

กลยุทธ์ภาวะผู้นำเชิงสร้างสรรค์สำหรับผู้บริหารโรงเรียนประถมศึกษาในการส่งเสริมความคิด  
สร้างสรรค์ของครูในมณฑลกวางตี้ประเทศจีน



นางสาวชิงหลิง จาง

จุฬาลงกรณ์มหาวิทยาลัย

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ลิขสิทธิ์ของจุฬาลงกรณ์มหาวิทยาลัย

CREATIVE LEADERSHIP STRATEGIES FOR PRIMARY SCHOOL PRINCIPALS  
TO PROMOTE TEACHERS' CREATIVITY IN GUANGXI, CHINA

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for the Degree of Doctor of Philosophy Program in Educational Administration  
Department of Educational Policy Management and Leadership  
Faculty of Education  
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ซิงหลิง จาง : กลยุทธ์ภาวะผู้นำเชิงสร้างสรรค์สำหรับผู้บริหาร โรงเรียนประถมศึกษาในการส่งเสริมความคิดสร้างสรรค์ของครู ในมณฑลกวางซีประเทศจีน (CREATIVE LEADERSHIP STRATEGIES FOR PRIMARY SCHOOL PRINCIPALS TO PROMOTE TEACHERS' CREATIVITY IN GUANGXI, CHINA) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: ศ. พงษ์สิทธิ์ บรรณพิทักษ์, อ.ที่ปรึกษาวิทยานิพนธ์ร่วม: ศศ. นันทรัตน์ เจริญกุล, 264 หน้า.

วัตถุประสงค์ของการวิจัยครั้งนี้เพื่อ 1) ศึกษากรอบแนวคิดของภาวะผู้นำเชิงสร้างสรรค์ของผู้บริหาร โรงเรียนประถมศึกษาในการส่งเสริมความคิดสร้างสรรค์ของครู 2) ศึกษาสภาพปัจจุบันและสภาพที่พึงประสงค์ของภาวะผู้นำเชิงสร้างสรรค์ของผู้บริหาร โรงเรียนประถมศึกษาในการส่งเสริมความคิดสร้างสรรค์ของครูในมณฑลกวางซีของประเทศจีน 3) วิเคราะห์จุดแข็ง จุดอ่อน โอกาส และภาวะคุกคามของภาวะผู้นำเชิงสร้างสรรค์ของผู้บริหาร โรงเรียนประถมศึกษาในการส่งเสริมความคิดสร้างสรรค์ของครูในมณฑลกวางซีของประเทศจีน 4) พัฒนากลยุทธ์ภาวะผู้นำเชิงสร้างสรรค์ของผู้บริหาร โรงเรียนประถมศึกษาในการส่งเสริมความคิดสร้างสรรค์ของครูในมณฑลกวางซีของประเทศจีน โดยใช้วิธีวิจัยแบบผสมผสาน กลุ่มตัวอย่าง ได้แก่ โรงเรียนในสังกัดเมืองเป่ย์ไห่ของกวางซี จำนวน 106 โรงเรียน ผู้ให้ข้อมูลได้แก่ ผู้อำนวยการ หัวหน้ากลุ่มสาระ และครู 636 คน เครื่องมือที่ใช้ในการวิจัย ได้แก่ แบบสอบถามและแบบประเมินความเหมาะสมและความเป็นไปได้ของกรอบแนวคิดและกลยุทธ์ สถิติที่ใช้ในการวิเคราะห์ข้อมูล คือ ค่าความถี่ ร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน ค่าดัชนี PNIModified และการวิเคราะห์เนื้อหาจากการสนทนากลุ่ม

ผลการวิจัยพบว่า 1) กรอบแนวคิดของภาวะผู้นำเชิงสร้างสรรค์ของผู้บริหาร โรงเรียนประถมศึกษาในการส่งเสริมความคิดสร้างสรรค์ของครู ประกอบด้วย 1.1) การส่งเสริมความสามารถเชิงสร้างสรรค์ของครูทุกคนในโรงเรียน 1.2) การสร้างและส่งเสริมทีมงานครูให้มีความคิดสร้างสรรค์เชิงพลวัต 1.3) การส่งเสริมวัฒนธรรมโรงเรียนเชิงนวัตกรรม 2) สภาพปัจจุบันของภาวะผู้นำเชิงสร้างสรรค์ของผู้บริหาร โรงเรียนประถมศึกษาในการส่งเสริมความคิดสร้างสรรค์ของครูในมณฑลกวางซีประเทศจีน ในภาพรวมอยู่ในระดับปานกลาง (=3.37) เมื่อพิจารณารายด้าน การส่งเสริมความสามารถเชิงสร้างสรรค์ของครูทุกคนในโรงเรียน มีค่าเฉลี่ยสูงสุด (=3.42) และการสร้างและส่งเสริมทีมงานครูให้มีความคิดสร้างสรรค์เชิงพลวัต มีค่าเฉลี่ยต่ำสุด (=3.34) สภาพที่พึงประสงค์ของภาวะผู้นำเชิงสร้างสรรค์ของผู้บริหาร โรงเรียนประถมศึกษาในการส่งเสริมความคิดสร้างสรรค์ของครูในมณฑลกวางซีประเทศจีน ในภาพรวมอยู่ในระดับมากที่สุด (=4.81) เมื่อพิจารณารายด้าน การส่งเสริมความสามารถเชิงสร้างสรรค์ของครูทุกคนในโรงเรียน มีค่าเฉลี่ยสูงสุด (=4.82) 2) จุดแข็งของภาวะผู้นำเชิงสร้างสรรค์ของผู้บริหาร โรงเรียนประถมศึกษาในการส่งเสริมความคิดสร้างสรรค์ของครูในมณฑลกวางซีประเทศจีน คือ การส่งเสริมความสามารถเชิงสร้างสรรค์ของครูทุกคนในโรงเรียน ส่วนจุดอ่อน คือ การสร้างและส่งเสริมทีมงานครูให้มีความคิดสร้างสรรค์เชิงพลวัต และการส่งเสริมวัฒนธรรมโรงเรียนเชิงนวัตกรรม โอกาสของภาวะผู้นำเชิงสร้างสรรค์ของผู้บริหาร โรงเรียนประถมศึกษาในการส่งเสริมความคิดสร้างสรรค์ของครูในมณฑลกวางซีของประเทศจีน คือ การเมืองและนโยบายของรัฐ ส่วนภาวะคุกคาม คือ สภาพเศรษฐกิจ สภาพสังคม และสภาพเทคโนโลยี 4) กลยุทธ์ภาวะผู้นำเชิงสร้างสรรค์ของผู้บริหาร โรงเรียนประถมศึกษาในการส่งเสริมความคิดสร้างสรรค์ของครูในมณฑลกวางซีของประเทศจีน ที่ผู้วิจัยพัฒนาขึ้น มี 3 กลยุทธ์หลัก คือ (1) ส่งเสริมทีมงานครูให้มีความคิดสร้างสรรค์เพื่อบ่มเพาะความคิดสร้างสรรค์ของนักเรียน (2) ส่งเสริมวัฒนธรรมเชิงนวัตกรรมที่กระตุ้นความคิดสร้างสรรค์ของครูแต่ละคนและทีมงานครูเพื่อบ่มเพาะความคิดสร้างสรรค์ของนักเรียน และ (3) ส่งเสริมความคิดสร้างสรรค์ของครูแต่ละคนเพื่อบ่มเพาะความคิดสร้างสรรค์ของนักเรียน

ภาควิชา นโยบาย การจัดการและความเป็นผู้นำทางการศึกษา ลายมือชื่อ นิสิต .....

สาขาวิชา บริหารการศึกษา ลายมือชื่อ อ.ที่ปรึกษาหลัก .....

ปีการศึกษา 2559 ลายมือชื่อ อ.ที่ปรึกษาร่วม .....



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KEYWORDS: CREATIVE LEADERSHIP/ STRATEGIES/ PRIMARY SCHOOL PRINCIPALS/ TEACHERS' CREATIVITY/ GUANGXI, CHINA

QINGLING ZHANG: CREATIVE LEADERSHIP STRATEGIES FOR PRIMARY SCHOOL PRINCIPALS TO PROMOTE TEACHERS' CREATIVITY IN GUANGXI, CHINA. ADVISOR: PROF. PRUET SIRIBANPITAK, Ph.D., CO-ADVISOR: ASST. PROF. NUNTARAT CHAROENKUL, Ph.D., 264 pp.

The objectives of this research were 1) to study the conceptual framework of creative leadership of primary school principals to promote teachers' creativity; 2) to study the current and desirable state of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China; 3) to analyze the strengths, weaknesses, opportunities and threats to the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China; and 4) to develop creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China. The study was mixed method research and involved a sample of 106 schools and 636 school principals and teachers. The instrument used in this study were a questionnaire, a conceptual framework and a strategic evaluation form of suitability and feasibility. The data was analyzed by frequency, percentage, average, standard deviation, PINModified and content analysis.

The results showed as follows: 1) The conceptual framework of creative leadership of primary school principals to promote teachers' creativity consists of roles of creative leadership in three areas: 1. to facilitate the creative abilities of every teacher of school; 2. to form and facilitate dynamic creative teacher teams; 3. to promote a school culture of innovation. 2) The current state of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China was overall at a middle level (=3.37). When considering each aspect, the principals facilitate the creative abilities of every teacher of school was the highest average (=3.42), and the principals form and facilitate dynamic creative teacher teams was the lowest average (=3.34). The desirable state of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China was at the highest level overall (=4.81). When considering each aspect, the principal facilitates the creative abilities of every teacher of school to promote teachers' creativity was the highest average (=4.82). 3) The strength of the creative leadership of primary school principals in regard to promote teachers' creativity in Guangxi, China was the facilitating creative potential of every teacher of the school. Conversely, the weaknesses of the creative leadership of primary school principals in regard to promote teachers' creativity in Guangxi, China were the forming and facilitating dynamic creative teacher teams and the promoting a school culture of innovation respectively. The creative leadership development considered political and government policy as the opportunity in developing the principals' creative leadership to promote teachers' creativity in Guangxi, China. On the other hand, the creative leadership development saw the threats to developing principals' creative leadership in promoting teachers' creativity in Guangxi, China as the economy, socio-culture and technology respectively. 4) There three main strategies involved in developing primary school principals' creative leadership to promote teachers' creativity in Guangxi, China and these include: (i) to develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity; (ii) to develop principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity; and (iii) to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity.

Department: Educational Policy Management and  
Leadership

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Student's Signature .....

Advisor's Signature .....

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# Chapter 1

## Introduction

### 1.1 Rationale and Problem Statement

Since the reform and opening up, China has made great achievements in economic and social development. However, there are still some outstanding conflicts and problems, such as environmental pollution, resource crisis, less development of human resources, unbalanced regional economy, and rich-poor divide. At the same time, China is facing multiple foreign challenges that are global competition, technological innovations, new patterns of trade, and so on (S. Gu, Lundvall, Liu, Malerba, & Schwaag Serger, 2009). All those have highlighted the pressing need to enhance citizens' quality and cultivate creative, innovative, and adaptive talent in order to achieve sustainable development of economy and society (H. Chu & Cravens, 2012; Feng, 2006; Qian & Walker, 2011). In 2013, the UNESCO/UNDP Creative Economy Report discussed the impact of creativity in the sustainable development, and concluded "...there is an urgent need to find new development pathways that encourage creativity and innovation in the pursuit of inclusive, equitable and sustainable growth and development" (UNDP, 2013). In addition, creativity is perceived to be a starting point and the driving force for innovation (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Robinson, 2011). Thus, we must cultivate creative and innovative abilities of our new generations. Doing so has to become one of the principal priorities of education and training everywhere (Mingyuan Gu, 2010; Robinson, 2011; Siribanpitak, 2012). To school, the task of cultivating creative students falls on school principals and teachers.

Fostering students' creativity requires teachers to be creative (Colley, 2015; Hewitt & Tarrant, 2015; Robinson, 2006, 2009; Tian, 2007). Robinson (2013) stated that a creative teacher is not there just to pass on received information, but what creative teachers also do is to mentor, stimulate, provoke, and engage students' passion, energies, and spirits that can help students to discover their creative talents and develop the skills of their independent creative work as a result (Robinson & Aronica, 2015). In 1999, NACCCE reported that students' creative abilities are most likely to be developed in an atmosphere in which the teacher's creative abilities are properly engaged. To put it

another way, teachers can't develop the creative abilities of their pupils if their own creative abilities are suppressed (Creative & Education, 1999). Therefore, we must promote teachers' creativity in order to foster students' creativity. However, who or what will influence teachers' creative teaching and how to influence their creativity development in the school.

Many researchers emphasize the importance of organizational leadership in mobilizing employees' creativity and change in organization (Afshari, Siraj, Ghani, & Afshari, 2011; Andriopoulos & Dawson, 2009; Loewenberger, Newton, & Wick, 2014; Mumford & Licuanan, 2004; Shin & Zhou, 2003). Jung, Chow, and Wu (2003) stated that organizational leaders play an important role in managing change, creative processes, supporting innovative work practices and creating workplace (Dangaran, 2012; Robinson, 2011). In the education context, scholars and researchers also point out emphatically, school leaders' vision, their action and the way that they direct and the condition that they support can surpass or mobilize teachers' creative teaching and students' creative learning (Harris, 2009; Peterson, 2013; Robinson & Aronica, 2015; Sternberg, 2006; Stoll & Temperley, 2009b). In line with this idea, Afshari, Ghavifekr, Parhizkar, and Ayoufu (2013) demonstrate that school principals leadership can influence structure, culture of schools and resources that will affect the generation and implementation of teachers' new ideas within a school (Harris, 2009; Stoll & Temperley, 2009b). Thus, school principal leadership can influence teachers' creativity and be able to lead them to be creative for cultivating students' creativity.

As described above, we can conclude that school principal leadership is necessary for promoting teachers' creativity in school. But what style of school leadership can improve teachers' creativity in schools. According to the research study of Mainemelis, Kark, and Epitropaki (2015), they identified that there are three conceptualizations of creative leadership in their review. One of the conceptualizations of creative leadership focuses on the organizational leader's role in fostering the creativity of others in the organizational context. This conceptualization was originally developed within a strand of organizational creativity research that examines contextual influences on employee creativity. Later, it expanded into a strand of organizational leadership research that examines the influences of various leadership styles on employee creativity. These two research strands (located in the creativity and leadership

fields, respectively) share a social – psychological foundation, have regularly exchanged findings and insights, and they have been the most prolific contributors to creative leadership theories of creativity that appeared in the late 1980s and 1990s: Amabile (1988) componential theory, Woodman, Sawyer, and Griffin (1993) interactionist model, and Ford (1996) theory of creative action. Because these theories argued that organizational creative leadership influences employee creativity, subsequent studies in both research strands sought to understand how creative leaders promote and hinder employee creativity (Amabile et al., 1996; George & Zhou, 2001; Liao, Liu, & Loi, 2010; Mumford, Scott, Gaddis, & Strange, 2002; Oldham & Cummings, 1996; Shin & Zhou, 2003; Tierney, Farmer, & Graen, 1999; X. Zhang & Bartol, 2010). Creative leadership in these two strands refers to promoting employee creativity. They refer to this manifestation of creative leadership as *Facilitating*. Thus, I came to the conclusion that creative leadership style of school principals can facilitate teachers' creativity in schools.

In Addition, Robinson (2011) stated the role of creative leadership is to facilitate creativity and innovation in any organizational context. He described that the first role of a creative leader is to facilitate creative potential of every member of the organizational because everyone in an organization is capable of contributing creative ideas to its development. The second role of a creative leader is to form and facilitate dynamic creative teams due to more often than not creativity in organizations is driven by teams, where there is a flow of ideas between people who have different areas of expertise. In the same with this ideas, Stoll and Temperley (2009b) indicated that teachers' creativity is more likely to be enhanced, developed and supported through the collective rather than individual endeavor. Furthermore, the quality of the creative work of individuals and of groups is deeply enmeshed in the general culture of the organization as a whole. Thus, the third role of a great leader is to promote a general culture of creativity and innovation. Robinson stressed that these roles of creative leadership are not linear steps, they are organic processes that should feed into each other in a continuous cycle of mutual enrichment. Stoll and Temperley (2009b) also demonstrated that the creative school principals can create the right conditions, structure and culture in which teachers' creativity can thrive.

Moreover, from the study of Basadur (2004), the researcher found that creative leaders are not only able to recognize that individuals, teams, and organizations differ in their creative problem solving styles but also can help individuals and teams to coordinate and integrate their differing styles through a process of applied creativity that includes continuously discovering and defining new problems, solving those problems, and implementing the new solutions. Thus, he concluded that the most effective leader of the 21<sup>st</sup> century will be creative leader, those who can lead others in their organizations to think together in innovative ways and drive change. Stoll and Temperley (2009b) also explained that creative leadership of school principals meant setting the tone, climate and conditions where teachers' creativity can thrive. This means a creative principal can remove structural and cultural barriers that actively prevent teachers from working together, learning from each other and equip each other to be creative through interaction and dialogue. Thus, teachers' creativity is a product of professional collaboration, dialogue and disagreement by a creative school principal leading them to think creative together (Harris, 2009).

As demonstrated above, school creative leadership has significance on enhancing teachers' creativity and innovation in schools. Therefore, school leaders should actively develop creative leadership practices in order to create the 'space' and 'opportunities' for teachers' creativity to flourish. Simultaneously, school principals should invest in developing individual and collective skills, knowledge and creativity of all teachers and place a particular focus on accelerating creative capacity through the actions and interactions of people across the school. This is achieved primarily through ensuring that networking and collaboration are reinforced as the most important leadership skills (Harris, 2008, 2009). Therefore, school principals must strengthen creative leadership in order to promote teachers' creative teaching for students' creative learning.

In case of China, because of the pressures and challenges from home and abroad, to respond these needs, China made a National Medium and Long Term Plan for Science and Technology Development 2006-2020, its goal is to build an innovation-oriented country for national sustainable development (Cao, Suttmeier, & Simon, 2006). To achieve this goal, the key is to cultivate creative talents who rely on innovative education (S. Gu et al., 2009; Xiwei & Xiangdong, 2007). Based on the National Plan



for Medium and Long Term Education Reform and Development (2010-2020), one of the urgent tasks is to develop students' creativity for preparing to cultivate innovative talents (W. Zhang, 2012). Ma, Luo, and Liang (2014) stated that the school principals and teachers are not only the core people of the implementation of the education reform but also the practitioners of deepening the education reform. Chen (2008) also pointed out, China still lacks of innovation that is the strategic core competitiveness in our country, that is why developing innovative students is received much more attention now. He stated that in the school field, only the creative school principal can bring out the creative abilities of teachers and get more skillful for all students' independent innovation capability development (J. Liu, 2002; Zeng, 2012).

