrate to explore the effects of this course in career adaptation by using LSP as the facilitation method.

C. Career Adaptability

Savickas (1997) put forward the concept of career adaptability. Savickas believes that career adaptation is a meta-capacity to face various demands of career changes. Career adaptability refers to the resources and strategies an individual use in the face of career shocks or career transitions, which are career concern, career control, career curiosity, and career confidence, known as the 4Cs.

"Career concern" means that individuals can realize the importance of career preparation and put it into practice. "Career control" means that individuals have a sense of control to plan their future career development, can be self-responsible, and strive to construct their future careers. "Career curiosity" refers to an individual's interest in exploring his/her career and willingness to actively explore and try himself/herself and

his/her career environment. “Career confidence” refers to evaluating one’s effectiveness in completing career practice or career choice. In previous studies, the perception of social support is regarded as affecting career adjustment. In addition, positive emotional traits, clear career aspirations, and realistic career expectations also contribute to the development of career adaptability (Creed et al., 2009; Kenny & Bledsoe, 2005).

In the face of career stress, research has found that coping strategies are a good mediator between career anxiety and career adjustment (Li, 2013). Coping strategies are the cognitive adjustment and behavioral efforts individuals make to cope with stressful situations. Individuals with high career readiness were more likely to use positive coping strategies. More constructive coping behaviors will enhance individual coping effectiveness and thus affect individual career adaptation (Crespin, 2006).

The coping strategies can be summarized as follows (Yang, 2003): (a) Problem-focused coping: individuals adopt a direct problem-solving model to cope with challenging situations. Individuals can use patterns to change themselves, the environment, and the goals or generate new cognitive interpretations. The results show that problem-focused coping can effectively mediate dysfunctional cognition and career undecided and then promote career adjustment. A higher perception of control and more problem-focused will help alleviate situational anxiety. In addition, people with a high sense of hope can better use problem-focused coping with undecided career challenges; (b) Emotion-focused coping is the ability to use emotional support to mediate emotions and promote problem-solving when an individual is challenged. This coping mode involves physical and mental adjustment and reduces the source of stress. Individuals with better mental toughness can use positive coping strategies to face challenges.

As indicated by related studies, social support, positive emotions, and career decisions contribute to the development of career adaptability and stress coping. Furthermore, improving strengths is a crucial strategy for increasing career adaptability (Huang, 2016; Yang, 2003). Chang (2019) pointed out the personality traits of “shrewdness,” “diligence” and “optimism,” as well as positive psychological resources that can effectively predict career adaptability.

The above shows that LSP has a diverse and systematic core process and application technology. By constructing the correlation between personal identity and accidental

events, develop action strategies to respond to “change” and “un-change” in life. LSP has a positive psychological effect. The strength-centered career course was constructed through the integration of LSP and strength intervention. Therefore, the researcher will further explore the effects of this course on college students’ career adaptability and coping strategies, as well as the connotation of change

II. Research Methods

A. Research Design

This study adopted a concurrent triangulation strategy in mixed studies. The experimentation method and content analysis used to perform quantitative and qualitative data analysis (Creswell & Creswell, 2018). For the quantitative analysis, the single group quasi-experimental design employed to explore the effects of the experimental course. Regarding qualitative research, the researcher collected the text data of weekly reflection logs to explore the connotation of change by content analysis method.

The LSP Strength-centered Career Course

The researcher developed an eight-week, two-hour LSP strength-centered career course. In the course, the career needs of college students classified by Liu (2006) covered four career dimensions: (a) orientation and adaptation, (b) evaluation and exploration, (c) goal setting and reality test, and (d) preparation and self-responsibility. This program took LSP as the primary facilitation method, using strength questions to help students identify and use their strengths to develop career goals and coping strategies. In addition, strength empowerment cards used as cue cards (Harn et al., 2016) to assist participants in identifying and utilizing personal and career strengths. LSP aims to visualize students’ career concepts, goals and individual strengths, helping them deepen their professional identity and establish their career vision and action plan. The students who participated in this study are from the Psychology Department. The researcher constructed the LSP strength-centered career course with the professional development of Psychology Department as the target, as shown in Table 1. During the eight-week course, participants were required to write a weekly reflection log after the weekly course.

Table 1
LSP Strength-centered Career Course

Theme	Unit	Content
Orientation and Adaptation	Emotional Thermometer	Be familiar with LSP Use the LSP's "skill building" strategy to familiarize yourself with the language of the LSP with simple questions. LSP enhances participants' flow, positive emotions, and other positive psychological effects.
	The Future of Psychological Professional	Explore careers in the Department of Psychology Exploration of typical and innovative careers in the Department of Psychology through group discussions.
Evaluation and Exploration	Career Highlights	Build life highlights With three themes of "past me," "present me" and "future me," using LSP's strategies of "building a personal model" and "make connection" to present highlights of life and identify personal strengths.
	Professional Identity	Develop a professional identity model Using LSP's strategies such as "self-identity," "external identity" and "inspirational identity" to integrate personal strengths to develop a professional identity model.
Goal Setting and Reality Test	Career Grid	Build a career blueprint Use the group's collective strengths to carry out micro-entrepreneurship with the nine-square grid of the business model.
	Coping with Career Change	Construct the influencing factors and coping strategies Using LSP's "emergence and decision" strategy, it discusses the challenges that micro-entrepreneurs can encounter and the strengths-based coping strategies.
Preparation and Self-Responsibility	Career Vision	Construct career goals and phased tasks Using personal strengths to construct career goals ten years later and career goals and tasks at different stages.
	Career Hope	Build career hope and form strengths-based career principles Using "career agent" and "career pathway" to construct a model of career hope. Integrating personal strengths with LSP's "Forming Simple Principles" strategy to form strengths-based career action principles.

B. Participants

The participants of this research are 32 students from the Department of Psychology who took the general course of “Career Knowledge and Development” in the case university, and the age range is between 19 and 21.

C. Instruments

Career Hope Scale

This study adopted the University Student Career Hope Scale (Dai, 2011). This scale was based on the construct of the Trait Hope Scale (Snyder et al., 1991) and integrated with the career expectations of university students. The scale contained nine items, with five of them on “career agent” and four on “career pathway.” Six-point Likert scale was adopted, with a high score indicating high career hope in the respondent. Regarding reliability, the internal consistency of Cronbach’s α of “career agent” and “career pathway” was .91 and .88, respectively. The Cronbach’s α of the overall scale was .93. Factor analysis indicated that the factor loading of the items in the two dimensions was higher than .84, suggesting that the scale was reliable and valid.

Career Adjustment Scale

The “Career Adjustment Scale” developed by Tien et al. (2012) adopted in this study. This scale was divided into four subscales, including “career concern,” “career control,” “career curiosity,” “career confidence,” a total of 24 questions. Using a Likert five-point scale, the subjects chose “never,” “sometimes,” “usually,” “often,” and “always” according to their feelings and gave one to five points to the forward questions in order. The higher the total score, the higher the adaptability. The Cronbach’s α of the total scale was .96, and the Cronbach’s α of the subscales were .84 to .91 respectively. In the validity part, the factor loading of each item ranged from .84 to .91. Using confirmatory factor analysis, RMSEA = .078 and SRMR = .049 showed good model fit.

Career Choice Stress Coping Scale

This study adopted the coping scale of career choice stress developed by Yang (2003). The scale was divided into 12 items of “positive problem-focused coping,” with item factor load ranging from .37 to .65, and explained variation is 14.93%, 11 items of

“negative problem-focused coping,” with item factor load ranging from .48 to .70, and explained variation is 10.49%, nine items of “positive emotional-focused coping” with item factor load ranged from .33 to .52. The explained variation was 5.67%, two items of “negative emotional-focused coping” with item factor load ranged from .74 to .77, and the explained variation was 4.93%, a total of 34 questions.

In the reliability part, Cronbach’s α of the internal consistency between the whole scale and the four subscales was .75, .84, .84, .69, .88. It could see that the scale itself has good reliability. Regarding answering and scoring, the subjects asked to answer questions about how they would respond to the pressure of their future career choices. A four-point scale used to give one, two, three, and four points according to “never,” “occasionally,” “often,” and “always.” The higher the subjects’ scores on each subscale, the more frequently they used this coping style. The combination of positive problem-focused coping and positive emotional coping was called “positive coping.” The combination of negative problem-focused coping and negative emotion-focused coping was called “negative coping.”

Weekly Reflection Logs of LSP Strength-centered Career Course

Participants took photos of LEGO® bricks model works weekly and placed the weekly logs to describe the meaning of the model and write reflections.