However, while many scholars and researchers recognized the importance of creative leadership in promoting creativity and innovation of the organization, very few examined this topic within the context of school administration (Jarvis, 2015). Goertz (2000) observed that "much has been written about creativity and the creative person, as well as about leadership and the principal, but studies that explained a relationship between creativity and leadership were limited." Stoll and Temperley (2009b) also found that no related educational research specifically on creative leadership and very limited educational applications. Moreover, very limited research has been conducted on the effect of primary school creative leadership on teachers' creativity. This study is based on this pressing need and tried to develop creative leadership strategies for primary school principals to promote teachers' creativity in selected research primary schools in Guangxi, China.

The researcher focuses on Guangxi, because the findings of research study of Wu, Lin, and Xie (2010) indicated that the primary school principals lack imagination, creativity and leadership to promote teachers' professional development in the less developed regions, Guangxi is included. Ma et al. (2014) showed that many teachers, who work in the rural primary schools of Guangxi, lack of both innovation awareness and collaboration in teaching. Additionally, Wei (2015) found that most of the primary school students who study in backward areas of Guangxi usually fear of making mistake, lack of self-confidence and innovation spirit. The professor Mingyu Gu (1999), who is the editor-in-chief of *Frontiers of Education in China* and concurrently the president of the Chinese Society of Education, stated that basic education is a critical period of the

development of students' creativity (Wang, 2010, 2011). He explained that the task of basic education is to lay the foundation for students, which is not only refer to master the basic knowledge, but also include the training of the basic ability; and the core of the basic ability is the creative thinking that needs to be fostered from an early age so that they have the spirit of exploration since childhood, and they will be able to be innovative in their career through growing up with the training of creative thinking. Guangxi (2015) stressed several times that strengthen primary school principals creative leading and professional management, and teachers' professional development in order to fostering creativity and creative habits of mind in students that is an essential starting point of deepening education reform and new curriculum reform (Qian & Walker, 2011, 2013). Therefore, the researcher decided to study creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China.

## **1.2 Research Questions**

1. What is the conceptual framework of creative leadership of primary school principals to promote teachers' creativity?
2. What are the current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China?
3. What are the strengths, weaknesses, opportunities and threats of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China?
4. What are creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China?

## **1.3 Research Objectives**

1. To study the conceptual framework of creative leadership of primary school principals to promote teachers' creativity.
2. To study the current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China.

3. To analyze the strengths, weaknesses, opportunities and threats to the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China.

4. To develop creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China.

#### **1.4 Operational Definitions of Terms**

The following terms are relevant to the proposed research.

**Creative Leadership:** The conceptualization of creative leadership focuses on the roles of primary school principals' leadership in fostering teachers' creativity in the school. There are three roles of creative leadership in three areas of focus, including 1. Personal: to facilitate the creative abilities of every teacher of the school 2. Group: to form and facilitate dynamic creative teacher teams 3. Culture: to promote a school culture of innovation. Within each of these roles there are three core component of practice. The detailed definitions of each role of creative leadership is explained in the followings:

**1. To facilitate the creative abilities of every teacher of the school** which involved the personal area consists of three core components of practice which including 1.1) engage every teacher using their creative potential in teaching, 1.2) energize every teacher's imagination for teaching and 1.3) provide every teacher learning opportunities to enhance creativity in teaching. The each core component of practice is defined as follows:

##### **1.1 engage every teacher using their creative potential in teaching**

It means that the school principals engage every teacher in the creative teaching; ensure that every teacher in the school is playing to their creative strengths and values their contribution of creative teaching; and stimulate a sense of urgency, give those challenges in pursuing teaching creativity.

##### **1.2 energize every teacher's imagination for teaching**

It means that the school principals give every teacher freedom to take risks in the teaching; give teachers opportunities to fail together and to recover from mistakes together; and helps teachers to discover and develop their own natural intelligence.

### **1.3 provide learning opportunities to enhance creativity in teaching**

It means that the school principals inspire teachers to learn techniques and practical skills of creative teaching; support every teacher to learn and find the right creativity tools and techniques in teaching; and provide teachers training opportunities for professional development in teaching creativity.

**2. To form and facilitate dynamic creative teacher teams** which involved the group area consists of three core components of practice which including 2.1) facilitate diversity in teacher teams, 2.2) facilitate collaboration in teacher teams and 2.3) offer time for teacher team to work on their passion. The each core component of practice is defined as follows:

#### **2.1 facilitate diversity in teacher teams**

It means that that the school principals show appreciation in the different teaching thinking and practices of every teacher; and create interdisciplinary teacher teams to ensure that teacher teams include diverse talents.

#### **2.2 facilitate collaboration in teacher teams**

It means that the school principals promote collaborative teaching of teachers; facilitate open and frequent communication; facilitate a creative teamwork process to teacher teams; and know who to put in a team, what work to give each other person on the team, and when it is time to move onto something else.

#### **2.3 offer time for teacher team to work on their passion**

It means that the school principals understand that time is an essential resource for creative teaching; give time for teachers to express their thoughts and feeling in teaching creativity; support teacher team to take time to reflect about teaching creativity; and offers teachers discretionary time and freedom to do what they are most passionate about.

**3. To promote a school culture of innovation** which involved the culture area consists of three core components of practice which including 3.1) promote a flexible school culture, 3.2) promote an inquiring school culture and 3.3) create creative school workspaces. The each core component of practice is defined as follows:

### **3.1 promote a flexible school culture**

It means that the school principals 1) evolve school structure without hierarchies by reinventing principal, teachers and students relationships, creating a flexible schedule and interdisciplinary opportunities for teachers, allowing teachers to stray away from the limits of their subject matters, and fostering an open culture, encourage teachers to listen and rethink upon reflection, critiquing from different collaborators; 2) evolve flexible working processes by changing the style of leadership away from command and control to collaboration and teamwork and creating interdisciplinary teacher teams.

### **3.2 promote an inquiring school culture**

It means that the school principals encourage every teacher to work through their unique talents and expertise; empower teachers to explore various approaches of teaching creativity; self-consciously relinquish control, leading to more delegation and to more empowerment of younger teachers and create a mistake-tolerant culture that encourages teachers to use failure as a learning opportunity.

### **3.3 create creative school workspaces**

It means the school principals create shared spaces for meetings and workshops; create a variety of different work spaces where full of relaxed and comfortable atmosphere; provide spaces for shared planning, follow-up, and assessment of teaching creativity projects; and allow teachers to personalize their workspace and give supports when they ask for help.

**Creative Leadership Strategies:** The proactive approach used in creative leadership for primary school principals to promote teachers' creativity.

**Teachers' creativity:** Teachers are creative in their teaching and finding new and exciting ways of learning to foster students' creativity. The key skills of creative teacher consist of 4 elements: 1) Modeling creative working processes 2) Encouraging students' creativity 3) Identifying students' creativity 4) Developing students' creativity. The detailed definition of each key skill of creative teacher is explained in the following:

### **1) Modeling creative working processes**

It means that the teachers show their interest, enthusiasm and process of working to students. Sharing and modeling their own creativity may take many forms, such as, the teachers can ‘speak aloud’ their thought processes in terms of decision making and assessing alternative courses of action; explain and explore the way they work and the choice they take.

### **2) Encouraging students’ creativity**

It means that the teachers encourage students to believe in their creative potential; engage their sense of possibility; give them the confidence to try; and encourage other attitudes which are important for creative achievement, these include high motivation and independence of judgment, willingness to take risks and be enterprising, to be persistent and to be resilient in the face of adversity and failure.

### **3) Identifying students’ creativity**

It means that the teachers are able to identify creativity in many different situations; recognize creative expressions or characteristics of students, and help students to find their creative strengths.

### **4) Developing students’ creativity**

It means that the teachers develop the skills of independent creative work of students. Such as, the teachers are able to

- (1) promote experiment and inquiry and a willingness to make mistakes,
- (2) encourage generative thought, free from immediate criticism,
- (3) encourage the expression of personal ideas and feelings,
- (4) convey an understanding of phases in creative work and the need for time,
- (5) develop an awareness of the roles of intuition and aesthetic processes,
- (6) encourage students to play with ideas and conjecture about possibilities,
- (7) facilitate critical evaluation of ideas.

**Primary schools of Guangxi:** Schools from Grade 1 to Grade 6, which are located in Beihai city and are operated by the Guangxi Administration.

**Primary school principals:** School principals and vice-principals who are in the management positions in primary schools of Beihai city, conducted by the Guangxi Administration.

**Primary school teachers:** School teachers who are in the teaching positions in primary schools of Beihai city, conducted by the Guangxi Administration.

## 1.5 Conceptual Framework

The researcher analyzed and synthesized all relevant documents in order to develop strategies for creative leadership of primary school principals to promote teachers' creativity in Guangxi, China.

1) The roles of creative leadership (Robinson, 2011; Stoll & Temperley, 2009), including

1. Personal: To facilitate the creative abilities of every teacher of the school
  - 1.1 Engage every teacher using their creative potential in teaching
  - 1.2 Energize every teacher's imagination for teaching
  - 1.3 Provide learning opportunities to enhance creativity in teaching
2. Group: To form and facilitate dynamic creative teacher teams
  - 2.1 Facilitate diversity in teacher teams
  - 2.2 Facilitate collaboration in teacher teams
  - 2.3 Offer time for teacher teams to work on their passion
3. Culture: To promote a school culture of innovation
  - 3.1 Promote a flexible school culture
  - 3.2 Promote an inquiring school culture
  - 3.3 Create creative school workspaces

2) The key skills of creative teacher consist of 4 elements: (1) Modeling creative working processes (2) Encouraging students' creativity (3) Identifying students' creativity (4) Developing students' creativity (Desailly, 2015; NACCCE, 1999; Robinson, 2011)

3) Development of strategies

The concept has been synthesized to carry out these three steps for developing strategies (Certo & Peter, 1991; Siribanpitak, 2009):

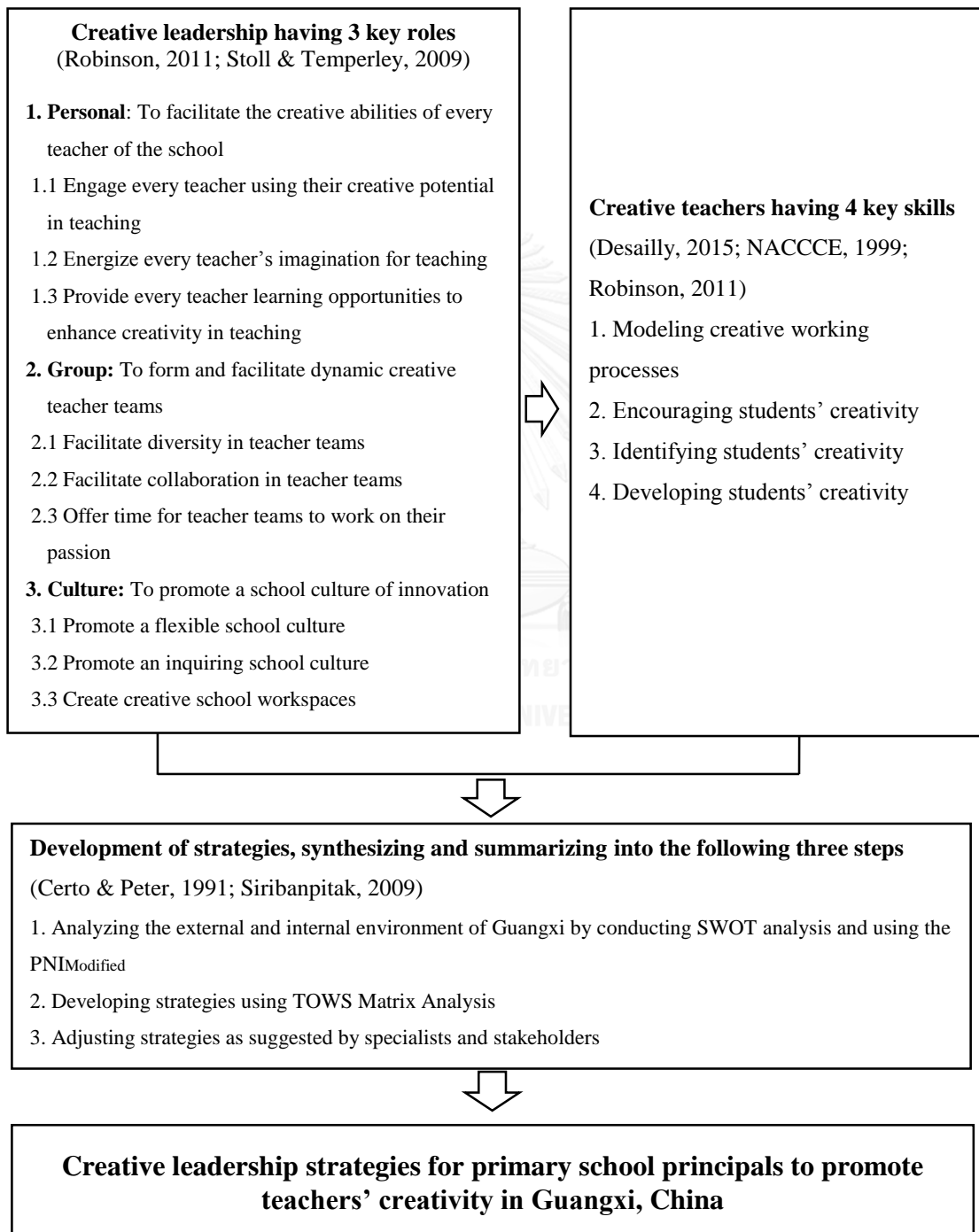
(1) Conducting SWOT analysis using PNI Modified to study the current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China.

(2) Developing strategies using TOWS Matrix.

(3) Adjusting strategies as suggested by specialists and stakeholders.

The conceptual framework of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China has been illustrated in figure 1.

Figure 1: Conceptual framework of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China





## **1.6 Scope of Research Study**

### **1. Research Population**

The population of this study consists of 144 primary schools under the Beihai city of Guangxi, China and the informants include school principals, heads of subject and teachers at Beihai city primary schools.

### **2. Research Content**

The key skills of creative teachers are studied, analyzed and synthesized through the review of literature. The study of the current state and desirable state of the creative leadership of primary school principals to promote teachers' creativity is conducted through questionnaires; the information acquired from the study is analyzed to identify strengths, weaknesses, opportunities and threats (SWOT analysis). The study of the creative leadership of primary school principals to promote teachers' creativity is conducted according to the following roles and their components:

1. Personal: To facilitate the creative abilities of every teacher of the school
  - 1.1 Engage every teacher using their creative potential in teaching
  - 1.2 Energize every teacher's imagination for teaching
  - 1.3 Provide every teacher learning opportunities to enhance creativity in teaching
2. Group: To form and facilitate dynamic creative teacher teams
  - 2.1 Facilitate diversity in teacher teams
  - 2.2 Facilitate collaboration in teacher teams
  - 2.3 Offer time for teacher teams to work on their passion
3. Culture: To promote a school culture of innovation
  - 3.1 Promote a flexible school culture
  - 3.2 Promote an inquiring school culture
  - 3.3 Create creative school workspaces

### **3. Research Timeframe**

The research study is to be conducted during the academic year 2016-2017.

## **1.7 Significance of the Research**

### 1. In terms of academic development

1.1 The new body of knowledge consisting of creative leadership strategies of primary school principals, developed to promote teachers' creativity in Guangxi, China.

1.2 The research finding can be used for the study and development of each aspect of teachers' creativity in further detail.

### 2. In terms of the implementation of strategies:

2.1 The Guangxi Administration can employ the strategies to set or develop principal leadership for all schools to promote teachers' creativity.

2.2 School principals of schools in Guangxi Administration can employ the strategies to develop a set of action plans for the quality of teaching for students' creativity.

2.3 Other educational institutions with the similar context, can employ the strategies to develop creative principal leadership for teachers' creativity.

2.4 Universities and educational training centers can effectively develop academic work, a study course or a workshop seminar relating to the development of principals leadership and teachers' creativity to ultimately develop students' creativity in primary school, based on the derived creative leadership strategies.

## **Chapter 2**

### **Literature Review**

Literature reviews and various research studies on the concepts, theories and practices relating to “Creative leadership strategies for primary school principals to promote teachers’ creativity in Guangxi, China” have been conducted; this chapter has seven sections which include the following:

- 2.1 Overview of Education in China
- 2.2 Politics, Economy, Culture, Technology and Education in Guangxi, China
- 2.3 Primary School Teachers’ Creativity
- 2.4 The Link between Creative Principal Leadership and Teachers’ Creativity
- 2.5 The Roles of Creative Leadership for Primary School Principals
- 2.6 Strategies Development
- 2.7 Related Research Studies

#### **2.1 Overview of Education in China**

##### **2.1.1 Principles and General Objectives of Education**

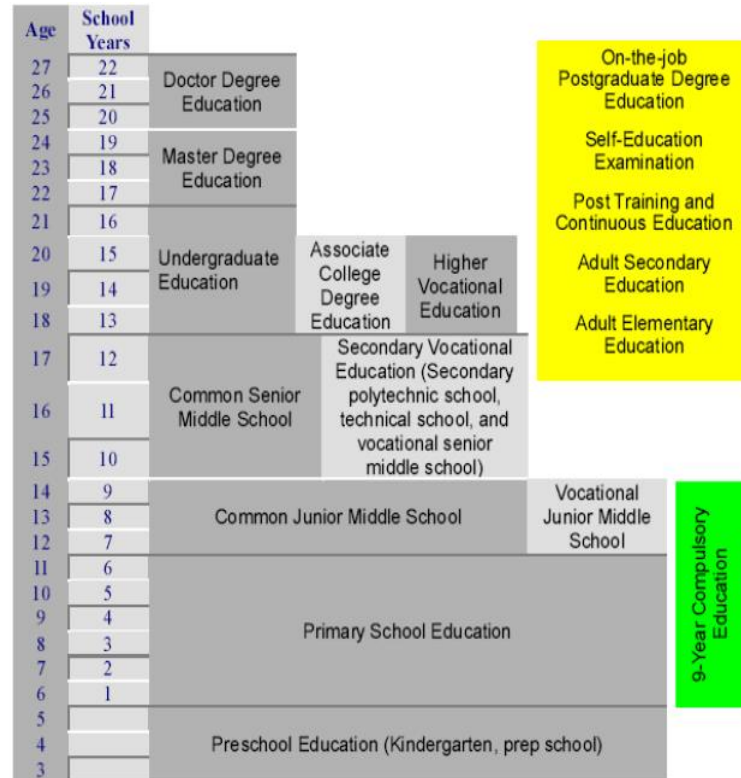
In terms of the Education Law of 1995, education in the People’s Republic of China shall serve the construction of socialist modernization, be combined with production and labor, and satisfy the needs of training constructors and successors with all round development of morality, intelligence and physique for the socialist cause. The State shall conduct education for promoting among learners patriotism, collectivism and socialism as well as ideals, ethics, discipline, legality, national defense, and ethnic unity. Education shall be carried out in the spirit of inheriting and expanding the fine historical and cultural traditions of the Chinese nation and assimilating all the fine achievements of the civilization progress of human beings. Article 3 specifies that in developing the socialist educational undertakings, the State shall uphold Marxism-Leninism, Mao Zedong Thought, and the theories of constructing socialism with Chinese characteristics as directives (Deng Xiaoping Theory), and comply with the basic principles of the Constitution.