D. Data analysis and processing

This study adopted the “Career Hope Scale,” “Career Adjustment Scale,” and “Career Choice Stress Response Scale” to evaluate the effects of the course program. The implementation time was one day before and three days after the LSP strength-centered career course. The researcher used the SPSS 19.0 to perform a dependent sample t-test. Secondly, after the program ended, the students analyzed the weekly reflection logs. Researcher used content analysis to analyze the text data for sentence segmentation, coding, exact item names, and the relationship between them to explore the connotation of the effects of the LSP strength-centered career course. The encoding method of the text was “gender-number,” for example M-03, representing the male college student with the number 3.

E. Research Ethics

Prior to the experimental course, the announcement of the informed consent form of the study carried out. All the students informed that the questionnaires filled out by them and their weekly reflection logs were analyzed afterward for academic research. The quantitative or qualitative research data filled in by the students were anonymized. Students in the course could choose whether to participate in the research according to their wills, fill in the follow-up questionnaires, and write weekly reflection logs.

III. Research Results

A. The Change Effects of the LSP Strength-centered Career Course

The researcher performed the analysis using paired samples T-test, as shown in Table 2. The post-test mean scores of “career hope” ($t = -3.13, p < .01$), “career adaptation” ($t = -3.44, p < .01$) and “positive coping” ($t = -3.13, p < .01$) were higher than the pre-test mean scores, and reached significant level, respectively. There was no significant difference in “negative coping.” Overall, the LSP strength-centered career course had significantly improved college students’ sense of hope, career adaptation, and positive coping.

Further exploration of its change dimensions, the results showed that the post-test mean scores of “career agent” ($t = -2.10, p < .05$) and “career pathways and methods” ($t = -3.73, p < .01$) were significantly higher than the pre-test mean scores in the aspect of career hope. Therefore, it could be seen that the LSP strength-centered career course can promote the improvement of college students’ career agents and career pathways and methods.

In the aspect of career adjustment, the post-test mean scores of “career concern” ($t = -2.19, p < .05$) and “career confidence” ($t = -2.92, p < .01$) were all higher than the pre-test mean scores and the difference was significant. There was no significant difference between “career control” ($t = -1.16, p > .05$) and “career curiosity” ($t = -1.37, p > .05$). After attending the LSP strength-centered career course, college students significantly improved their awareness of career preparation’s importance and self-efficacy in

accomplishing career goals. However, no significant progress had made in terms of career control and willingness to invest in career practice actively.

In the aspect of choice stress coping strategy, the post-test mean scores of “positive problem-focused coping” ($t = -2.19, p < .05$) and “positive emotion-focused coping” ($t = -2.92, p < .01$) were both higher than the pre-test mean scores, and both reached a significant level. The post-test scores of “negative problem-focused coping” and “negative emotion-focused coping” were all higher than the average pre-test scores, but there was no significant difference. The results of this study showed that with the implementation of the LSP strength-centered career course, college students could face up to problems and seek solutions when facing career pressure. They could also seek support to ease their anxiety.

Table 2

A Dependent Sample T-test of Pre-test and Post-test (N=32)

Variable	Category of tests	M	SD	df	t	p	95%CI	
							Lower limit	Upper limit
Career hope	pre-test	38.72	6.72	31	-3.13**	.004	-4.54	-.96
	post-test	41.46	5.21					
Career agent	pre-test	21.99	3.65	31	-2.08*	.046	-2.35	-.02
	post-test	23.16	2.92					
Career pathway	pre-test	16.75	3.43	31	-3.73**	.001	-2.42	-.71
	post-test	18.31	2.61					
Career adaptability	pre-test	86.59	13.30	31	-3.44**	.002	-6.77	-1.73
	post-test	90.84	14.74					
Career concern	pre-test	21.50	4.22	31	-2.19*	.036	-2.35	-.08
	post-test	22.72	4.16					
Career control	pre-test	22.06	4.22	31	-1.16	.255	-1.72	.47
	post-test	22.69	3.46					

Table 2

A Dependent Sample T-test of Pre-test and Post-test (N=32) (continued)

Variable	Category of tests	M	SD	df	t	p	95%CI	
							Lower limit	Upper limit
Career curiosity	pre-test	21.88	3.71	31	-1.37	.182	-1.64	.32
	post-test	22.53	4.36					
Career confidence	pre-test	20.78	3.14	31	-2.92**	.006	-2.60	-.46
	post-test	22.31	3.82					
Positive coping	pre-test	51.19	6.75	31	-3.06**	.005	-5.99	-1.20
	post-test	54.78	8.75					
Positive problem-focused coping	pre-test	28.94	5.59	31	-3.03**	.005	-3.50	-.69
	post-test	31.03	6.58					
Positive emotional-focused coping	pre-test	22.25	3.60	31	-2.10*	.044	-2.96	-.04
	post-test	23.75	3.51					
Negative coping	pre-test	26.78	4.34	31	.09	.927	-1.99	2.18
	post-test	26.69	5.17					
Negative problem-focused coping	pre-test	23.28	3.76	31	.084	.934	-1.46	1.59
	post-test	23.22	4.52					
Negative emotional-focused coping	pre-test	3.50	1.76	31	.085	.933	-.72	.78
	post-test	3.47	1.74					