Article 24 of the Constitution, promulgated in 1982 (and amended in 1988, 1993, 1999 and 2004), stipulates that the State strengthens the building of socialist spiritual civilization by promoting education in high ideals, ethics, general knowledge, discipline and legality, and by promoting the formulation and observance of rules of conduct and common pledges by various sectors of the population in urban and rural areas. The State advocates the civic virtues of love for the motherland, for the people, for labor, for science and for socialism. It conducts education in patriotism and collectivism, in internationalism and communism and in dialectical and historical materialism, to combat capitalist, feudalist and other decadent ideas.

The educational equity is fundamental for social equity. To provide all people the access to education and ensure the opportunity for the quality education constitutes the major content and essential condition for the construction of the socialist harmonious society (Ministry of Education, 2008). Quality-oriented education encourages students to claim ownership of their learning and to actively participate in the collaborative construction of knowledge. In addition, quality-oriented education challenges teachers to create school-based curricula and to conduct their instruction in a way that nurtures creative and independent learners. And school principal leadership practices primarily affect student learning indirectly through developing teacher capacity and creating positive organizational conditions (Huang & Wiseman, 2011).

## 2.1.2 Structure of the Education System in China

### People' Republic of the education system



Source: National Center for Education Development Research, 2008.

## 2.1.3 Structural Context of Education in China

China has the greatest number of school and principals of any nation in the world. Currently there are more than 310,000 primary and secondary schools. Each school has leaders at different career stages, involved in different development programs, with at least one principal and one vice-principal at each school. Thus there are at least 620,000 primary and secondary school principals in China. With the largest scale of educational provision in the world, China has a continuing and growing need for large numbers of high quality school principals.

In China, the national government is the employer and also retains tight control over the context within which different educational profession (e.g., teachers, principals) operate. Educational administrators (e.g., superintendents, school principals) have been considered to be rank-and-file civil-service government officials for at least the past

several decades. Effectiveness in management the school and ensuring education quality has been a vague concept, with loyalty in implementing government and party policies viewed as the primary area of concern. Professional educational leaders in China thus operate in a different context from their counterparts in countries such as the USA and UK where state involvement in employment and control is much more limited (Cravens, Liu, & Grogan, 2012).

#### **2.1.4 Context of Educational Reform in china**

Since the turn of the twenty-first century, Chinese policymakers have engaged in a series of attempts at major education policy reform (Hannum & Park, 2002). These included the Basic Education Reform in 2001 (Ministry of Education, 2001) the New Curriculum Reform (Ministry of Education, 2001), and most recently a National Plan for Medium and Long-term Education Reform and Development (Ministry of Education, 2010). Today, more than a decade since the launch of the New Curriculum Reform, results have not met the expectations of policymakers or the public (Ministry of Education, 2010). As the Chinese authorities recently concluded: “achievement is great, but there are also numerous problems” (Ministry of Education, 2010). More specifically, there is a widespread perception that schools are failing to prepare students with the knowledge, skills and attitudes needed to succeed personally or professionally in a rapidly changing society (Feng, 2006).

The guiding principle of K-12 education reform in China is called *su zhi jiao yu*, which is frequently translated as ‘quality education’ or ‘quality-oriented education’, and it provides a blueprint for promoting holistic students development, both academically and socially (Mingyuan Gu, 2010). Quality education became the hallmark of the nationwide educational reform in 1999 and was intended to be fully enacted in 2001. It is commonly believed that the quality education reformers have attempted to borrow from Western educational methodologies without committing themselves to the conceptual based that underpin those Western educational systems. These reform ideas inevitably clash with traditionally embedded practices such as respect for authority, an emphasis on high-stakes examinations and an over-reliance on teacher-centered pedagogy (Walker, Hu, & Qian, 2012). Many problems have emerged as a result.

At the policy level, national and provincial governmental bodies advocate reducing students' excessive workload and changing completely the practice of evaluating the educational quality of primary school and secondary schools purely on the basis of students' test scores and the school's percentage of students entering a higher level of schooling. At a recent conference, Limin Liu, the vice president of Chinese Ministry of Education, emphasized the following key points:

**First**, the core of education reform is to improve the quality of education.

**Second**, the keys to the improvement of education are teachers and principals, who play a crucial role in the development of education, constituting the key factor for ensuring equity and quality in educational provision; thus, the idea of 'educator-type principal' should be promoted. This new term refers to a new type of principal who not only possesses knowledge of educational management, but also is an educational expert (e.g., instructional leader).

**Third**, school leaders, teachers, and parents should understand the new implications of improving education quality, playing attention to a student's all round holistic development rather than focusing only test scores (L. Liu, 2013)

In spite of what policymakers advocate, much of the intended reform policy for well-rounded quality and equity is yet to be fully implemented (Mingyuan Gu, 2010). Test scores, especially those for the national college entrance examinations, remain the main benchmarks for school performance. If the nationwide entrance examination system remain intact, it is likely that it will be difficult for educational decision makers and principals, themselves, to implement many of the educational reform initiatives (H. Chu & Cravens, 2012).

### **2.1.5 The requirements of school principals for curriculum reform**

Initiative and creativity are considered essential at the national level for increased global competitiveness. Thus, the major student learning challenge facing China-especially in the eyes of government policy-makers-is to confront exam-oriented education through the promotion of holistic student development. Towards this end, a series of policy initiatives have been released over the last decade or so. One of the most high-profile of these is the New Curriculum Reform launched in 2001 (Zhong,

2006). This reform arguably has been one of the most important influences on principals as leaders of student learning (Qian & Walker, 2011). The curriculum reform demanded that both teachers and principals shift their norms of practice (Wong, 2012). That is, teachers needed to shift their primary role from conveyor of knowledge to facilitator of student learning, and principals needed to move beyond just monitoring school academic success to facilitating deeper learning through curriculum design (Qian & Walker, 2013).

One of the major thrusts of the curriculum reform was the change from centralized curriculum management to a cascading structure of power sharing—from the central government to local government and to local school (Huang & Wiseman, 2011). Schools were to develop curricula to match their context (Qian & Walker, 2013). For example, the new Shanghai curriculum structure is comprised of three components: *the basic, enriched and inquiry-based* curriculum. Schools are to design their own *enriched and inquiry-based* curriculum which reflect their uniqueness, while reorganizing *basic* curriculum offerings innovatively (Shanghai Education Commission, 2004).

The reforms granted principals greater latitude as school-based curriculum decision makers (Qian & Walker, 2013). This increased autonomy was accompanied by a matching escalation in principal accountability and responsibility to counter public perceptions that only academic results count (Ke, 2011; Walker & Qian, 2011). Principals are now expected to create an environment that shapes children's independent and critical thinking, nurture creative mindsets and provide learning opportunities beyond the confines of the classroom (Huang & Wiseman, 2011)

### **2.1.6 Compulsory School Principal Professional Standards**

On December 24, 2012, the Ministry of Education of China (2012) issued *Compulsory School Principal Professional Standards* (Trial). It clearly mentioned that in the field of educational leadership, professional duties of school principals include the following three aspects:

1. Professional understanding and awareness: School principals should adhere to all students, teach students in accordance with their aptitude, comprehensively improve the quality of teaching, respect for the law of education, focus on students' sense of responsibility, innovative spirit, and practical ability, respect for teachers'



teaching experience and wisdom, and actively promote the teaching reform and innovation;

2. Professional knowledge and methods: School principals should master students' training objectives and curriculum standards in different stages of development; understand curriculum development and implementation, relevant knowledge of curriculum evaluation, and policy of teaching materials, as well as the experience of domestic and foreign curriculum reform; and master the classroom teaching, general principles and methods of the application of educational information technology;

3. Professional competence and behavior: School principals should effectively plan the overall national, local, and school level courses, to ensure the implementation of national and local curricula, promote the development and implementation of school-based curriculum, and provide students with rich variety of teaching resources. They should also earnestly implement compulsory education curriculum standard, protect students from the heavy burden, not arbitrarily increase the difficulty of the class and not occupy the lessons of sports, music, art, and so on. Besides, they should ensure that students can do sports activities one hour each day, establish a system of attending and evaluating lectures, attend more lectures than asked by the local educational administrative departments, and give some suggestions to lecturers. They should actively organize research activities and carry out teaching reform. Teaching evaluation system also should be established to promote students' comprehensive development which cannot be judged by test scores and graduation rates (Yan, 2015).

## **2.2 Politics, Economy, Culture, Technology and Education in Guangxi**

At the research for this study has been conducted in Guangxi, the following section provides a contextual discussion about this region. Guangxi is an autonomous region of the southern People's Republic of China covering 236,700 square kilometers. It is the first most populous monitoryies region with a population of more than 15 million people, and the total population of more than 27 million people. In Guangxi, Chinese culture is clearly predominant. Because the minorities in Guangxi possess neither a unified organization nor support by fraternal groups, their assimilation by the Chinese is far more advanced than in the other autonomous regions. The underlying causes of

what appear to be the region's ethnic tensions are economic and geographic factors that have exerted a powerful influence on cultural trends. After the establishment of the People's Republic of China, the political system of Guangxi was structured in a dual party-government system as with all other governing institutions in Mainland China. There are 14 prefecture-level municipalities (*dijishi*), 37 districts (*shixiaqu*), 8 county-level municipalities (*xianjishi*), 53 counties (*xian*) and 12 autonomous counties (*zizhixian*) in Guangxi province.

In recent years, Guangxi has made considerable progress in its economic development. Guangxi has become self-sufficient in rice and exported surplus rice to Guangdong. The Beibu Gulf Economic Zone was established in 2006 to promote international participation in developing the Gulf of Tonkin coastal region. However, there is uneven economic development throughout Guangxi, and urban areas are more developed than rural areas. In 2014, Guangxi GDP ranked 19 in Mainland China. Guangxi is a less-developed province. In the technology field, Guangxi technological level is improving day by day, however, the development of science and technology in Guangxi rarely involves education, Guangxi technologies are mainly used in commerce, trade, engineering construction, marine field, and scientific research. Therefore, the educational technology in Guangxi needs to be developed urgently.

Since the implementation of Mainland China's open-door policy, education in Guangxi has undergone significant changes. Guangxi has fully implement nine-year compulsory education. Since 2001, it took the lead in carrying out curriculum reform of reform of basic education in Mainland China through a series of curriculum experiment. And now actively implements National Plan for Medium and Long-term Education Reform and Development (2010-2020). Within thirty years, 12,946 primary schools have been built in Guangxi province with 4.318063 million students and a 99.58% enrolment rate in 2014 (Education, 2015). However, the unbalanced development of urban and rural education has emerged as the major problem in Guangxi's education system, which is manifested in the coexistence of advanced education in cities and less developed education in rural areas. And basic education ignored the students' creative thinking cultivation, the quality of teaching and school management needs to be improved. Therefore, Guangxi province has placed quality education achievement as the top priority in reforming education.

## **2.3 Primary School Teachers' Creativity**

### **2.3.1 Definition of Creativity**

In 1998 the government set up the National Advisory Committee on Creative and Cultural Education (NACCCE). Its report *All Our Futures: Creativity, Cultural and Education* (Creative & Education, 1999) proved to be one of the most significant contributions to the debate about creativity. This report was specific in its definition of creativity and that definition was subsequently used in a number of government initiatives and other publications (Desailly, 2015). Their definition was:

Imaginative activity fashioned so as to produce outcome that are both original and of value (Creative & Education, 1999). This definition, as can be seen, has four distinct parts: using imagination, pursuing purposes, being original and judging value (Desailly, 2015).

West-Burnham (2008) suggests that it might be appropriate to define creativity in terms of:

- (1) The use of imagination, insight and originality;
- (2) The development of a different product, process or outcome;
- (3) The addition of value to an existing product or process;
- (4) The use of higher order skills, knowledge and qualities;
- (5) The potential to make a difference, to improve, enhance or enrich.

Creativity was defined as the generation of novel ideas by individuals or small groups working together within a given domain (Dangaran, 2012).

Therefore, creativity is the process of having original ideas that have value (Robinson, 2011).

### **2.3.2 Characteristics of creative teachers**

Torrance (1965) identified the personality characteristics of creative individuals, as follows:

- (1) Curiosity
- (2) Independence in judgment and thinking
- (3) Intuition

- (4) Idealism
- (5) Risk taking
- (6) A capacity to become preoccupied with tasks

Stein (1974) identified the features of creative people, as follows:

- (1) Curiosity
- (2) Independence
- (3) The capacity to become preoccupied
- (4) Persistence and assertiveness
- (5) Domain expertise
- (6) Unconventional tendencies

Guilford (1973) Research studies of artists, writers, scientists, and other highly creative adults reveal the following traits as among those shared by many unusually creative people:

(1) Flexibility: The ability to go beyond tradition, habits, and the obvious. To turn ideas and materials to new, different, and unusual uses.

(2) Fluency: The ability to think of many ideas; many possible solutions to a problem.

(3) Elaboration: The ability to work out the details of an idea or solution.

(4) Tolerance of ambiguity: The ability to hold conflicting ideas and values and to bring about a reconciliation without undue tension. The values of creative persons, for example, seem to be both aesthetic and theoretical, two value systems which might be considered antithetical. The creative person appears to be interested not only in solutions to problems but also in “elegant” aesthetically satisfying solutions. His goal seems to be both truth and beauty.

(5) Originality: Divergent rather than convergent thinking, going beyond commonly accepted ideas to unusual forms, ideas, approaches, solutions.

(6) Breadth of interest: Wide range of interests with much more concern for the “big ideas,” broad meanings, and implications rather than for small details and facts for the sake of facts.

(7) Sensitivity: The ability to sense problems, to see deficiencies and needs in life, the challenge to find solutions and fill these needs. Sensitivity to our own inner life and feelings, thoughts and feelings of others.

(8) Curiosity: Openness to new ideas and experimenting with ideas and pleasure in seeking and discovering ideas.

(9) Independence: Thinking things through our own self-reliance and forcefulness.

(10) Reflection: The ability to consider and reconsider, to evaluate our ideas as well as the ideas of others; to take time to achieve understanding and insight, to look ahead and plan, to visualize the complete picture.

(11) Action: The ability to put ideas in action; to begin, help, shape, with high energy and enthusiasm these ideas.

(12) Concentration and persistence: The ability to work hard, long, consistently, and persistently with extraordinary concentration.

(13) Commitment: Deep involvement, intense commitment, deep caring, almost of a metaphysical nature.

(14) Expression of total personality: Expression of both male and female sides of nature, which at times leads to tension in our society. As the creative male shows such supposedly female traits as sensitivity, self-awareness, and breadth of interests or as the female shows such “male” traits as independence, self-reliance and forcefulness.

(15) Sense of humor: The ability to see and express the humor in the contradictions and ambiguities of life. To maintain balance without losing commitment.

He also identified creativity checklist for teachers:

(1) Do you really care about teaching? Does it renew or exhaust you? Is it a way of life and not just a way or earning a living?

(2) Do you teach today the same as you did one year ago? Five years ago? Twenty years ago?

(3) Are you doing highly unusual, different, and exciting things in your teaching this year? Are you experimenting with new teaching materials, methods, and ideas?

(4) Do you read about education in general (not just your own specialty) and about areas other than education?

(5) Do you really care about children? Do you respect them? Do you anticipate differences in each child? Do you see children not as gifted or retarded, average or accelerated, alike in some basic ways and yet each unlike any child encountered before

or to be encountered again, each unique, different from other people, and exciting in potential?

(6) Do you let some children feel inferior to other children? Do you put one child against another, "See what neat work John does?"

(7) Do you emphasize sex roles? Do you say, "Girls usually like this," or "Let's not do that, Sue, that is for boys"?

(8) Do you sometimes use flashes of insight which come to you? When a pupil says, "Hey, I just got a crazy idea," and tells you about it, do you say, "That's an interesting idea; let's try it out"?

(9) Do you welcome changes in curriculum, such as the so-called "new" mathematics or "new" science? Do you seek information about such changes and speak of the "good old days when children learned their numbers without all this nonsense?"

(10) Do you rely primarily in your teaching on the textbook? Is most of your class period devoted to talk about what is in the textbook?

(11) Do you set up the daily schedule and make all classroom decisions? Do children feel free to suggest changes in classroom procedures? Are their suggestions ever adopted?

(12) Do you need and require specific and authoritative answers to most questions?

(13) Do children in your class feel free to express ideas contrary to yours and those in the textbook?

(14) Is there much purposeful movement and activity in your room on an average day?

(15) Do you allow time regularly for individual study projects?

(16) Does your classroom invite new experiences and individual projects? Is there a good classroom library? Materials for examination and handling? Readily available art and construction materials?

(17) Do you use a wide variety of teaching materials and methods; such as, films, filmstrips, recordings, charts, demonstration, and dramatics?

(18) Do you ever discuss controversial issues in your classroom?

(19) Outside the classroom, are you deeply involved in some community activities or causes? Have you acquired any exciting new interests in the last five years?

(20) Do you feel competent to think about and come to some conclusions about such in questions as, “What is the purpose of life?” and “What is the purpose of education?”

Horng, Hong, ChanLin, Chang, and Chu (2005) found that the common personality traits of creative teachers are: 1) self-confidence 2) openness to experience 3) fantasy oriented 4) imagination 5) emotional sensitive 6) drive and ambition 7) norm doubting (questioning established norms) 8) nonconformity 9) flexibility of thoughts 10) risk taking, consistent with the viewpoint of Feist (1999), and Sternberg and Lubart (1999).

In addition, the research in educational contexts reveals that confidence, enthusiasm and commitment are common qualities in creative teachers (Beetlestone, 1988; Joes and Wyse, 2004; Grainger et al., 2004; Cited by Wilson, 2014)

At last, synthesizes the above analysis, characteristics of creative teachers as appeared in the table 1 below.

Table 1: Characteristics of creative teachers

Characteristics of creative teachers	Torrance (1965)	Stein (1974)	Guilford (1973)	Sternberg and Lubart (1999); Feist (1999)	Beetlestone (1988); Joes and Wyse (2004);
Curiosity	√	√	√	√	
Independence in judgment and thinking	√	√	√		
Intuition	√				
Idealism	√				
Risk taking/ unconventional tendencies/ nonconformity	√	√	√	√	
A capacity to become preoccupied with tasks/ Concentration	√	√	√		
Persistence		√	√		
Assertiveness		√			
Domain expertise		√			
Flexibility			√	√	
Fluency			√		
Elaboration			√		
Tolerance of ambiguity			√		
Originality			√		
Breadth of interest			√		
Sensitivity			√		
Reflection			√		
Commitment			√		√
Expression of total personality			√		
Sense of humor			√		
Confidence				√	√
Enthusiasm/ Passionate			√		√
Imagination				√	
drive and ambition				√	
openness to experience				√	
Emotional sensitive				√	

### 2.3.3 The key skills of creative teacher to foster students' creativity

In 1999 the National Advisory Committee on Creative and Cultural Education (NACCCE) reported *All Our Futures: Creativity, Cultural and Education* (Creative & Education, 1999). One of the three principle objectives is that teachers must be trained



in the most current methods to stimulate student's learning. They define creative teaching in two ways: first, teaching creatively, and second, teaching for creativity. Their terms of reference imply a primary concern with the second. Teaching for creativity involves teaching creatively. By teaching creatively they mean teachers using imaginative approaches to make learning more interesting, exciting and effective. Students' creative abilities are most likely to be developed in an atmosphere in which the teacher's creative abilities are properly engaged. To put it another way, teachers can't develop the creative abilities of their pupils if their own creative abilities are suppressed. The report stated that teachers can be highly creative in developing materials and approaches that fire children's interests and motivate their learning. There are three related skills in creative teaching of a teacher: encouraging, identifying and fostering.

### ***Encouraging***

Highly creative people in any field are often driven by a strong self-belief in their abilities in that field. Having a positive self-image as a creative person can be fundamental to developing creative performance. Many young people and adults do not think of themselves as creative and lack the confidence to take even the first steps. Consequently, the first task in teaching for creativity in any field is to encourage young people to believe in their creative potential, to engage their sense of possibility and to give them the confidence to try. These are the simplest steps but they can be the most important for stimulating creative performance. Other attitudes are important for creative achievement; these include high motivation and independence of judgment, willingness to take risks and be enterprising, to be persistent and to be resilient in the face of adversity and failure. These attitudes can be encouraged and nourished to varying extents in all young people, particularly if they are linked with the development of self-directed learning. We come back to this idea later.

### ***Identifying***

All young people have different creative capacities. A creative musician is not necessarily a creative scientist, a creative writer is not necessarily a creative mathematician. An essential task for education is to help young people to discover their own creative strengths. Creative achievement is often driven by a person's love of a particular instrument, for the feel of the material, for the excitement of a style of work

that catches the imagination. Identifying young people's creative abilities includes helping them to find their creative strengths – to be in their element. This too has implications for the range and balance of the curriculum.

### ***Fostering***

Creativity draws from many ordinary abilities and skills rather than one special gift or talent. Thus the development of many common capacities and sensitivities can help to foster creativity – for example, curiosity can be stimulated, memory can be trained and awareness can be enhanced. Recognizing and becoming more knowledgeable about the creative process can also help foster creative development; teaching for creativity helps young people in understanding what is involved in being creative and becoming more sensitive to their own creative processes. Creative ability is best enhanced in the process of being creative. This 'learning by doing' can be further developed and enriched by working with personal models and mentors who are prepared and share their experience.

Robinson (2011) explained that teaching for creativity is about facilitating students' creative work. The skill requires may be generally creative or specific to a particular domain. Teaching for creativity involves teaching creatively. There are three related skills in creative teaching of a teacher: encouraging, identifying and developing.

### ***Encouraging***

Many people do not think of themselves as creative and lack the confidence to take even the first steps. The first task in teaching for creativity in any field is to encourage people to believe in their creative potential and to nurture the confidence to try. Other attitudes important for creative learning include: high motivation and independence of judgment; a willingness to take risks and be enterprising, to be persistent and to be resilient in the face of false starts, wrong turns and dead ends.

### ***Identifying***

A second role is to help students to discover their own creative strengths. Everyone can learn the general skills of creative thinking. In addition, we all have personal creative capacities. A creative musician is not necessarily a creative mathematician. A creative writer is not necessarily a creative mathematician. Creative achievement is often driven by a person's love of a particular instrument, for the feel of the material, for the excitement of a style of work that catches the imagination.

Identifying people's creative abilities includes helping them to find their creative strengths: to be in there element.

### *Developing*

The third role is to develop the skills of independent creative work. Teaching for creativity aims to encourage self-confidence, independence of mind, and the capacity to think for oneself. In teaching for creativity, teachers aim to:

- (1) promote experiment and inquiry and a willingness to make mistakes,
- (2) encourage generative thought, free from immediate criticism,
- (3) encourage the expression of personal ideas and feelings,
- (4) convey an understanding of phases in creative work and the need for time,
- (5) develop an awareness of the roles of intuition and aesthetic processes,
- (6) encourage students to play with ideas and conjecture about possibilities, and
- (7) facilitate critical evaluation of ideas.

Desailly (2015) described that the key skills that a teacher needs to teach both creatively and to foster creativity, including:

- (1) To model creative working processes yourself (modeling creativity)

Understanding your own creativity and being prepared to model your own creative working processes with the children is one of the cornerstones of helping them to recognize and make the most of their own creativity.

Sharing and modeling your own creativity may take many forms. The teachers can 'speak aloud' their thought processes in terms of decision making and assessing alternative courses of action. If you have skills yourself as, for example, an artist, dancer, gymnast or musician then would you be prepare to share the expertise with the children? You might explain and explore the way you work and the choice you take. Why did you decide to take some photographs in black and white rather than color? What difference did you make? How could you play a piece of music differently? How much scope is there for interpreting a composition in terms of tempo, ornamentation or dynamics? This is closely allied to modeling the learning process yourself. Guy Claxton comments, 'One of the problems with conventional schooling is that it delivers knowledge to the students after all the interesting learning has taken place, and all the uncertainty, disagreement and trial-and-error has been squeezed out of it' (Craft, Gardner, & Claxton, 2007). He goes on to suggest that children would learn better if

they could see all the first drafts or initial observation that went into the works of art or scientific and mathematical theories they study. Teachers can help here. If you write poetry or songs or stories why not show your class the multiple drafts you generate before you are satisfied? Guy Claxton suggests teachers could set up their trying to do. Perhaps you are involved in a mini action-research methods. The possibilities are endless. The process of your classroom will really help children to see what a creative person and a successful learner does. You don't have to be an expert in order to do this, in fact it may inhibit children if they are overawed by your prowess. Just showing your interest, enthusiasm and process is enough.

(2) To be able to identify creativity in others (identifying creativity)

Teachers need to be able to identify creativity in many different situations. Christopher Bannerman, writing on 'Creativity and wisdom', reminds us that these creative expressions might be 'vibrant and overt, or secret and personal'. They may appear completely unexpectedly. Bannerman cites the example of 'individuals experiencing a sudden unleashing of creative energies, which appeared to be entirely hidden previously, through contact with a new context or discipline' (Bannerman, 2007). Most, if not all, teachers will have recognized this phenomenon. It most often happens when a child is working with an outside agency visiting the school or a learning experience outside the classroom. The unusual working methods, different relationships with the teacher and different setting seem to stimulate responses in some children which were unexpected and surprising. When this happens and the teacher notices the engagement then they can find ways to encourage and foster that spark of creativity in the future.

(3) To be able to encourage and foster creativity in others (encouraging and fostering creativity)

To be able to encourage and foster creativity in students, the teachers need to

1) give themselves space and time to develop the skills and confidence they will need and to develop within the students they teach the skills and confidence to work in this way.

2) be comfortable themselves with flexibility and able to change routines where appropriate. And balance the need to address certain areas of learning and to plan for particular outcomes while allowing the unexpected to happen.

3) have good subject knowledge in the whole range of National Curriculum subjects. They will need to understand the progression of skills inherent in each subject and the range and breadth of the areas of learning. They will also need to have enough confidence in what they are teaching to be able to be flexible.

4) provide a broad and rich curriculum and encourage their class to enjoy and use the knowledge they have acquired.

5) allow students to explore ideas in different areas, to challenge them with ‘what would happen if’ and encourage them to ask that of themselves.

6) have confidence in their own subject knowledge and yet the flexibility to recognize when and how ‘rules’ and conventions can be altered or ignored, and they need to encourage students to ‘play with’ those conventions and to see what effects that has and what they think of the results.

On the basis of above analysis, the key skills of creative teachers to foster students’ creativity can be synthesized in the following table 2, which including 1) Modeling creative working processes 2) Encouraging students’ creativity 3) Identifying students’ creativity 4) Developing students’ creativity.

Table 2: The key skills of creative teachers to foster students’ creativity

<b>Key skills of creative teachers</b>	NACCCE (1999)	Robinson (2011)	Desai (2015)
1. Modeling creative working processes			√
2. Encouraging students’ creativity	√	√	√
3. Identifying students’ creativity	√	√	√
4. Developing/fostering students’ creativity	√	√	√

### **2.3.4 Definitions of the key skills of creative teachers**

Operational Definition of each key skill of creative teachers were synthesized from theory and related research of Desailly (2015), NACCCE (1999), and Sir Ken Robinson (2011), which is described as follows:

#### **Modeling creative working processes**

It means that the teachers show their interest, enthusiasm and process of working to students. Sharing and modeling their own creativity may take many forms, such as, the teachers can ‘speak aloud’ their thought processes in terms of decision making and assessing alternative courses of action; explain and explore the way they work and the choice they take.

#### **Encouraging students’ creativity**

It means that the teachers encourage students to believe in their creative potential; engage their sense of possibility; give them the confidence to try; and encourage other attitudes which are important for creative achievement, these include high motivation and independence of judgment, willingness to take risks and be enterprising, to be persistent and to be resilient in the face of adversity and failure.

#### **Identifying students’ creativity**

It means that the teachers are able to identify creativity in many different situations; recognize creative expressions or characteristics of students, and help students to find their creative strengths.

#### **Developing students’ creativity**

It means that the teachers develop the skills of independent creative work of students. Such as, the teachers are able to

- (1) promote experiment and inquiry and a willingness to make mistakes,
- (2) encourage generative thought, free from immediate criticism,
- (3) encourage the expression of personal ideas and feelings,
- (4) convey an understanding of phases in creative work and the need for time,
- (5) develop an awareness of the roles of intuition and aesthetic processes,
- (6) encourage students to play with ideas and conjecture about possibilities, and
- (7) facilitate critical evaluation of ideas.

## 2.4 The Link between Creative Principal Leadership and Teachers' Creativity

According to the research study of Mainemelis et al. (2015), they identified that there are three conceptualizations of creative leadership in their review. One of the three conceptualizations of creative leadership focuses on the organizational leader's role in fostering the creativity of others in the organizational context. This conceptualization was originally developed within a strand of organizational creativity research that examines contextual influences on employee creativity. Later, it expanded into a strand of organizational leadership research that examines the influences of various leadership styles on employee creativity. These two research strands (located in the creativity and leadership fields, respectively) share a social – psychological foundation, have regularly exchanged findings and insights, and they have been the most prolific contributors to creative leadership theories of creativity that appeared in the late 1980s and 1990s: Amabile (1988) componential theory, Woodman et al. (1993) interactionist model, and Ford (1996) theory of creative action. Because these theories argued that organizational creative leadership influences employee creativity, subsequent studies in both research strands sought to understand how creative leaders foster and hinder employee creativity (Amabile et al., 1996; George & Zhou, 2001; Liao et al., 2010; Mumford et al., 2002; Oldham & Cummings, 1996; Shin & Zhou, 2003; Tierney et al., 1999; X. Zhang & Bartol, 2010). Creative leadership in these two strands refers to fostering employee creativity. They refer to this manifestation of creative leadership as *Facilitating*. Thus, from the above, we can come to the conclusion that creative leadership style of school principals can facilitate teachers' creativity in schools.

In addition, Robinson (2011) stated the roles of the creative leader is to facilitate creativity of every member in any organizational context. As Robinson described, everyone in an organization is capable of contributing creative ideas to its development. Thus, the first role of the creative leader is to facilitate the creative abilities of every member of the organization by encouraging and giving opportunities for professional development. And more often than not creativity in organizations is driven by teams, where there is a flow of ideas between people who have different areas of expertise. In the same with this ideas, Stoll and Temperley (2009b) indicated that teachers' creativity is more likely to be enhanced, developed and supported through the collective rather than individual endeavor. Thus, the second role of a creative leader is to form and

facilitate dynamic creative teams. Furthermore, the quality of the creative work of individuals and of groups is deeply enmeshed in the general culture of the organization as a whole. Therefore, the third role of a creative leader is to promote a general culture of creativity and innovation. These roles of creative leadership are not linear steps. They are organic processes that should feed into each other in a continuous cycle of mutual enrichment. And Stoll and Temperley (2009b) also demonstrated that the roles of creative leadership show that the creative school principals can create the right conditions, structure and culture in which teachers' creativity can thrive.

Moreover, from the study of Basadur (2004), he found that creative leaders are able to recognize that individuals, teams, and organizations differ in their creative problem solving styles. And the creative leadership of leaders can help individuals and teams to coordinate and integrate their differing styles through a process of applied creativity that includes continuously discovering and defining new problems, solving those problems, and implementing the new solutions. Thus, he stated that the most effective leader of the 21<sup>st</sup> century will be creative leader, those who can lead others in their organizations to think together in innovative ways and drive change. Stoll and Temperley (2009b) also explained that creative leadership of school principal meant setting the tone, climate and conditions where teachers' creativity can thrive. This means a creative principal can remove structural and cultural barriers that actively prevent teachers from working together, learning from each other and equip each other to be creative through interaction and dialogue. Thus, it can be said that teachers' creativity is a product of professional collaboration, dialogue and disagreement by a creative school principal leading them to think creative together (Harris, 2009).

As demonstrated above, school creative leadership has significance on enhancing teachers' creativity and innovation in schools. Therefore, school leaders should actively develop creative leadership practices in order to create the 'space' and 'opportunities' for teachers' creativity to flourish. Simultaneously, school principal should invest in developing individual and collective skills, knowledge and creativity of all teachers and place a particular focus on accelerating creative capacity through the actions and interactions of people across the school. This is achieved primarily through ensuring that networking and collaboration are reinforced as the most important leadership skills (Harris, 2008, 2009). Therefore, school principals must strengthen



creative leadership that promotes teachers' creative teaching and students' creative learning.

## **2.5 The Roles of Creative Leadership for Primary School Principals**

### **2.5.1 Definition of Creative Leadership**

#### **Leadership**

Yukl and Mahsud (2010) defines leadership as “the process of influencing others to understand and agree with about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives”.

Van Vugt and Ahuja (2011) define leadership as “a process of social influence to attain shared goals”.

Northouse (2015) defines leadership as “a process whereby an individual influences a group of individuals to achieve a common goal”.

These definitions suggest several components central to the phenomenon of leadership. Some of them are as follow: 1) Leadership is a process, 2) leadership involves influencing others, 3) leadership happens within the context of a group, 4) leadership involves goal attainment, and 5) these goals are shared by leaders and their followers (Rowe & Guerrero, 2012).

#### **Creative Leadership**

Many scholars and researchers defined creative leadership as follows:

Basadur (2004) explained that creative leadership means leading people through a common process or method of finding and defining problems, solving them, and implementing the new solutions.

DeLuca (2014) mentioned that a creative leader continually maintains and refreshes the common vision, values, and goals; sensing and adapting to changing conditions both inside and outside the community; and creating conditions of trust, respect, and curiosity that enable dynamic synergisms and co-creativity.

Furthermore, creative leadership is an imaginative and thought-through response to opportunities and to challenging issues that inhibit learning at all levels. It

is about seeing, thinking and doing things differently in order to improve the life chances of all students. Creative leaders also provide the conditions, environment and opportunities for others to be creative (Stoll & Temperley, 2009b). This means creative leadership is fundamentally about connecting different people and providing the time, resources, opportunities and space for creativity to flourish (Harris, 2009).

Similarly, Robinson and Aronica (2015) mentioned that the role of a creative leader is not to have all the ideas; it is to nurture a culture where everyone can have new ideas. For this perspective, the main role of a creative school principal is not command and control, it is climate control.

Therefore, in this study, creative leadership means the process of inspiring and leading teachers to be creative through creating a school culture of innovation.

### **2.5.2 Three Conceptualizations of Creative Leadership in the Organizational Literature**

Mainemelis et al. (2015) identified the three conceptualization of creative leadership in their review. And each conceptualization underlies the intellectual efforts of two or more research strands in the organizational literature.

The first conceptualization focuses on the leader's role in fostering the creativity of others in the organizational context. This conceptualization was originally developed within a strand of organizational creativity research that examines contextual influences on employee creativity. Later, it expanded into a strand of leadership research that examines the influences of various leadership styles on employee creativity. These two research strands (located in the creativity and leadership fields, respectively) share a social – psychological foundation, have regularly exchanged findings and insights, and they have been the most prolific contributors to creative leadership theories of creativity that appeared in the late 1980s and 1990s: Amabile (1988) componential theory, Woodman et al. (1993) interactionist model, and Ford (1996) theory of creative action. Because these theories argued that leadership influences employee creativity, subsequent studies in both research strands sought to understand how leaders foster and hinder employee creativity (Amabile et al., 1996; George & Zhou, 2001; Liao et al., 2010; Mumford et al., 2002; Oldham & Cummings, 1996; Shin & Zhou, 2003; Tierney et al., 1999; X. Zhang & Bartol, 2010). Most studies in these two strands have examined

creativity not in the creative industries but in industry environments where creativity is a less fundamental aspect of organizational activity (Vessey, Barrett, Mumford, Johnson, & Litwiller, 2014). Creative leadership in these two strands refers to fostering employee creativity. In the remainder of the article, they refer to this manifestation of creative leadership as *Facilitating*.