* $p < .05$; ** $p < .01$

B. The Change Connotation of the LSP Strength-centered Career Course

After the weekly LSP strength-centered career course, the participants wrote a weekly reflection log. The researcher extracted weekly reflection logs of college students to illustrate the change connotations of this course on college students by content analysis. The connotation of the change can be divided into two parts, which are explained below.

Positive Psychological Effects

The eight-week course was a great time for me. I could visualize the ideas in mind and use Lego bricks step by step to create what I had in mind. Colorful LEGO® models popped up on the table, and with verbal exposition, the dream was closer. (M-01)

Using different LEGO® bricks combination to present different ideas could open my heart. Only when playing LEGO® bricks, I could devote my heart to it. I did not need to be stuck with reality. It was right to be myself, regardless of success or failure. (F-14)

Using LEGO® bricks to think about one's career was incredibly special. The toys of childhood worked. When doing it, I could deepen thinking, eliminate restrictions and frameworks, and inspire different thinking about a career. (F-06)

Gathering all the models together and connecting with people was my happiest moment. (M-04)

Participants responded to a series of designed questions by constructing building bricks, which was different from the previous way of expressing themselves through simple text or speaking. The process of manually constructing an answer model while thinking was not linear. The stacking and combination of building bricks could produce immediate feedback on, visual and tactile, allowing participants to modify the model and construct their answers; or to comprehend a new answer from the model, and then inspired the participants and let participants have a new vision of their careers. Then, express the model that is self-constructed in text or spoken. At this time, it was the process of responding to the question again and telling the story of the building brick model based on a self-constructed building brick model.

From the participants' reflection logs, it known that this process was more exciting and more manageable than directly answering in spoken or written words. However, a small number of participants also thought that repeating the process of building bricks was tiresome. For example, participant M-14 mentioned, "The limitation of building bricks made it difficult to express all the thoughts [...] Repeatedly building models, sharing, and

thinking, I felt a little bored.” LSP provided a set of rigorous grammar, with “construction” and “sharing” as the core, focusing on the construction and sharing of building brick stories. This rigorous and repetitive grammar might reduce some participants’ willingness to participate in this facilitation method due to the stimulation of the standardization.

The above results echoed the previous research claimed that LSP is prone to playful behaviors (Schulz et al., 2015), also presented the visual and operational methods explained by many scholars, supplemented by oral sharing, which helps to enhance the depth of career reflection (Harn & Hsiao, 2018; Harn, 2019; Peabody, 2015; Peabody & Noyes, 2017). In the process of co-creating knowledge, feeling the connection with people and generating a sense of belonging was the essence of what Peterson calls the essence of positive psychology (Mads & Ilona, 2017). “Play” created a safe psychological atmosphere. The agitation of imagination allowed participants to devote themselves to hands-on thinking, break through the limits of thinking, and generate flow.

Promotion of Career Adaptability

Building a future career with LEGO® bricks was very interesting, and I also found the career I want [...] After this semester, I could recognize the purpose of studying in the psychology department. I was once lost and could not find the purpose of studying. Now I found the way forward. And purpose. (M-12)

Every week I thought differently, I knew what I wanted in the future [...] I thought seriously about my career goals and found a way of my own. (F-09)

Let me think about the way forward seriously, but also felt some pressure reappearing, but the idea was firm, at least I had thought about it, and increased the motivation to move forward. (F-10)

I knew that becoming a psychologist was not the only way to help others. I wanted to see more and explore myself [...] If I did not want to be replaced by technology, I must find my uniqueness. (M-02)

I could use LEGO® bricks to make a career after graduating from the psychology department. I was proud of my LEGO® models [...] Used the model to think about the psychology department’s identity and confirmed that I just want to study psychology. (F-11)

Let me understand that the variability of career might not always smoothly be able to move towards the goal. (F-02)

By concretizing the inner response, students could use this brand-new approach to explore aspects that they have rarely thought about in the past. This also responded to the three elements of self-exploration, environment, and career information in the golden triangle of Swain's career and the relationship between them.