The second conceptualization portrays the creative leadership as the primary source of creative thinking and behavior, as a creative institutional entrepreneur, or as a master-creator who both creates and manages his or her creative enterprise. This conceptualization of creative leadership is evident in three strands of organizational research that have rarely informed each other, to date: a stream of neo-institutional case studies of creative haute-cuisine chefs (Bouty & Gomez, 2010; Svejnova, Mazza, & Planellas, 2007); a set of studies on orchestra conductors (Hunt, Stelluto, & Hooijberg, 2004; Marotto, Roos, & Victor, 2007); and set of studies on creative leadership in the context of top-down corporate innovation (Eisenbeiss, van Knippenberg, & Boerner, 2008; Vaccaro, Jansen, Van Den Bosch, & Volberda, 2012). Creative leadership in these strands refers to materializing a leader's creative vision through other people's work. In the remainder of the article, we refer to this manifestation of creative leadership as *Directing*.

The third conceptualization focuses on the leader's role in integrating his or her creative ideas with the diverse creative ideas of other professionals in the work context. This conceptualization has emerged from research on creativity in new forms of work (e.g. temporary organizations and brokerage) and in contexts where the traditional leader-follower distinction gives way to a group of expert professionals who collaborate intensively in the context of a creative project. This conceptualization is evident in a stream of studies on creative leadership in filmmaking (Perretti & Negro, 2007), theatrical (Dunham & Freeman, 2000), and television (Murphy & Ensher, 2008) settings; a second stream of social network studies on creative leadership in the form of brokerage in music production (Lingo & O'Mahony, 2010), industrial design (Obstfeld, 2012), and museum settings (Litchfield & Gilson, 2013); and a nascent stream of research on dual (Hunter, Cushenbery, Fairchild, & Boatman, 2012; Sicca, 1997) and shared (Davis & Eisenhardt, 2011; Hargadon & Bechky, 2006) forms of leadership. Creative leadership in these strands refers to a leader who synthesizes his or her own

creative work with the hetero generous creative contributions of other professionals. This creative synthesis may be undertaken either by a single leader or by multiple leaders in a collaborative leadership context. In the remainder of the article, they refer to this manifestation of creative leadership as *Integrating*.

In this study, the concept of creative leadership used in the research is the first conceptualization of creative leadership which focuses on the leader's role in fostering the creativity of others in the organization context. That is, creative leadership for primary school principals to promote teachers' creativity.

### **2.5.3 The Roles of Creative Leadership of Primary School Principals to Promote Teachers' Creativity**

The concept of creative leadership has been explored by scholars and researchers and they have identified necessary common roles which are needed to creative leadership development for primary school principals to promote teachers' creativity.

Robinson and Aronica (2015) have stated that the role of a creative school principal is not to have all the ideas; it is to nurture a school culture where teachers and students can have new ideas that was expressed in their book named "Creative Schools: Revolutionizing Education from the Ground up). Before that, Robinson (2011) has also expressed the roles of creative leadership more graphically in his book which named "Out of Our Minds: Learning to be creative". He described that being a creative leader to promote creativity and innovation involves strategic roles in three areas of focus: *personal, group and culture*. Within each of these there are three core principles of practice which can be used in any organizational context. The detail of the roles and principles of creative leadership is described as follows:

1. Personal area: The first role of the creative leader is: To facilitate the creative abilities of every member of the organization, and within this role there are three core principles of practice which including 1.1) everyone has creative potential; 1.2) innovation is the child of imagination and 1.3) we can all learn to be more creative.

2. Group area: The second role of creative leadership is: To form and facilitate dynamic creative team, and within this role there are three core principles of practice

which including 2.1) creativity thrives on diversity; 2.2) creativity loves collaboration and 2.3) creativity takes time.

3. Culture area: The third role of a creative leader is: To promote a general culture of innovation, and within this role there are three core principles of practice which including 3.1) creative cultures are supple; 3.2) creative cultures are inquiring and 3.3) creative cultures need creative spaces.

Stoll and Temperley (2009) have carried out a research and development project (the Creative Leadership Learning Project) from September 2006 until February 2008. In this project, they helped 11 school leadership team (nine primary and two secondary) to explore and develop their creative leadership to create the conditions, culture and structures in which learning-focused innovation and creativity best thrive. Through their research, they have also clearly mentioned that a creative school leader need to promote and nurture creativity in teachers for fostering students' creativity by 1) promoting individual teacher' creative thinking; 2) enhancing collaborative creative thinking and design in teachers; 3) providing teachers time and space to facilitate their creative thinking and practicalities; and so on.

Basadur (2004) conducted a research on leading others to think innovative together by creative leadership. He explained that although individuals, teams, and organizations differ in their creative problem solving styles, creative leaders can help individuals and teams to coordinate and integrate their differing styles to drive change through a process of applied creativity. When he described how creative leadership encourage and enable people to think innovatively together, he also mentioned 1) appreciating individuals' differing preferences, 2) facilitating a creative teamwork process, 3) leading multidisciplinary teams, 4) set up structures that encourage people to use their creativity, and so on.

Levesque (2011) stated that everyone has creative talents and creativity can be developed. She also suggested that there are several steps creative leaders can take to maximize their colleagues' creative contributions to the organization. Some curial steps she stressed in particular as follows: 1) recognize and develop different creative individual; 2) show them appreciation; 3) engage and motivate them in creative work; 4) build their teams include diverse talents 5) give them time to express their thoughts and feeling; 4) allow them time to process change; 6) provide the time they need to be

the most creative; 7) strengthening creativity in teams; 8) provide the personal space they need to be most creative; 9) set the right structure; 10) nurture the culture and environment that brings out their creative strengths.

From the above analysis about the roles with components of creative leadership, the researcher decided to conduct the roles of creative leadership based on the theories of Robinson (2011) and supplemented by the conclusions of Basadur (2004), Stoll and Temperley (2009) and Levesque (2011), because Ken Robinson is an internationally recognized leader and educationalist in the development of creativity, innovation and human resources. In addition, he often mentions and discusses China's education in his books what can be indicated that he has studied about education of China and known it very well. Therefore, the researcher synthesizes the roles with components of creative leadership to promote teachers' creativity based on the theories of Robinson (2011), which including as follows:

1. Personal: To facilitate the creative abilities of every teacher of school
  - 1.1 Engage every teacher using their creative potential in teaching
  - 1.2 Energize every teacher's imagination for teaching
  - 1.3 Provide learning opportunities to enhance creativity in teaching
2. Group: To form and facilitate dynamic creative teacher team
  - 2.1 Facilitate diversity in teacher teams
  - 2.2 Facilitate collaboration in teacher teams
  - 2.3 Offer time for teacher teams to work on their passion
3. Culture: To promote a school culture of innovation
  - 3.1 Promote a flexible school culture
  - 3.2 Promote an inquiring school culture
  - 3.3 Create creative school workspaces

The above roles with components of creative leadership to promote teachers' creativity were synthesized in the following table 3:

Table 3: Synthesis the roles with components of creative leadership to promote creativity

<b>Basadur (2004)</b>	<b>Stoll and Temperley(2009)</b>	<b>Levesque (2011)</b>	<b>Robinson (2011)</b>	<b>Synthesized concept</b>
Individual: 1) Appreciate individuals' differing preferences	Individual: 1) Promote individual teacher' creative thinking	Individual: 1) Recognize and develop different creative individual; 2) Engage and motivate them in creative work;	Personal: 1. To facilitate the creative abilities of every member of the organization 1) Everyone has creative potential 2) Innovation is the child of imagination 3) We can all learn to be more creative	1. Personal: To facilitate the creative abilities of every teacher of school 1.1 Engage every teacher using their creative potential in teaching 1.2 Energize every teacher's imagination for teaching 1.3 Provide learning opportunities to enhance creativity in teaching
Team: 2) Facilitate a creative teamwork process 3) Lead multi-disciplinary teams	Team: 2) Enhance collaborative creative thinking and design in teacher teams 3) Provide teachers time to facilitate their creative thinking and practicalities	Team: 3) Build their teams include diverse 4) Show them appreciation; talents 5) Give them time to express their thoughts and feeling; 6) Allow them time to process change; 7) Provide the time they need to be the most creative; 8) Strengthening creativity in teams;	Group: 2. To form and facilitate dynamic creative team 4) Creativity thrives on diversity 5) Creativity loves collaboration 6) Creativity takes time	2. Group: To form and facilitate dynamic creative teacher team 2.1 Facilitate diversity in teacher teams 2.2 Facilitate collaboration in teacher teams 2.3 Offer time for teacher teams to work on their passion
Structure: 4) Set up structures that encourage people to use their creativity	Culture: 4) Create culture and structures in which learning-focused innovation and creativity best thrive. 5) Provide teachers space to facilitate their creative thinking and practicalities	Culture: 9) Nurture the culture and environment that brings out their creative strengths. 10) Provide the personal space they need to be most creative; 11) Set the right structure	Culture: 3. To promote a general culture of innovation 7) Creative cultures are supple 8) Creative cultures are inquiring 9) Creative cultures need creative spaces	3. Culture: To promote a school culture of innovation 3.1 Promote a flexible school culture 3.2 Promote an inquiring school culture 3.3 Create creative school workspaces

### **2.5.3.1 Definitions of the roles with components of creative leadership**

#### **1. Personal: To facilitate the creative abilities of every teacher of school**

##### **1.1 Engage every teacher using their creative potential in teaching**

Robinson (2011) states that everyone in an organization has different experiences of how it works and potentially valuable insights on how it might be improved. In the line with the same idea, Levesque (2011) believes that everyone is born with creativity that will be flourished when they are supported with the right conditions and suitable environment. Ditze, Schmidt, Wuhrmann, and Müller-Kirschbaum (2005) also stated that everyone has creative talents.

In 2001, Gallup published a study that estimated that ‘actively disengaged employees’ were costing the US economy alone between \$292 and \$355 billion a year. Later studies show that engaged employees, in contrast, are more productive, profitable and create stronger customer relationships. Workplace engagement is also a powerful factor in facilitating creative thinking on how to improve business processes and customer service. According to Gallup, 59 percent of ‘engaged employees’ strongly agreed that their job brought out their most creative ideas, while only 3 percent of ‘actively disengaged employees’ said the same (Cited by Ken Robinson, 2011). Therefore, consciously engaging the whole staff in the creative life of an organization can have huge benefits; unconsciously disengaging them can have expensive consequences.

Human resources, like natural resources, are often buried deep. In every organization there are all sorts of untapped talents and abilities. Being a creative leader means ensuring that everyone in the organization is playing to their creative strengths and feels that their contribution is valued as part of the overall performance of the organization. Because being in their talents is not only about aptitude, it’s about passion, the leader should encourage everyone to work on their passion for helping them be in their creative potential.

In addition, Robinson (2011) stated that the best strategy is usually to put people in situations and give them challenges that reveal their abilities in order to identify individual creative capacities which appear to be accorded with the research conclusion of Stoll and Temperley (2009), they suggested stimulate a sense of urgency, if necessary, generate a ‘crisis’ in order to reveal every teacher abilities. Ditze et al. (2005) also stated



that there are different ways of being creative and contributing to be innovation process. One can be creative by supporting a climate of mutual respect and to encourage a challenging atmosphere, by motivating others and supporting them or by solving conflicts in order to foster creativity.

Therefore, *engaging every teacher using their creative potential in teaching* means that the school principals engage every teacher in the creative teaching; ensure that every teacher in the school is playing to their creative strengths and values their contribution of creative teaching; and stimulate a sense of urgency, give them challenges in pursuing teaching creativity.

### **1.2 Energize every teacher's imagination for teaching**

Robinson (2011) stated that nourishing imagination is an essential part of growing a culture of innovation. a good deal of creative work, especially in the early stages of a project, is about openly playing with ideas, riffing, doodling, improvising and exploring new possibilities. The eventual quality of what is done depends on this process of interweaving, of making fresh connections, of breaking with convention and seeing from different perspectives. Consequently, a creative organization, as Peter Richards puts it, “is first and foremost a place that gives people freedom to take risks; second it is a place that allows people to discover and develop their own natural intelligence; third, it is a place where there are no ‘stupid’ questions and no ‘right’ answers; and fourth, it is a place that values irreverence, the lively, the dynamic, the surprising, the playful” (Cited by Robinson, 2011).

Pixar is one of the most innovative and critically acclaimed film studios in the history of the movies. Pixar has a fascinating culture. It includes the Pixar University, a program of workshops, events lectures and seminars that take place on the Pixar campus every day. It offers over a hundred courses including a complete filmmaking curriculum, classes on painting, drawing, sculpting and creative writing. The university has powerful benefits for Pixar. Since anybody can go to any course, there is a constant flow of new ideas running through the whole organization. People are constantly meeting each other from different areas of the organization and are reminded that they are all part of a single effort (Cited by Robinson, 2011).

The Pixar University crest features the Latin motto, *Alienus Non Diutius*, “Alone No Longer.” Randy Nelson who was Dean of the University says, “It’s the heart of our model; giving people opportunities to fail together and to recover from mistakes together.” Above all, the Pixar University is a highly practical way of energizing the imaginations of everyone in the company, of uncovering often-unknown personal talents, and of cross-pollinating the culture of the whole organization. Stoll and Temperley (2009) also stated using failure as a learning opportunity, they explained that by valuing the things that go wrong, there is an opportunity to neutralize at least the fear of censure that teachers say they imagine would follow such failure, and to challenge their beliefs that such failure constitutes a serious risk: ‘From to down ... people will try it. If it doesn’t work we can learn from it’. Thus, the school principals should allow teachers to have the freedom to explore, to take risks to make mistakes and learn from them.

Therefore, *energizing every teacher’s imagination for teaching* means that the school principals give every teacher freedom to take risks in the teaching; give teachers opportunities to fail together and to recover from mistakes together; and helps teachers to discover and develop their own natural intelligence.

### **1.3 Provide every teacher learning opportunities to enhance creativity in teaching**

Levesque (2011) described that there are eight creative talents in the organization. Each creative talent need to find the right creativity tools and techniques and paly with tools that work for their talent, and organizational leaders should help and support them. Robinson (2011) stated that there are techniques, procedures and practical skills that can be taught to most people that will facilitate some sorts of creative activity. Such as, brainstorming is one of a number of approaches that are designed specifically to facilitate the first mode of creative activity: the generation of the ideas. But simply being asked to have ideas is not enough. Being creative is not only a matter of inspiration. It requires skill, craft in the control of materials and a reciprocating process of critical evaluation.

Robinson (2011) stated professional development in the general skills of creative thinking (including how to work in creative teams) is an important feature of

creative organizations. He explained that professional development is at the heart of creative cultures but often, organizations are reluctant to invest in it. Many take a short-term thinking can ultimately be counter-productive because it eats away at organizational loyalties and the sense of common purpose on which creative cultures depend. The better approach is to invest in the talents and loyalties of the staff. Therefore, providing learning opportunities to develop colleagues will advance the organization's goals.

Therefore, *providing every teacher learning opportunities to enhance creativity in teaching* means that the school principals inspire teachers to learn techniques and practical skills of creative teaching; support every teacher to learn and find the right creativity tools and techniques in teaching; and provide teachers training opportunities for professional development in teaching creativity.

## **2. Group: To form and facilitate dynamic creative teacher team**

### **2.1 Facilitate diversity in teacher teams**

Robinson (2011) stated that *creative teams are diverse*. Just as intelligence in a single mind is interactive, so too, organizational creativity is often interdisciplinary. From research organizations to commercial companies, the best creative teams bring together people from very different backgrounds: people who think differently, who may be of different ages and genders, or with different cultural backgrounds and professional experiences. Diversity is a powerful resource for creative teams and in the workforce as a whole. A more diverse workforce enable an organization to be more in tune with the needs of the changing cultural environment in which it is operating. It also provides a deep resource of different perspectives that is essential to sustain a culture of innovation.

Levesque (2011) suggested that building a diverse team to maximize the staffs' creative contributions to the organization. He said, wherever possible, team with individuals with different talents so that they can learn from and support one another. Make sure that they have the tools and techniques necessary to benefit from one another's strengths and contributions. At the same time, make sure the team can translate the different talents and great ideas into creative results and solutions.

Therefore, *facilitating diversity in teacher teams* means that the school principals show appreciation in the different teaching thinking and practices of every teacher; and create interdisciplinary teacher teams to ensure that teacher teams include diverse talents.

## **2.2 Facilitate collaboration in teacher teams**

Robinson (2011) stated that creative teams are dynamic. Bringing people together from different discipline is no guarantee of creative work. Diversity can be an obstacle to innovation unless teams have working processes in which differences become strengths rather than weaknesses. Collaboration is at the heart of Pixar's creative processes. Collaboration, as Randy Nelson observes, is not the same as cooperation. Cooperation only requires that the efforts of different people be synchronized in some way. They may be doing completely separate tasks at different times yet still be cooperating, as long as one supports the completion of another one. This is the typical *modus operandi* of industrial assembly lines and the linear processing of many administrative tasks.

Collaboration, on the other hand, involves people working together in a shared process in which their interaction affects the nature of the work and its outcomes (Stoll and Temperley, 2009). Collaboration is a process of improvisation that, according to Randy Nelson, has to be based on two key principles. First, all participants, "accept every offer that is made." The aim is not to negate other people's contributions but to build on them, a process known as 'plussing'. Second, "always make your work partners look good." The aim is not to judge what they produce but to help make something of it and raise everybody's game.

The purpose of collaboration is to benefit from the stimulation of each other's expertise (Basadur, 2004). *Vis Viva* is a teaching and research group of artists and engineers in the United States. A leading member of the group points out a common misconception about interdisciplinary group: "The notion that we are trying to bring aesthetics to engineers or conversely bring a rigorous empiricism to artists is not the point at all. The point is both of these things in different way. Our group attempts to foster creativity by creating space for interaction between disciplines and viewpoint". Therefore, if teachers have a wonderful collaborative process, their differences will

become highly productive. Moreover, a school principal need to know who to put in a team, what work to give each other person on the team, and when it is time to move onto something else (Cited by Robinson, 2011).

Therefore, *facilitating collaboration in teacher teams* means that the school principals promote collaborative teaching of teachers; facilitate open and frequent communication; facilitate a creative teamwork process to teacher teams; and know who to put in a team, what work to give each other person on the team, and when it is time to move onto something else.

### **2.3 Offer time for teacher teams to work on their passion**

Levesque (2011) stated that time is crucial important for strengthen creativity in team. Process change requires the leaders give them support they need to work through their concerns, and allow time for them to consider all aspects and allow enough time on a project for all sides to be heard. He stressed that facilitating a creative team should provide time for them to reflect. Before concluding the problem-solving process, the team have to take the time to learn from its experience. The team needs to schedule a review of personal and team performance if all members, individually and collectively, are going to improve. Taking time to reflect can avoid making the same mistakes over and over again.

Robinson (2011) also stated that creative insights can take time to develop, and creative organizations understand that time is an essential resource for innovation (Levesque, 2011). Some offer staff discretionary time to work on their own ideas. Perhaps the best-known example is Google, where engineers can use 20 percent of their time for discretionary projects. During this time they can pursue any interest they like. If they do come up with an idea that would interest the company, they can pitch it to senior management team. Since 2005, 5 percent of all products that have been launched by Google were developed in the 20 percent discretionary time. The 20 percent allocation is a flexible provision. It is valuable in itself but also because it sends an important signal to the workforce that the company values creativity enough to give people that freedom to do what they are most passionate about (Stoll and Temperley, 2009).

Therefore, *offering time for teacher team to work on their passion* means that the school principals understand that time is an essential resource for creative teaching; give time for teachers to express their thoughts and feeling in teaching creativity; support teacher team to take time to reflect about teaching creativity; and offers teachers discretionary time and freedom to do what they are most passionate about.

### **3. Culture: To promote a school culture of innovation**

#### **3.1 Promote a flexible school culture**

Robinson (2011) stated that the internal challenge of organization is to evolve structures and processes that are supple and responsive. The processes of creativity can be stifled by a sense that ideas are unlikely to travel up the organization or will not be taken seriously if they come from the wrong places. Innovation can be stifled by pressure from above to deliver results over the wrong timescale: by demands for the wrong sort of accountability. Loosing hierarchies means that those who run the organizations should be accessible to those who work within them. The need for continuous innovation involves reviewing some of the most established practices in leadership. The 2010 IBM study, *capitalizing on complexity*, found that CEOs who are capitalizing on complexity have focused their attention on three areas: 1) embodying creative leadership 2) reinventing customer relationships 3) building operating dexterity. The report concluded that, “creative leaders expect to make deeper business model changes to realize their strategies. To succeed, they take more calculated risks, find new ideas, and keep innovating in how they lead and communicate.”

When John Chambers became CEO, he thought of leadership role with Cisco in three main ways: first, developing a vision and strategy of the company; second, building the team to implement that strategy; and third, communicating the strategy within and beyond the company. After he had been in the role for four or five years, he began to think differently about his role as a leader. He began to focus especially on the company cultures. “A huge part of a leadership role is to drive the culture of the company and to reinforce it.” He has also changed his style of leadership away from command and control to collaboration and teamwork in order to achieve the common goals. As at Pixar, IDEO and Google, the processes that drive the culture of innovation at Cisco are collaboration and delegation.

Therefore, *promoting a flexible school culture* means that the school principals 1) evolve and supplement school structure without hierarchies by reinventing principal, teachers and students relationships, creating a flexible schedule and interdisciplinary opportunities for teachers, allowing teachers to stray away from the limits of their subject matters, and fostering an open culture, encourage teachers to listen and rethink upon reflection, critiquing from different collaborators; 2) evolve flexible working processes by changing the style of leadership away from command and control to collaboration and teamwork and creating interdisciplinary teacher teams.

### **3.2 Promote an inquiring school culture**

Robinson (2011) stated that innovation involves trial and error, being wrong at times and sometimes having to back up and start again. Being creative isn't all about chaos and risk. Creativity in any domain is a balance of freedom and control. In all cases, innovation involves calculating risks and the organization's tolerance for them. Meeting these challenges has called for creative leadership, to make the most of the resources within the organization. A creative leader will change the style of management to meet new circumstances:

(1) Delegation and Empowerment. Because others may be more competent than you, like younger members of staff, who often have clearer minds. Yet at the same time the leader needs a sense of direction; otherwise it seems that you will be abrogating responsibility rather than delegating it.

(2) Listening rather than competing with others to produce the cleverest answer. Willingness to listen will lead to more harmonious senior management discussions, enhance trust, and speedy decision-taking as colleagues have ceased second-guessing each other, particularly in areas where the second-guesser has little knowledge.

(3) Offering support and encouragement to your colleagues rather than seeking to score points.

Therefore, *promoting an inquiring school culture* means encourage every teacher to work through their unique talents and expertise; empower teachers to explore various approaches of teaching creativity; self-consciously relinquish control, leading

to more delegation and to more empowerment of younger teachers and create a mistake-tolerant culture that encourages teachers to use failure as a learning opportunity.

### **3.3 Create creative school workspaces**

Robinson (2011) stated that the physical environment is a powerful embodiment of organizational culture. The size and shape of workspaces, the configuration of furnishings and equipment, the quality of lighting, fabrics and colors all create ambiances that may encourage or discourage creativity. Until the 1980s, there was very little research into the effects of workspaces on the work done. Since then a growing number of studies have been published in what is now known as ‘environmental psychology’ and the obscurely named field of ‘cognitive ergonomics’. The traditional design of office buildings and spaces is rooted in the nineteenth-century model of industrial work. When the emphasis is on efficient processing of tasks, the principal considerations in the workspace become productivity, maximum occupancy and uniformity. These are hardly the right environments for stimulating imagination, creativity and innovation.

More flexible patterns of working time and the pervasive effects of information technologies mean that there is a blurring of boundaries between the home and office, work, play and personal time (Stoll & Temperley, 2009b). It is often important to allow staff to personalize their workspace in ways that they find most conducive to creative work. Where collaboration matters, there is a need for shared spaces for meetings and workshops.

Von Stamm (2008) stated that the physical work environment can support organizational culture and help facilitate a culture of creativity and innovation. She suggests 5 aspects associated with the work environment will help managers create an atmosphere where creativity and innovation flourish: 1) Meeting and recreational spaces 2) A variety of different work spaces 3) Arrangement of departments 4) Space dedicated to project teams 5) Spaces dedicated to innovation and creativity.

Therefore, *creating creative school workspaces* means the school principals create shared spaces for meetings and workshops; create a variety of different work spaces where full of relaxed and comfortable atmosphere; provide spaces for shared



planning, follow-up, and assessment of teaching creativity projects; and allow teachers to personalize their workspace and give supports when they ask for help.

Robinson and Aronica (2015) stated that schools that flourish have their own particular dynamics. In general, they all promote these essential features of an empowering culture of learning:

**Community:** Its members all feel part of a compassionate community that supports each other's needs and aspirations. There is a strong sense of shared identity and purpose that extends beyond the gates to embrace the aspirations of all the families it serves and all the organizations with which it collaborates.

**Individuality:** Its members feel respected as individuals, each with his or her own talents, interests, and needs. They are encouraged as individuals to develop a deeper understanding of themselves, of their own values and aspirations, and of their fears and anxieties. They all feel part of the larger community but know they will not be lost in the world.

**Possibility:** The school provides hope and opportunity for all who are part of it. It recognizes the great range of talents in its members and provides multiple pathways to fulfill their aspirations. It provides opportunities for what everyone needs to know in common, as well as for everyone to excel on their own terms.

The culture of the school is expressed through the curriculum, teaching, and assessment practices. They all relate to the overall culture of the school in this way (Robinson & Aronica, 2015):

<b>Conditions for Growth</b>			
<b>Culture</b>	<b>Curriculum</b>	<b>Pedagogy(Teaching)</b>	<b>Assessment</b>
Community	Diversity	Inspiration	Motivation
Individuality	Depth	Confidence	Achievement
Possibility	Dynamism	Creativity	Standards

### **Characteristics of curriculum**

**Diversity:** It should be broadly based to cover the sorts of understanding that we want for all students and to provide proper opportunities for them as individuals to discover their personal strengths and interests.

**Depth:** It should provide appropriate choices so that as they develop, students can pursue their own interests in proper depth.

**Dynamism:** The curriculum should be designed to allow for collaboration and interaction between students of different ages and teachers with different specialties. It should build bridges with the wide community, and it should evolve and develop in the process.

### **Characteristics of pedagogy**

**Inspiration:** They inspire their students with their own passion for their disciplines and to achieve at their highest levels within them.

**Confidence:** They help their students to acquire the skills and knowledge they need to become confident, independent learners who can continue to develop their understanding and expertise.

**Creativity:** They enable their students to experiment, inquire, ask questions, and develop the skills and disposition of original thinking.

### **Characteristics of assessment**

**Motivation:** Effective assessment spurs students to do well. It provides constructive feedback to help them understand how they're doing and to encourage them to improve where they can.

**Achievement:** Effective assessment provides information on what students have actually done and achieved. It also provides relevant comparisons with how others have done against similar criteria so that students and others can make their own judgments of their progress and potential.

**Standards:** Effective assessment sets clear and relevant standards that can raise students' aspirations and contribute to the guidance and practical support they may need in reaching them.

Therefore, while school principals develop creative leadership or lead teachers and students to be creative, they need to realize the importance of school cultural construction and the essential features of school culture.

## **2.5.4 The Conditions for Creative School Leaders to Promote Teachers'**

### **Creativity**

A key aim of the project by Stoll and Temperley (2009b) was to help school leaders to explore and develop their capacity to create the conditions, culture and structures in which learning-focused innovation and creativity best thrive. Through their research, they have identified nine conditions that creative school leaders need to work towards in their school to promote and nurture creativity in teachers. To promote and nurture the creativity of teachers, school leaders need to attend to the following:

#### (1) Model creativity and risk-taking

One of the most powerful ways leaders can lead others' learning and development is through modeling. Other staff are unlikely to take risks experiment with new ideas if they constantly see senior leaders being cautious. They need to know that it is acceptable to act in this way; that this is norm. This came through strongly in interviews with head teacher and other senior leaders: 'Model practice, even in risk taking' (senior leader); 'You have more credibility if you show you can do it. You have to be doing it yourself. They won't feel so worried about having a go and would feel more enthusiastic' (senior leader). The researchers also heard this from their colleagues: 'They do it themselves; they lead by example' (support staff); 'they role model it. They intentionally lead in that direction and value it' (teacher), and from LA advisers: 'senior leaders have to be role models, advocates, so they see them living it out and not compromising it.'

#### (2) stimulate a sense of urgency – if necessary, generate a 'crisis'

Learning occurs as a result of dissonance; when new ideas or situations do not fit with current beliefs or ways of working. When this dissonance becomes uncomfortable, it creates a sense of urgency that something needs to be done; that 'the way we do things' needs to be changed. If this is supported by positive conditions, productive activity can ensue (Earl et al., 2003). Problem-solving was frequently described as the stimulus for creativity: 'Quite often we have to solve problems and challenges and have to think creatively. How are we going to solve this staffing issue, and school improvement and making it work rather than it being done to us?' (head

teacher); ‘if something is a challenge, difficult, you need to think about the different avenues’ (senior leader); ‘I become creative when something’s not working, for example something new, and you see limited impact. I say ‘this isn’t working; there has to be another way’ (LA leader).

### (3) Expose colleagues to new thinking and experiences

Creativity is stimulated in an environment full of new ideas and experiences (Creative & Education, 1999). The more exposed people are to ideas and others who think differently, and the more adventurous they tend to become. Bringing in new ideas is essential life blood in schools: ‘some teachers would like to change but don’t know where to go for ideas, which is a reflection on the management team’ (teacher); ‘Teachers may get stuck in a kind of routine monotony and don’t feel they’re encouraged to break out of that’ (teacher)’. Some schools consciously feed in new ideas on a regular basis: ‘making them aware of different ways of doing things, day to day in small ways rather than feeling overwhelmed that they must totally change’ (senior leader). Given many people’s natural comfort with routine, at times this requires taking them out of their comfort zones, forcing them to push the boundaries of their thinking about what’s possible.

### (4) Self-consciously relinquish control

Schools can feel places of control where staff think they are being watched, by both senior leaders and external bodies. This can apply to schools in all contexts: ‘High achieving schools carry the weight of parents’ expectations, and in underachieving schools people want your data to look better’ (deputy head). Asking what might inhibit teachers who do not experiment and innovate in their work, some responded that their creativity would be inhibited if they felt they were ‘being checked on’: ‘They may not feel they can try anything new because the school is too rigid and it’s all about results so maybe they feel constricted’ (senior leader); ‘Management pressures from government, the local authority and heads, and though we try not to, I’m sure that’s an element of that. We need to give messages that it’s OK’ (head teacher); ‘Freedom. It depends on the school you are in. my previous school ... was very set in its ways. You

couldn't go off and do things differently. Here, everyone is a lot more willing. It's not so tied to restrictions' (teacher).

Fear of letting colleagues, pupils and parents down is an issue. Those in more senior roles appeared to feel greater autonomy in relation to taking risks, suggesting that other colleagues may need more encouragement to take risks, to know that 'it's OK to make mistakes'. Working with challenging issues of school improvement, as one LA adviser explained, can suppress a lot of natural creativity, but: 'I don't want colleagues to feel it'. We heard about 'situations where if the head teacher comes in, I will be in trouble' (teacher). This condition is about creating an ethos that it is acceptable to take risks, and being given the freedom to explore without constraints. If staff do not have opportunities to experiment and step out of the boundaries, 'They stick rigidly to what they know' (teacher). Many people seemed to feel a need for what one teacher described as 'a license to think creatively'.

This also relates to the issue of trust discussed earlier, and feeling valued: 'Being comfortable with each other and able to speak your mind without being shot down in flames. Knowing your opinion is valued even when it's not shared. Giving people leeway to explore new ideas. Letting them know they can try things out without being slated so long as there is a period of reflection after they have done that' (senior leader); 'We're a mixed team. It's about trying to set the atmosphere where it's not just me in charge; they've got just as much contribution' (senior leader).

##### (5) Provide time and space and facilitate the practicalities

Creative thinking is facilitated by time and the mental space for ideas to evolve and be fleshed out. Interestingly, the researchers found that some pressure of time seemed to be important for creating the sense of urgency which concentrates energy and effort. This may mean setting deadlines. But this needs to be balanced with allowing enough time and space for creative possibilities to emerge: 'Having a clear head makes for what you want' (head teacher); 'I need to be in a good mood. Flexible. We can become less creative when we get stuck in what we're doing in structures and tests and so on.

The physical environment also enhances some people's creative processes. They become creative when going for a run, driving through countryside, in brightly

decorated rooms at school: ‘Being here in this school inspires me and keeps you doing... The atmosphere and vibrancy of the school and colorful classrooms’ (senior leader) and: ‘At home. I find that inspiring – a huge window to look over Bristol Gorge, and a big light room’ (Middle leader).

Creating time and space are practicalities that can be facilitated. One secondary school spent the equivalent of hiring four teachers a year on ‘lead practitioners’ who could provide colleagues with time and space to explore creative work: ‘You need to have time to think about what you’re doing, and if you need support, you need to know who you can ask for support and advice’ (senior leader). Using peer coaching was also suggested as a means of promoting new practices when colleagues came out of their classrooms and saw other colleagues’ practice. Several schools also used different teaming arrangement to support sharing.

#### (6) Promote individual and collaborative creative thinking and design

It seems necessary to create opportunities both for individual thought and for collaboration. The stimulation of other colleagues was necessary for a considerable number of teachers: ‘I think when I have people to bounce ideas off. When you’re working with someone else and someone else introduces ideas’ (teacher); ‘working with someone closely is really important’ cause it means you can share ideas – you can build on each other’s ideas. It really works’ (teacher); ‘When I am being stimulated and challenged by other people – that fires me up. Two or three heads are even better than one and I do need fuelling. I don’t jump out of bed and then be creative’ (deputy head). Many people, however, reflected that they needed a combination of time alone and time with colleagues to ‘spark’ and share ideas: ‘You can be creative alone for so much of the time but eventually you need other people so your thinking isn’t off beam’ (LA adviser); ‘When I’m on my own but after the hurly burly of discussion about a stimulus or a problem, that’s when I come up with a solution’ (head teacher); ‘Being on my own and having space, but a lot of ideas come from bouncing off other people’ (head teacher).

(7) Set high expectations about the degree of creativity

Promoting and valuing innovation are critical to unlocking creative practice. The researchers found that, often, starting to think creatively bred a desire for greater creativity. The mind shift often came from the top of the school, where a passionate interest in how learning and teaching could be different helped spawn a culture that expected people to think differently about learning and teaching. Many examples were offered from colleagues about how the challenge of child-centered and personalized learning had stimulated them to be more creative in how they thought about their teaching practice and also some hopes that possible curriculum change at a national level will provide much needed support for people's high expectation about the potential of creativity.

Confidence was seen by many as a prerequisite and gaining 'permission' from senior leaders as important. Several senior leaders told the researchers that it was necessary to build colleagues' confidence: 'Give them confidence to have a go. Share what you're doing, including times when it hasn't gone well and what to do about it. It can look as though it's all going smoothly, but for them to know that that's OK and you can get it back again. If there's a curriculum area that they don't know much about you can help them and make it easy for them to take a risk. It's all about confidence and permission' (senior leader); 'We are now more confident to step out. We do work more collaboratively now. We work with colleagues collaboratively' (head teacher).

A number of people, however, relished the positive challenge connected with creativity: 'Not being satisfied with things being enough. Anyone can deliver the lesson to the children but wanting to get the most out of it as possible pushes me to be the most creative' (teacher); 'I love being challenged in my thinking.... I am stimulated by "have you thought about?"' (LA adviser); 'When it's something I'm very excited about doing, I feel inspired to learn more. If I'm teaching, I gather resources and then have a go. It's nice if it's something new rather than always the same' (senior leader); 'I love an environment where more than acceptable to do unusual, exciting things' (senior leader). By setting the bar high and pushing people to be imaginative and to think originally, leaders appear to create a bigger space for colleagues to grow into.

(8) Use failure as a learning opportunity

People worry a great deal about what they perceive as serious (the greatest) risks associated with experimenting with their practice. These turn out to be low risks long term; for example, the pupils not learning what they are supposed to in one lesson. By valuing the things that go wrong, there is an opportunity to neutralize at least the fear of censure that teachers say they imagine would follow such failure, and to challenge their beliefs that such failure constitutes a serious risk: ‘From top down ... people will try it. If it doesn’t work we can learn from it’ (teacher); ‘In an environment where ... you can fail and say “no, this doesn’t really work”, make decisions for yourself and won’t be pulled in different direction’ (teacher); ‘to have the freedom to explore, to take risks to make mistakes and learn from them’ (LA adviser).

Ensuring that people are supportive of experimentation, therefore, matters: ‘You need to feel you can have a go, so the environment is important, knowing people won’t laugh, and it’s OK if you don’t get it right first time’ (senior leader). Mitigating the worst effects by being able to put right any mistakes that ensue is also important.