From the participants' texts, it found that the most information about self-exploration, including the recognition or clarification of interests, values, abilities, and aptitudes, followed by environmental information, including family, career development support and resistance, and social development trends, and so on. Finally, it was the presentation of occupational information. Through this method of using both hands and brains, most participants could have a complete discussion of their careers, thus encouraging them to continue advancing their career visions.

Sorting out the reflection logs of participants, as pointed out by previous research (Harn, 2019; Harn & Hsiao, 2018; Peabody, 2015; Peabody & Noyes, 2017) also showed the effect of LSP's emphasis on deepening thinking, covering the original intention of career, career goals, career orientation, professional identity, etc. In an interesting and safe atmosphere of exploration, participants could also explore the meaning of professional learning, presenting a synchronic and diverse professional development process through LSP's "playing emergence and decisions" strategy (Hayles, 1990). Some students mentioned that they could improve their motivation to move forward after participating in the course, but improving career confidence and the sorting of thinking was still the central axis. As for the output and execution of actions, they seldom focused on it.

Based on the above, the LSP strength-centered career course did provide an interesting and safe exploration environment, allowing participants to use hands-on thinking mode to promote the development of multiple career thinking, which helped to clarify and establish the participants' career anchor, and nourish the psychological capital of career adaptability.

IV. Discussions

In this study, the concurrent triangulation strategy used to explore the effect and change connotation of LSP strength-centered career course in career adaptation by linking and discussing the relationship between quantitative and qualitative research results. The researcher combined the above results and discussed them as follows:

In LSP, “play” provides a safe and creative way of thinking, and “flow” is the key to deepening thinking (Frick et al., 2013). LSP emphasizes group dialogue and sharing knowledge, echoing the critical core value of positive psychology as connecting with people (Mads & Ilona, 2017). With the development of LSP theory, an essential element of positive psychology presented. Therefore, the researcher wanted to explore whether the LSP strength-centered career course could trigger positive psychological effects on participants. As F-14, F06, M-04 said, there was the full engagement in LSP strength-centered career course, and the feeling of being able to connect with people. It could be seen from Table 2 that participants had a significant improvement in variables such as “career agent” and “career hope.” This showed that the LSP strength-centered career course could enhance the participants’ sense of hope, and the sense of hope is an essential change in the strength-oriented consultation (Ward & Reuter, 2011).

After participating in the eight-week course, participants perceived a significant improvement in cognitive thinking about their motivation and efficacy of pathways and methods toward their career goals (Snyder et al., 1991), which also presented a positive psychological effect. As stated by participants M01, F14, and F06, the visualization of LSP, supplemented by oral sharing, allowed participants to feel that their dreams could be described in detail; in addition, the positive emotions such as joy and flow, as well as the use of imagination that was promoted during the process, led to a diversity of thoughts that could break through limitations (Fredrickson, 2009) and became a self-designer to outline their own life goals. The LSP co-creation knowledge mentioned in M04 created a connection between the person and the self, which was the source of joy, echoing Peterson’s statement that “positive psychology is about connecting with people” (Mads & Ilona, 2017).

As mentioned earlier, LSP has positive psychological effects such as enhancing imagination, positive emotions, flow, interpersonal connections, etc. LSP focuses on

concentrated thinking (Kristiansen & Rasmussen, 2014) and has a rigorous core process of posing the question, construction, sharing, and reflection. For adolescents, prolonged exposure to repetitive patterns might reduce concentration due to the lack of multiple stimuli. Therefore, as participant M14 mentioned, the repetitive pattern led to boredom. Thus, for some participants, the mindfulness was reduced due to reduced stimulating freshness.

The effect of the LSP strength-centered career course on career adjustment changes could be seen in Table 2, which showed a significant increase in “career concern” and “career confidence.” After participating in the eight-week course, participants increased their career preparation and improved their career effectiveness. This was consistent with the nature of LSP to increase “preparation” rather than develop action plans (Kristiansen & Rasmussen, 2014). In addition, the apparent increase in participants’ confidence in their careers echoed the increase mentioned above in career hope. Can career hopefulness, a cognitive mindset (Snyder et al., 1991), be transformed into action development? The lack of significant differences in “career curiosity” in this study indicated that cognitive transformation into action attempts had not clearly demonstrated. The lack of significant differences in “career control” might be related to experiencing career variability and career stress, as suggested by participants F9 and F10. In the face of career variability, participant M02 began to think about developing their uniqueness to respond to career changes.