#### (9) Keep referring back to core values

While the possibilities of creative thinking and the inspiration it seems to provide many people can be exciting, staying close to core values appears to provide a bedrock for development. Being clear and explicit about values and holding them in steady state offered a context and stable point of reference for people: ‘If there’s ever a time when you feel that things have run flat or drifted, I find that pulling myself back towards core values and vision helps’ (deputy head); ‘Nothing is ever straightforward. We need to think a bit more widely about the issues. There’s always a knock-on. We have to think about the best possible solution but keeping still the values we believe in’ (head teacher); ‘You need to be secure in your knowledge of what’s already there and where you want to be’ (deputy head); ‘Knowing that everyone is moving towards the same goals and vision keep you going too’ (senior leader).



### **2.5.5 The Ways of Creative Leaders to Lead Others to Think Innovatively Together**

Basadur (2004) stated that individuals, teams, and organizations differ in their creative problem solving styles. Creative leaders can help individuals and teams to coordinate and integrate their differing styles to drive change through a process of applied creativity. Creative leaders encourage and enable people to think innovatively together in many ways as follows:

- (1) Appreciate individuals' differing preferences
- (2) Leading people to think in new ways by 1) Modeling and training in problem solving 2) Transfer ownership 3) Set up structures that encourage people to use their creativity 4) Group problem solving 5) Be a process leader, not just a doer 6) Show people how their challenges align with strategic company goals
- (3) Facilitate a creative teamwork process
- (4) Apply creativity to lead their organizations to achieve adaptability

### **2.5.6 The steps for creative leadership development of organizational leader**

Levesque (2011) suggests that there are 5 steps for creative leadership development of organizational leader to improve and maximize their colleagues' creative contributions to the organization:

- (1) Define what creativity means to the organization

In generally, there are four main concepts of the definition of creativity:

- 1) Creativity is what everyone is born with.
- 2) Creativity can be developed
- 3) Creativity is the ability to create value and the results are different.
- 4) There is no single tool or techniques to foster creativity

- (2) Recognize individual differences

Levesque described that there are eight creative talents in the organization, four of these creative talents are used to perceive or collect data and information: 1) the adventurer 2) the navigator 3) the explorer 4) the visionary, the other four creative talents help evaluate data and information and make decisions: 5) the pilot 6) the inventor 7) the extraverted 8) the poet.

Ditze et al. (2005) stated that everyone has creative talents. There are different ways of being creative and contributing to be innovation process. One can be creative by supporting a climate of mutual respect and to encourage a challenging atmosphere, by motivating others and supporting them or by solving conflicts in order to foster creativity.

(3) Grow self-creative competency

The guidelines for growth self-creative competency as follows:

1) Beginning with the understanding the work, duties and responsibilities of their job and organization.

2) Create a database and related organizations in all parts of their responsibility and use the database to be useful in a situation and at the right time.

3) Nurture the culture and environment that support and encourage creativity

4) Strengthen the positive attitude to be creative

5) Develop greater self-awareness

6) Have flexible management and leadership diversity, and try to adjust to the pattern of management and style of leadership.

(4) Apply creative ability to form a creative team

Developing a creative team by

1) Emphasizing on skills, knowledge and ability of members in the team without discrimination.

2) Promoting a culture that focuses on the possibility and probability of creativity development.

3) Promote the atmosphere and environment in the functional model of learning organization under allowing to make a mistake and giving the opportunity to learn from the mistakes.

4) Provide space and time for working effectively.

5) Promote creative problem solving.

6) Systematically manage and plan, and clearly have goals, objectives, roles, responsibilities and operational guidelines.

(5) Apply creative ability to build a breakthrough organization

A breakthrough organization that has a significant feature:

1) Leaders who are creative

- 2) Define what creativity means to the organization, and use their creativities in the work and the behavior that expected
- 3) Implement with the vision, mission, goals, planning, implementation, evaluation, and adjustment continuously and systematically.
- 4) The organization is committed to focus on creativity.

## **2.6. Strategy Development**

### **2.6.1 Definition of Strategy**

This word was first used in French as “Stratageme” in 1233, the word “strategy” derives from Greek as “strategos” or “generalship” which has a combination of two separate words and meanings as stratos which means “an army” and agein which means “to lead”. The word describes how people would do things to achieve their goals. It gives less detailed information than an action plan which would describe in details who will do the activities, how and when the activities are done. The word has later been used in management and its meaning is “to lead the total organization”, in 1808, the new word came up in French as “Strategies” of which its meaning is matched with “strategy” in English and widely used by various public and private organizations, military forces, government officials, politicians, businessmen and scholars.

Certo and Peter (1991) define strategy as a procedure to carry out tasks in order to achieve the goals of the organization.

Mintzberg (1994) define the meaning of strategy as a pattern of decision making with explicit rationale and have gathered many things together; the strategy is therefore an important action plan that can lead people to achieve the objectives and goals of the organization.

Mintzberg (1994)also describes 5 Ps principles of strategies which refer to different meanings as follows:

1. Strategy is a plan (P1), it refers to the activities which give directions or guidelines for the operation in the future.
2. Strategy is a pattern (P2). It refers to a behavioral pattern in performing ongoing tasks for a period of time which indicates that planning for the future must consider the evolution of the organization in the past. In addition, leaders must take into account of abilities and expectations of those who perform tasks when planning.

Sometimes the leader's strategic intention to achieve the goals may not be plausible; however, those who perform the tasks may use their abilities and expertise to adjust the strategies and make things happen.

3. A strategy is a position (P3), it refers to the emphasis placed on customer or those who receive services; therefore, products or services must be suitable to meet different needs of customers.

4. A strategy is perspective (P4), it refers to the perception or the approach of work operation of the organization that all staff must follow, the real conditions of the organization must be considered.

5. A strategy is a ploy (P5), it refers to the artifice employed in the operation in order that the organization can achieve its goals or gain victory when the organization is facing the competition.

It is not necessary for the organization to create strategies that refer to the complete definitions of all five principles, each strategy can be different depending on the situations, internal and external environments that are dynamic. The strategies selected for implementation can have meanings that are aligned with the real situations.

From the studies of various definitions of a strategy, it is concluded that the strategy means proactive actions or directions leading to the objectives or goals of the organization and enable the organization to be able to cope with changing environments and to continue its operation in order to achieve its goals.

### **2.6.2 The Process of Strategic Planning**

Siribanpitak (2009) explained that strategy means the proactive approach in order to achieve the goal, and one strategy consists of a group or series of proactive methods. The strategic planning as a part of strategic management, which consists of 4 steps:

1. Situation analysis
2. Strategic planning or strategic formulation
3. Strategic implementation
4. Strategic evaluation and control

Kotler and Murphy (1981) said that the process of strategic planning in higher education including 6 steps:

1. Environment analysis
2. Resource analysis
3. Goal formulation
4. Strategic Formulation
5. Organization design
6. System design

Certo and Peter (1991) described that the process of strategic management included 5 steps:

1. Environment analysis
2. Establishing organization direction that includes mission and objectives of organization
3. Strategic formulation
4. Strategic implementation
5. Strategic control

These concept are aligned with Thomas L.. Wheelen and Hunger (2012) four basic steps of strategic management which include

1. Environmental scanning

The environment of organization can affect the change and development of the organization. The environment scanning refers to the SWOT analysis or the analysis of external and internal environments of an organization.

The analysis of external environment reviews factors which can become opportunities (O) or threats (T) of organization and may have direct or indirect impact on the operation of the organization in a long term; they include the economic (E), social (S), political (P) and technological (T) environments or so called PEST.

Jurevicius (2013) explained that the PEST analysis is conducted to analyze the political, economic, social and technological factors in the external environment of an organization in order to understand the overall environment which may affect its activities and performance. The following template is designed to gather information for PEST analysis.

<b>PEST analysis</b>	
<b>Political factors</b>	<b>Economic factors</b>
Government stability and likely changes Bureaucracy Corruption level Tax policy (rates and incentives) Freedom of press Regulation/de-regulation Trade control Import restrictions (quality and quantity) Tariffs Competition regulation Government involvement in trade unions and agreements Environmental law Education law Anti- trust law Discrimination law Copyright, patents/ Intellectual property law Consumer protection and e-commerce Employment law Health and safety law Data protection law Laws regulating environment pollution	Growth rates Inflation rate Interest rates Exchange rates Unemployment trends Labor costs Stage of business cycle Credit availability Trade flows and patterns Level of consumers' disposable income Monetary policies Fiscal policies Price fluctuations Stock market trends Weather Climate change
<b>Socio-cultural factors</b>	<b>Technological factors</b>
Health consciousness Education level Attitudes toward imported goods and services Attitudes toward work, leisure, career and retirement Attitudes toward product quality and customer service Attitudes toward saving and investing Attitudes toward "green" or ecological products Attitudes towards and support for renewable energy Emphasis on safety Lifestyles Buying habits Religion and beliefs Population growth rate Immigration and emigration rates Age distribution and life expectancy rates Sex distribution Average disposable income level Social classes Family size and structure Minorities	Basic infrastructure level Rate of technological change Spending on research & development Technology incentives Legislation regarding technology Technology level in your industry Communication infrastructure Access to newest technology Internet infrastructure and penetration

Source: Ovidijus, O. (2013). PEST & PESTEL Analysis, Strategic Management Insight, 13, 2013.

Thomas L Wheelen and Hunger (1995) explained that the internal environment consists of the organizational structure, lines of authority and command, the organizational culture, resources, assets, knowledge and skills, etc. The analysis of internal factors helps to identify the strengths (S) and the weaknesses (W) of the organization.

Therefore, the study of the school environment through the SWOT analysis will help the school to be aware if the environment is inclined towards the opportunities or threats or to have more strengths or weaknesses. The understanding of the school environment is then the initial step of formulating strategies for the school.

## 2. Strategy formulation

Once the organization has the data collected from the SWOT analysis, the strategies can be formulated to maintain the strengths and to prevent the weakness. Rungsun Maneelek (2006) explained that there are two levels of strategies formulated for school as follow:

1) Main strategies which are defined to meet the needs of the analyzed environments of the school.

2) Minor strategies or action plans which are created based on the school tasks.

In the strategy formulation, the following elements are to be reviewed:

1) Mission of the organization – the tasks of the organization has to do and accomplish

2) Goals of the organization – what are the outcomes of the mission

3) Strategic plans – the plans of actions for the organization to follow in order to achieve the goals and mission

4) Policies of the organization – guidelines for practices and decisions making

Koontz and Weihrich (1990) developed a TOWS matrix as a tool to match the analyzed internal and external factors in order to develop strategies. The TOWS matrix is a matching system of SW and OT to enhance the strengths and to prevent the weaknesses. It can be displayed in the figure 2.

Figure 2: TOWS matrix to formulate strategies

Internal factors		Internal Strengths (S)	Internal Weaknesses (W)
		Management, Finance, Operation, Research and Development	
External factors			
External opportunities (O)	PEST Competition of Markets, Risks, New Products and	SO – Maxi-Maxi Strategies to use strengths and opportunities to enhance the organization's success and growth	WO – Mini-Maxi Strategies to use opportunities to reduce weaknesses
	Services, Energy, Shortage	ST – Maxi-mini Strategies to use strengths to avoid to cope with threats	WT- Mini-mini Strategies to reduce weaknesses and avoid threats

Source: Koontz and Wehrich. The TOWS matrix for strategy formulation. *Essentials of Management*. Singapore: McGra-Hill, 1990.

However, the internal and external environments are constantly changing; therefore, different types of TOWS Matrix analysis may be conducted to formulate various strategies that respond to the needs of the organization. It is also necessary to prioritize the needs of the organization. The Modified Priority Needs Index ( $PNI_{Modified}$ ) will be employed to calculate the priority of needs to identify the ranking order of strengths, weaknesses, opportunity and threats (Wongwanich, 2007). The  $PNI_{Modified}$  formula is described below:

$$PNI_{Modified} = (I-D)/D$$

I = the desirable state

D = the current state

### 3. Strategy implementation

When the strategies are formulated, people in the organization would carry out their tasks based on the strategies. Their tasks may include the operation of projects and



functions. The action plans for the projects or functions should be established to clearly identify the activities, the budget needed and the process or steps of operation.

#### 4. Evaluation and control

The strategies, policies and action plan should be regularly evaluated in order to control the quality and effectiveness of the performance of the organization. The evaluation will help members of the organization determine if their performance moves the organization to achieve the mission, goals and objectives and if the outcomes received are as expected.

Therefore, the process of strategic planning consists of the analysis of the external and internal environment of the organization, establishing organization direction, strategy formulation, strategy implementation and strategy evaluation and control. In the preparation of the creative leadership development strategies for primary school principals to promote teachers' creativity, the researcher has defined a conceptual framework consists of 3 steps: 1) the external and internal environment analysis by conducting SWOT analysis using PNI<sup>Modified</sup> 2) strategy formulation by using TOWS Matrix analysis 3) strategy adjusting by specialists and stakeholders' suggestions.

## 2.7 Related Research Studies

### 2.7.1 Research Studies in China

C. K. Chu (2008) conducted a research study of the relationship between creative leadership of principals and school effectiveness in elementary schools. The findings of the research study as follows:

- 1) Teachers' evaluation on the creative leadership of principal is above nice levels.
- 2) Positive school efficacy exists in elementary schools.
- 3) Teachers in different sex, positions and areas perceive differently in creative leadership of principal.
- 4) Teachers in different sex, positions, school sizes and areas perceive differently in school effectiveness.

5) The higher teachers perceive principal's creative leadership, the higher school effectiveness show.

6) The creative leadership of principal is highly related to school effectiveness.

Wu et al. (2010) conducted a research study of four weak of primary school principals in less developed areas. They design the questionnaires referred to the leadership quality inventory and the leadership character inventory of Glanz (2002). The findings of the research study as follows:

1) On the leadership quality performance, the creativity of the primary school principals in the less-development areas is the lowest, only 10.7%. This features of leaders indicated that they follow the traditional values, satisfied with the present situation, embody in the pursuit of stability in leadership style, easy to follow the crowd and believe in authority.

2) On the leadership character performance, the courage character and imagination character of primary school principals in the less-development areas ranked back, respectively, accounted for 10.9% and 10.7%. It reflected that the leadership style of principals tend to be conservative and passive and lack of initiative and pioneering spirit.

J. Li (2011) conducted that a research study of discussion of the relevance and application on innovation leadership of primary school principals. The findings of the research study indicated that school principals are key figures in school management; their demeanor and even thinking philosophy will affect the school teachers, students, parents, alumni and the interaction with the community directly or indirectly. Era of knowledge economy, only through innovation development, the school can improve the education effectiveness; the principal's leadership philosophy must also have the characteristics and thought connotation of innovation leadership. Then, they can create a quality school and educational environment with innovative features.

H. Zhang and Zhang (2011) conducted that a research study on the primary and high school teacher collaboration over the past thirty years, it was indicated that there are many problems in facilitating collaboration in teacher teamwork, such as, the teachers used to work alone and they lack awareness, motivation, skills and habits in collaboration and sharing; teacher collaboration is limited by time, working

environment and other necessary support conditions; and the schools have not enough emphasized and lacked of guidance on education and scientific research.

Zeng (2012) conducted that a research study on the relationships among the primary school principal's innovation leadership, teacher's creative teaching and school performance management. The findings of the research study as follows:

1) The principal's innovation leadership and school teachers' creative teaching have interaction on school performance management.

2) Teachers' creative teaching as the intermediary variables.

H. Li (2013) conducted that a research study on the relationships among elementary school principals' transformational leadership, emotional Intelligence, creative personality and school innovation management: Taoyuan County as an example. The findings of the research study as follows:

1) The school principals' transformational leadership, emotional intelligence, creative personality and school innovation management perceived by the teachers from elementary schools in Taoyuan County are all significantly above theoretical average.

2) Teachers with different background variables have significantly different perception in principals' transformational leadership, emotional intelligence, creative personality and school innovation management.

3) There is a high positive correlation between every two variables of principals' transformational leadership, emotional intelligence, creative personality and school innovation management.

4) The school principals' transformational leadership, emotional intelligence, creative personality has the significant prediction toward school innovation management.

5) Creative personality is a moderate variable between school principals' transformational leadership, emotional intelligence and school innovation management.

### 2.7.2 Foreign Research Studies

Stoll and Temperley (2009a) conducted a study about creative leadership teams: capacity building and succession planning. The research's aims included: 1) helping senior leadership teams (SLTs) and a local authority (LA) officer team explore and develop their capacity to create the conditions, culture and structures in which the learning-focused creativity of staff might be likely to thrive; 2) creating time and space for SLT members and LA officers to engage in dialogue with each other and with colleagues in a wider learning network on how to enhance learning to learn through promoting creativity; 3) creating a supportive professional learning community of leaders of creativity which would also share their learning with other colleagues in South Gloucestershire; etc. The research indicated that enhancing teachers' creative teaching development and the learning of all students means that leaders need to be flexible and adaptable, able to deal with uncertainty and 'think in their feet'; they need to be ready with creative responses to problems and to opportunities. And the way is to harness the diverse talents of creative leadership teams and facilitate their collaborative learning to ensure that their experience of working together helps them provide the conditions, environment and opportunities for teachers to be creative and improve the life chances of all students.

Von Stamm (2008) conducted a survey of over 1000 people in the UK and found that two-thirds of the British workforce believe that they would be more productive and would in fact work harder if their work environment was better – less crowded, better air conditioning, better lighting. He concluded that people are more creative, more productive, when their environment is beautiful and relaxed.

Stoll and Temperley (2009b) conducted a study about creative leadership: a challenge of our times. This research study argued that promoting creativity of teachers to enhance twenty-first century learning is a fundamental challenge for school leadership today. Drawing on the findings of research and development project involving senior leadership teams and a local authority team, the nature of creative leadership is explored along with conditions leaders establish to support teachers' creativity. The concept of creative leadership also raises questions about context, levels of creativity, the nature of risk taking, and measuring impact, among others.

Jarvis (2015) investigated whether or not Missouri school administrators were prepared to meet the creative leadership demands of the 21<sup>st</sup> century by measuring their creative capacity, creative styles, and their current creative leadership practices. A convenience sample of Missouri K-12 public school administrators and teachers completed the abbreviated Torrance Test for Adults, the Creativity Styles Questionnaire-Revisited and an original Organizational Creativity Survey; two homogenous small focus groups discussed their experiences regarding creativity and creative leadership within school organizations. The researcher noted administrator trends toward low risk propensity, high conformity, and a deficit of creative leadership. Findings further suggested that demographic factors and career attributes such as age, gender, school level, job level, job embeddedness, and work experience were not significantly related to creative capacity.