At the level of career coping, “positive problem-focused coping” and “positive emotion-focused coping” showed a significant increase. However, there was no significant weakening in the direction of negative coping, which indicated that participants might still be in a tug of wedging between positive and negative coping. This might also affect participants’ attempts and enthusiasm for active development.

The end-of-period participants feedback indicated that career goal recognition and deepening of professional identity were important benefits, consistent with previous LSP studies (Harn, 2019; Nolan, 2010; Peabody, 2015). Research suggested that career goal affirmation could contribute to feelings of well-being and efficacy (Wang, 2013; Verbruggen & Sels, 2010). In this study, two crucial psychological mechanisms of hope and positive emotion in strengths counseling were presented, suggesting that this model inherits the changing nature of previous strengths counseling.

Compared to previous strengths counseling models (Wang, 2013, 2015; Wang et al., 2011), the LSP strengths-centered career course was more likely to produce playful behaviors (Schulz et al., 2015), which promoted more positive effects such as joy, engagement, and flow. In addition, participants had good results in recognizing the importance of their careers and in career adaptabilities such as career confidence and positive career coping.

According to previous studies, LSP has used in career counseling in higher education or high school, mainly in a centralized mode (Harn, 2019; Harn & Hsiao, 2018; Harn & Yu, 2018; Peabody, 2015; Peabody & Noyes, 2017). LSP strengths-centered career course provided a long-term course model and extended from focusing on the deepening of psychological capital such as professional identity and hope to the development of career action based on strengths. According to the research results, this contributed to not only the development of career hope but also the career adaptability and coping strategies showed enhanced benefits.

Positive psychological resources have mentioned as an effective predictor of career adaptability (Chang, 2019). However, the effect of career adaptability has not demonstrated in the empirical study of strength counseling (Wang, 2013, 2015; Wang et al., 2011). In this study, through the dual intervention of “strength” and “play,” a kind of strength-centered career course through hand-mind thinking is developed, which provides multiple positive psychological resources such as positive social connection, promotion of multiple positive emotions, clarity of self-identity, and visualization of career decision. The transformation from strength-centered career counseling to strength-centered counseling career course opens up different inspirations in practice and academics.

V. Conclusions and Implications

The purpose of this study is to explore the LSP strength-centered career course changes to students' career adaptability. The design and implementation of the course were divided into four aspects, with the use of strengths as the core, LSP as the facilitation method, and the implementation of the eight-week course.

First of all, the student's career agent, career pathway, career concern, career

confidence, positive problem-focused coping, and positive emotional-focused coping were significantly improved. There was no significant change in students' career control and career curiosity. In addition, through the weekly learning log written by the students and the final feedback, the students showed positive progress in their positive psychological state and career adaptability.

This study is a part of the course; in order to reduce the possible interference of other course modes, a single group before and after test design was adopted, and the effect of the follow-up test did not appear tested. As a result, the delayed effect of the course might not be known. In the predicament of implementing the curriculum scheme, there were still possible interfering variables which could use as a reference for the subsequent experimental design. In terms of course implementation, LSP emphasizes the mode of deepening thinking, and it is usually appropriate for one teacher to guide 12-15 participants. It is challenging to grasp individual states if it is used in-class teaching. In the future, this model could be used with the help of teaching assistants or different LEGO® facilitation methods to meet the diverse needs of students.

The creative and visual characteristics of LSP contributed to the clarity of career thinking and the visualization of career goals. Therefore, the application of LSP career courses has a high degree of development. According to the research results, most students could have the pleasure of career exploration, professional identity, career orientation, and other benefits in the course, which echoed the current foreign career curriculum development trend. Presently, career courses in higher education in Taiwan still follow the traditional model and should return to the career learning model of different generations of students. It encourages the development of diversified and innovative career courses, so students with different characteristics can find their career development ways.

This course is exploratory action research, and the experimental treatment of the course is limited to convenience sampling (i.e., students participating in the course). In future research, recruitment can be used to select research participants, and different intervention programs can be designed for students with different career orientations. In addition, in terms of research design, the experimental design of follow-up measurement can be included to discuss the effect of follow-up action development.

References

- Chen, J. M., Su, H. C., & Chang, J. H. (2016). The exploration of LEGO® SERIOUS PLAY® for promoting young children's learning. *Yu Da Academic Journal*, 43, 63-86.
- Chang, Y. H. (2019). *The study on relationships among positive psychological resources, Chinese personality traits and career adaptability of university students* [Master's thesis, Chinese Culture University]. National Digital Library Theses and Dissertations Taiwan. <https://hdl.handle.net/11296/nkhe9r>
- Cooperrider, D. L., & Srivastva, S. (1987). Appreciative inquiry in organizational life. In R. W. Woodman & W. A. Pasmore (Eds.), *Research in organizational change and development* (Vol. 1, pp. 129-169). JAI Press.
- Creed, P. A., Fallon, T., & Hood, M. (2009). The relationship between career adaptability, person and situation variables, and career concerns in young adults. *Journal of Vocational Behavior*, 74(2), 219-229. <https://doi.org/10.1016/j.jvb.2008.12.004>
- Crespin, C. A. (2006). *Contributors to college women's career decision-making self-efficacy: Support, barriers, and coping* (Publication No. 3210262) [Master's thesis, Fordham University]. ProQuest Dissertations Publishing.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE.
- Dai, C. Y. (2011). *College major's frustration, resiliency, and students' career hope: A study of universities' students in north Taiwan* [Master's thesis, National Taiwan Normal University]. National Digital Library Theses and Dissertations Taiwan. <https://hdl.handle.net/11296/279h63>
- Erickson, E. H. (1968). *Identity: Youth and crisis*. Norton.
- Fitzpartick, M. R., & Stalikas, A. (2008). Positive emotions as generator of therapeutic changes. *Journal of Psychotherapy Integration*, 18(2), 137-154. <https://doi.org/10.1037/1053-0479.18.2.137>
- Fredrickson, B. L. (2009). *Positivity*. Three rivers press. <https://doi.org/10.1007/s11117-004-2385-0>
- Frick, E., Tardini, S., & Cantoin, L. (2013). *White paper on LEGO® SERIOUS PLAY®: A state of the art of its application in Europe*. Retrieved July 23, 2021, from <https://www.sintef>.

- no/globalassets/project/hfc/documents/2013-splay_white_paper_v2_0_1.pdf
- Harn, P. L., Lin, W. L., Yang, L. H., Hsu, T. J., Harn, S. J., & Ni, J. N. (2016). *Strength & empowerment card*. Psychological Publishing.
- Harn, P. L., & Hsiao, C. C. (2018). Strength-4D career model with LEGO® SERIOUS PLAY® and six bricks. *International Journal of Management and Applied Research*, 5(4), 157-172. <https://doi.org/10.18646/2056.54.18-012>
- Harn, P. L. (2019). A preliminary study of the effects of strength-based career workshop with LEGO® SERIOUS PLAY® in Taiwan. *Psychological Studies*, 64(1), 30-40. <https://doi.org/10.1007/s12646-019-00476-4>
- Harn, P. L., & Yu, Y. K. (2018). The effects of career guidance model with LEGO® SERIOUS PLAY® on career hope of Hong Kong junior school students. *The Hong Kong Teachers' Centre Journal*, 17, 83-97.
- Hsieh, N. J. (2008). *The career guidance of new century: The action research of the comprehensive senior high school career planning curriculum's conversion and implement* [Master's thesis, Tzu Chi University]. National Digital Library Theses and Dissertations Taiwan. <https://hdl.handle.net/11296/r5cans>
- Huang, S. F. (2016). Post-modern perspective of career happiness: An integrated model of career theory and career counseling for the changing world and steady core. *Journal of Educational Practice and Research*, 29(2), 137-172.
- Hayles, N. K. (1990). *Chaos bound: Orderly disorder in contemporary literature and science*. Cornell University Press.
- Kenny, M. E., & Bledsoe, M. (2005). Contributions of the relational context to career adaptability among urban adolescents. *Journal of Vocational Behavior*, 66, 257-272. <https://doi.org/10.1016/j.jvb.2004.10.002>
- Kristiansen, P., & Rasmussen, R. (2014). *Building a better business using the serious play method*. John Wiley & Sons. <https://doi.org/10.4324/9781315537658-1>
- Li, F. (2013). *The study of the relationship among career anxiety, coping strategies and career adaptabilities of college students* [Master's thesis, National Tsing Hua University]. National Digital Library Theses and Dissertations Taiwan. <https://hdl.handle.net/11296/v73hgq>
- Liu, L. W. (2006). If the class of career planning correspond with the content of career

- development for college students - Chaoyang University of Technology for example. *Zhi Shan, 1*, 65-80.
- Liu, C., Solis, S. L., Jensen, H., Hopkins, E., Neale, D., Zosh, J., Hirsh-Pasek, K., & Whitebread, D. (2017). *Neuroscience and learning through play: A review of the evidence*. https://cms.learningthroughplay.com/media/zbcd21td/neuroscience-review_web.pdf
- Mads, B., & Ilona, B. (2017), *Exploring positive psychology with LEGO® SERIOUS PLAY®*. Gnist.
- Nakamura, J., & Csikszentimihalyi, M. (2014). The concept of flow. In M. Csikszentimihalyi (Eds.), *Flow and foundations of positive psychology* (pp. 239-263). Springer. https://doi.org/10.1007/978-94-017-9088-8_16
- Nolan, S. (2010). Physical metaphorical modeling with LEGO as technology for collaborative personalized learning. In J. O'Donoghue (Ed.), *Technology-supported environments for personalized learning: Methods and case studies* (pp. 364-385). Information Science Reference. <https://doi.org/10.4018/978-1-60566-884-0.ch020>
- Peabody, M. A. (2015). Building with purpose: Using LEGO SERIOUS PLAY in play therapy supervision. *International Journal of Play Therapy, 24*(1), 30-40. <https://doi.org/10.1037/a0038607>
- Peabody, A., & Noyes, S. (2017). Reflective boot camp: Adapting LEGO® SERIOUS PLAY® in higher education. *Reflective Practice, 18*(2), 232-243. <https://doi.org/10.1080/14623943.2016.1268117>
- Savickas, M. L. (1997). Career adaptability: An Integrative construct for life-span, life-space theory. *The Career Development Quarterly, 45*(3), 247-259. <https://doi.org/10.1002/j.2161-0045.1997.tb00469.x>
- Schutt, D. A. (2007). *A strength-based approach to career development using appreciative inquiry*. National Career Development Association.
- Schulz, K. P., Gelthner, S., Woelfe, C, & Krzywinski, J. (2015). Toolkit-based modeling and serious play as means to foster creativity in innovation process. *Creativity and Innovation Management, 24*(2), 323-340. <https://doi.org/10.1111/caim.12113>
- Smith, E. (2006). The strengths-based counseling model. *The Counseling Psychologist, 34*, 13-79. <https://doi.org/10.1177/0011000005277018>

- Super, D. E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior*, 16(3), 282-298. [https://doi.org/10.1016/0001-8791\(80\)90056-1](https://doi.org/10.1016/0001-8791(80)90056-1)
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., Yoshinobu, L., Gibb, J., Langelle, C., & Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology*, 60(4), 570-585. <https://doi.org/10.1037//0022-3514.60.4.570>
- Tien, H. L., Wang, Y. C., Chu, H. C., & Huang, T. L. (2012). Career adaptabilities scale - Taiwan form: Psychometric properties and construct validity. *Journal of Vocational Behavior*, 80, 744-747. <https://doi.org/10.1016/j.jvb.2012.01.010>
- Verbruggen, M., & Sels, L. (2010). Social-cognitive factors affecting clients' career and life satisfaction after counseling. *Journal of Career Assessment*, 18(1), 3-15. <https://doi.org/10.1177/1069072709340516>
- Wang, Y. C. (2013). The therapeutic effectiveness and the change process of a strength-centered career counseling model. *Chinese Journal of Guidance and Counseling*, 37, 125-156.
- Wang, Y. C. (2015). The effectiveness of strength-centered career counseling in junior high school students in Taiwan. *Bulletin of Educational Psychology*, 46(3), 311-332. <https://doi.org/10.6251/BEP.20140525>
- Wang, Y. C., Tien, H. L., & Wu, L. C. (2011). The construction of a strength-centered career adjustment model for counseling dual-career women. *Chinese Journal of Guidance and Counseling*, 29, 1-35. <https://doi.org/10.7082/CJGC.201104.0001>
- Ward, C. C., & Reuter, T. (2011). *Strength-centered counseling: Integrated post-modern approaches and skills with practice*. Sage.
- Wong, J. Y. (2006). Strengths-centered therapy: A social constructionist, virtue-based psychotherapy. *Psychotherapy: Theory, Research, Practice and Training*, 43(2), 133-146. <https://doi.org/10.1037/0033-3204.43.2.133>
- Yang, Y. H. (2003). *The influence of attachment, expectancies for negative mood regulation, and coping on emotional experiences: The stress of career choice for senior college students* [Doctoral dissertation, National Chengchi University]. National Digital Library Theses and Dissertations Taiwan. <https://hdl.handle.net/11296/8v4kr9>

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