## **Chapter 3**

### **Research Methodology**

This chapter describes the research design employed in the study of Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi, China. The study explored the roles of creative leadership of primary school principals relating to the teachers' creativity development in modeling creative working processes, encouraging students' creativity, identifying students' creativity and developing students' creativity in Guangxi, China. The objectives of the study were to study the conceptual framework of creative leadership of primary school principals to promote teachers' creativity, to study the current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China, to identify the strengths, weaknesses, opportunities and threats to the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China, and to develop the creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China. The chapter explains the process of research design, the research population, the sample selection, the research instrument, the methods of data collection and data analysis.

#### **3.1 Research Design**

This research study on creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China used a mixed methods design of quantitative and qualitative analysis. In the mixed method approach, the research poses the research inquiry and makes the assumption that gathering various types of data can provide an understanding of a research problem. The study begins with a broad survey in order to generalize results to a population and then focuses, in a second phase, on detailed qualitative to collect detailed views from informants.

#### **3.2 Research Process**

The research study is designed based on the research purpose. The purposes of the study are 1) to study the conceptual framework of creative leadership of primary school principals to promote teachers' creativity; 2) to study the current and desirable

states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China; 3) to analyze strengths, weaknesses, opportunities and threats of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China; 4) to develop creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China.

The research process is designed to include four steps as appeared in the figure 3 below.

Figure 3: Research Process

<b>Research Steps</b>	<b>Research Methodology</b>	<b>Outcomes</b>
1. To study the conceptual framework of creative leadership of primary school principals to promote teachers' creativity.	1.1 To study literature that relate to creative leadership of primary school principals to promote teachers' creativity 1.2 To synthesis creative leadership of primary school principals 1.3 To synthesis the key skills of creative teachers 1.4 Experts evaluate the conceptual framework of creative leadership of primary school principals to promote teachers' creativity 1.5 To adjust conceptual framework as suggested by experts and advisors	The conceptual framework of creative leadership of primary school principals to promote teachers' creativity

Research Steps	Research Methodology	Outcomes
<p>2. To study the current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China</p>	<p>2.1 The sample population employed in the study are primary schools in Guangxi, China</p> <p>2.2 The informants include 1) school principals 2) heads of subject 3) teachers</p> <p>2.3 The research tool used in the study is a questionnaire to find the current and desirable states of the creative leadership of primary school principals to promote teachers' creativity.</p> <p>2.4 The methods used to gain the quality of the research tool are the IOC validity and the Cronban's alpha coefficient of reliability.</p> <p>2.5 The data analysis uses a statistical tool, SPSS, to identify frequency distribution, percentage, means and standard deviation (S.D).</p>	<p>The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China.</p>
<p>3. To conduct the SWOT analysis of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China</p>	<p>3.1 The statistical data received from step 2 is used for the internal and external environment analysis to identify strengths (S), weaknesses (W), opportunities (O) and threats (T)</p> <p>3.2 The PNI<sub>Modified</sub> analysis is conducted to prioritize needs by arranging PNI<sub>Modified</sub> scores of strengths (S), weaknesses (W), opportunities (O) and threats (T) in rank order from the highest to the lowest.</p>	<p>The PNI<sub>Modified</sub> scores of strengths, weakness, opportunities and threats of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China are arranged in rank order from the highest to the lowest.</p>
<p>4. To develop creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China by 4.1) designing a first draft of creative leadership strategies</p>	<p>4.1.1 A TOWS Matrix chart is created</p> <p>4.1.2 A TOWS analysis is conducted using a TOWS Matrix chart, the PNI<sub>Modified</sub> scores of strengths, weaknesses, opportunities and threats arranged in rank order from the highest to the lowest are put in the TOWS Matrix chart with pairs up of W-O, W-T, S-T and S-O</p>	<p>The first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is designed.</p>



<b>Research Steps</b>	<b>Research Methodology</b>	<b>Outcomes</b>
for primary school principals to promote teachers' creativity in Guangxi, China	4.1.3 A draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China consisting of main strategies, sub-strategies and procedures is designed.	
4.2) having the experts and stakeholders individually examine the suitability and feasibility of the draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China; and then revising the strategies as suggested by the experts and stakeholders.	4.2.1 An evaluation form of creative leadership strategies is drafted, examined on its content validity and revised. 4.2.2 Approximately 30 experts and stakeholders individually examine the suitability and feasibility of the first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China. 4.2.3 The creative leadership strategies are revised as recommended by the experts and stakeholders.	The second draft of suitable and practical creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is produced.
4.3) having a focus group examine the suitability and feasibility of the second draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China and having the creative leadership strategies revised and presented.	4.3.1 The focus group discussion consists of approximately the 19 experts and stakeholders is organized, the focus group examines the suitability and feasibility of the second draft of creative leadership strategies. 4.3.2 To adjust creative leadership strategies as recommended by the experts and stakeholders and advisor 4.3.3 To present a final version of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China.	The final version of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is produced.

According to the diagram, the research process includes the following steps:

### **3.2.1 To study the conceptual framework of creative leadership of primary school principals to promote teachers' creativity**

The concepts, theories and research literature that relate to the creative leadership of primary school principals and the key skills of creative teacher are studied and developed into a conceptual research framework with the details as follows:

- 1) To study literature that relate to the creative leadership of primary school principals to promote teachers' creativity
- 2) To synthesis the creative leadership for primary school principals
- 3) To synthesis the key skills of creative teachers
- 4) Experts evaluate the conceptual framework of creative leadership of primary school principals to promote teachers' creativity
- 5) To adjust the conceptual framework as suggested by experts and advisors

### **3.2.2 To study the current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China**

The population and sample are defined and a research tool is created based on the conceptual research framework with the details as follows:

#### **3.2.2.1 Research Population and Sample**

1) The research population include the public primary schools under Beihai city of Guangxi, China in the academic year of 2015-2016 (Department of Education in Guangxi, 2015-2016).

2) The sample population include 106 public primary schools of Beihai city in Guangxi. The participants include school principals, head of subject, and teachers from each school; the school principals, head of subject and teachers each take part in answering the survey questionnaires based on their willingness. A method of multi-stage random sampling is used for a sample selection as described below

2.1) The sample size is determined by the calculation using the Yamane formula with the confidence interval at 95% and allowable error (e) at 5% (Yamane, 1973). The calculation using Taro Yamane formula is displayed below

$$n = \frac{N}{1 + Ne^2}$$

N = the population of 144 schools in Beihai city

e = allowable error at 5%

n = the sample size required

The population of 144 schools under the Beihai city of Guangxi has been calculated using the Yamane formula to obtain the sample size of 106 schools.

2.2) The selection of sample primary school is conducted using multi-stage random sampling to obtain the sample population which involves three steps as follows:

2.2.1) conduct a stratified random sampling of schools from Beihai city consisting of 4 districts

2.2.2) select schools from 4 districts spreading out in Beihai city

2.2.3) determine the number of schools in each district of Beihai city based on the number of the sampling primary schools, the total of 106 primary schools are sampling primary schools as appeared in the table 4...

Table 4: The sampling primary schools in the Beihai city of Guangxi

北海市 Beihai city	Population	Sample
合浦县 Hepu county	61	45
海城区 Haicheng district	15	11
银海区 Yinhai district	46	34
铁山港区 Tieshangang district	22	16
<b>总共 Total</b>	<b>144</b>	<b>106</b>

### 3.2.2.2 Research Tool

The research tool employed in this study is a questionnaire; the process of designing the research tool includes the following:

1) To clearly define the objective of the questionnaire based on the purpose of the research study

2) To create the questionnaire consisting of questions designed based on the conceptual framework derived from the review of concepts, theories and relevant research literature; the step of designing questions includes the following:

2.1) draft questions based on the conceptual framework and the operational definition of terms

2.2) have a doctoral dissertation advisor examine the content validity of questions, the language usage in the questionnaire and the breadth of coverage based on the conceptual framework and the operational definition of terms

2.3) revise the questions based on the advice of the doctoral dissertation advisor

2.4) create a questionnaire consisting of questions inquiring about the current and desirable states of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China, the data is collected from school principals and teachers.

There are two sections of questions in the questionnaire as follows:

Section 1: Questions about the informants' demographic data

The informant can use a checklist to answer questions about his/her gender, age, qualification, position and experiences.

Section 2: Questions about the current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China

The informant can answer questions by selecting a number from a rating scale of 1 to 5; each number represents the level of practices.

The rating scale of 5 to 1 in the current state refers to the level of practices as follows:

- 5 = the highest level of practice in the current state
- 4 = the high level of practice in the current state
- 3 = the moderate level of practice in the current state
- 2 = the low level of practice in the current state
- 1 = the lowest level of practice in the current state

The rating scale of 5 to 1 in the desirable state refers to the level of need for the practices as follows:

- 5 = the highest level of need for the practice
- 4 = the high level of need for the practice
- 3 = the moderate level of need for the practice
- 2 = the low level of need for the practice
- 1 = the lowest level of need for the practice

### 3) To examine the validity of the questionnaire

3.1) The doctoral dissertation advisor will examine the developed questionnaire on its content validity and clear usage of language so that the questionnaire becomes suitable for the research study and has breadth of content coverage.

3.2) The questionnaire is revised based on the dissertation advisor's recommendation.

3.3) The revised questionnaire is examined by five specialists on its content validity and suitability. The selected specialists are those who possess knowledge or expertise on the creative leadership and the creative teacher in the schools.

Table 5: Specialists are classified based on their expertise

Specialists	Expertise			
	Academic	School Leadership/ Creative Leadership	Research and Measurement	Creative teacher/ Creativity
First Person	√	√	√	√
Second Person	√	√	√	√
Third Person	√	√	√	
Fourth Person	√		√	
Fifth Person	√	√		√

3.4) The results of the specialists' examination of the questionnaire are computed using Rovinelli's and Hamblenton's formula of the Index of Consistency (IOC) to identify its content validity as follows:

$$IOC = \Sigma R / N$$

IOC = the value of the index of consistency between -1 to +1

$\Sigma R$  = the total scores of the specialists' opinions

N = the total number of the specialists

3.5) The appropriate questions with suitable content validity based on the IOC value are selected; the IOC value of each question should be higher than 0.50. Based on the results of the specialists' examination, each selected question has the 1.00 IOC value.

3.6) The language used on the questionnaire is revised based on the specialists' recommendations and examined by the dissertation advisor prior sending to the trial survey group.

4) To examine the reliability of the questionnaire

4.1) After the examination of its content validity, the questionnaire together with the letter of cooperation for tryout of the research tool from the Graduate School,

Chulalongkorn University are sent to primary schools of Guangxi which do not belong to the sample schools. The informants include 5 school principals, 5 vice-principals, 5 heads of subject and 15 teachers, the total of 30 people.

4.2) The Cronbach's Alpha Coefficient formula is used to compute the data collected to identify the reliability value of the questions; the alpha reliability coefficients are 0.996 for the questions inquiring about the current state and 0.997 for those inquiring about the desirable state. Therefore, the questionnaire appears to have a high reliability value and can be used to collect data.

### **3.2.2.3 Data Collection**

The letter of cooperation for data collection from the Graduate School, Chulalongkorn University together with the copy of the questionnaires are sent to primary school of Guangxi via post.

### **3.2.2.4 Data Analysis**

The data analysis of the questionnaire consists of two sections as follows:

Section 1: The informant's basic information is analyzed using the descriptive statistics to identify frequency distribution and percentage.

Section 2: The information on the current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is analyzed using a statistical tool, SPSS for Windows, to identify means and standard deviation (S.D.). The analysis is conducted to find the  $\bar{X}$  and S.D. of the overall environment, the analysis is conducted and the external environment respectively. The criteria to define the range of the mean scores are described as follows:

4.50-5.00 = the highest level of practice or needs for practice

3.50-4.49 = the high level of practice or needs for practice

2.50-3.49 = the moderate level of practice or needs for practice

1.50-2.49 = the low level of practice or needs for practice

The difference between the current state and the desirable state of the creative leadership of primary school principals in Guangxi should be compared in order to evaluate the need of the creative leadership. The statistical data of the current and desirable states of the creative leadership of primary school principals is used for calculating the Modified Priority Need Index (PNI<sub>Modified</sub>) in order to prioritize the need. The PNI<sub>Modified</sub> technique (Wongwanich, 2007) used in the computation is described below:

$$\text{PNI}_{\text{Modified}} = (I-D)/D$$

I = The desirable state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China

D = The current state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China

### **3.2.3 Analysis of Strengths, Weaknesses, Opportunities and Threats of creative leadership for primary school principals in Guangxi, China**

3.2.3.1 The SWOT analysis is conducted using the PNI<sub>Modified</sub> statistics; the steps are described as follows:

1) The strengths, weaknesses, opportunities and threats of creative leadership for primary school principals in Guangxi, China are identified using a criterion-referenced approach as follows:

#### 1.1) The analysis of the internal environment

The statistical data obtained on the questionnaire relating to the creative leadership of primary school principals is arranged in two PNI<sub>Modified</sub> groups.

The highest value of the PNI<sub>Modified</sub> is subtracted by the lowest value of the PNI<sub>Modified</sub>; the difference of the subtraction divided by two is the mid interval value, the PNI<sub>Modified</sub> values which are higher than the mid interval value are defined as weaknesses and the those which are lower than the mid interval value are defined as strengths.



### 1.2) The analysis of the external environment

The statistical data obtained on the questionnaire relating to the political, economic, social and technological aspects is arranged in two PNI<sub>Modified</sub> groups.

The highest value of the PNI<sub>Modified</sub> is subtracted by the lowest value of the PNI<sub>Modified</sub>; the difference of the subtraction divided by two determines the mid interval value, the PNI<sub>Modified</sub> values which are higher than the mid interval value are defined as threats and those which are lower than the mid interval value are defined as opportunities.

### **3.2.4 To develop creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

The research process includes the following:

3.2.4.1 The steps to design the first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China are as follows:

- 1) Create a TOWS Matrix chart
- 2) Conduct a TOWS analysis using the TOWS Matrix chart and put the PNI<sub>Modified</sub> of strengths, weaknesses, opportunities and threats arranged in a ranking order from the highest to the lowest into the TOWS Matrix grid.
- 3) Match the internal environment with the external environment to formulate strategies as follows:
  - 3.1) Pair the weaknesses and threats to formulate a defensive strategy which is designed to enable the school to reduce weaknesses, avoid threats and perform with a minimum loss
  - 3.2) Pair the weaknesses and the opportunities to formulate a turnaround-oriented strategy which is designed to enable the school to fix the weaknesses and use the opportunities to gain the full benefits.
  - 3.3) Pair the strengths and the threats to formulate a diversification strategy which is designed to enable the school to use the benefit of the strengths, avoid threats and perform with a minimum loss.

3.4) Pair the strengths and the opportunities to formulate an aggressive strategy which is designed to enable the school to use the strengths to create or promote and using the opportunities to the full benefit.

4) Prepare the first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China consisting of main strategies, sub-strategies and procedures.

3.2.4.2 The suitability and feasibility of the first draft of creative leadership strategies for primary school principals to promote teachers' creativity is individually examined by the experts and stakeholders. The details are as follows:

1) Informants

The informants of the research study included 30 experts and stakeholders consisting of school principals, teachers and academics who have knowledge, experience and have produced academic work relating to the creative leadership and teachers' creativity. The purposive sampling technique is used to select the informants.

The informants are divided into 4 main groups as follows:

Group 1: 1 Educational policy maker

Group 1: 5 Educators of both higher education and basic education level

Group 2: 10 School principals

Group 3: 14 Primary school teachers of Guangxi

2) Research Tool

The evaluation form of creative leadership strategies is a research tool which has been created as follows:

2.1) The design of the evaluation form of creative leadership is derived from the advice of strategic planning experts.

2.2) The draft of the evaluation form of creative leadership strategies is designed to cover creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China. The suitability and feasibility of the creative leadership strategies are examined. The evaluation form of creative leadership strategies includes three sections as follows:

Section 1: Informant's demographic data

Section 2: Opinions and comments about the suitability and feasibility of main strategies and sub-strategies of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China

Section 3: Opinions and comments about the suitability and feasibility of procedures to implement strategies of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China

2.3) The content validity of the evaluation form of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is examined by the dissertation advisor.

2.4) The evaluation form of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is revised based on the dissertation advisor's recommendations and sent to the experts and stakeholders to collect the information.

3) The suitability and feasibility of the first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is examined by individual experts; the process includes the following:

3.1) The first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is sent to experts and stakeholders to individually examine its suitability and the feasibility of the strategies

3.2) The evaluation form is submitted to and collected from examiners, the experts and stakeholders via post.

3.3) The result of the examination of the suitability and the feasibility of creative leadership strategies is statistically analyzed using frequency distribution, percentage and content analysis.

3.2.4.3 The first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is revised based on the experts' and stakeholders' recommendations and presented to the dissertation advisor for a further review; the second draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is developed.

3.2.4.4 The suitability and feasibility of the second draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is examined by the focus group of experts and stakeholders, the details are as follows:

1) Informants

The informants include the experts and stakeholders who possess knowledge and experience or have produced academic work in educational administration and those who have knowledge and abilities relating to teachers' creativity. The focus group of 19 people is selected by using a purposive sampling technique.

2) The process of the examination on the suitability and the feasibility of the second draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China includes the following:

2.1) A focus group of 19 experts and stakeholders are invited for a group discussion

2.2) The second draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is presented to the focus group.

2.3) The focus group review the second draft and discuss the suitability and the feasibility of implementing creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China

3.2.4.5 The creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is revised for a complete, final version.

1) The second draft creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China is revised based on the recommendations of the experts, stakeholders and the dissertation advisor and developed further to become a complete version.

2) The creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China are completed and presented.

## **Chapter 4**

### **Results of Data Analysis**

In the chapter the researcher presents the results of the data analysis of the research study on “Creative Leadership Strategies for Primary School Principals to Promote teachers’ creativity in Guangxi, China”, a mixed method design of quantitative and qualitative analysis is employed. The research sample include 106 schools under the Beihai city of Guangxi, China. The informants include school principals, one head of subject and three teachers from each school. The research tool used to collect data is survey questionnaire and an evaluation form of creative leadership strategies for primary school principals to promote teachers’ creativity in Guangxi, China.

The purpose of the study was to learn about the conceptual framework of creative leadership of primary school principals to promote teachers’ creativity, to study the current and desirable states of creative leadership of primary school principals to promote teachers’ creativity in Guangxi, China, to analyze the strengths, weaknesses, opportunities and threats to the creative leadership of primary school principals to promote teachers’ creativity in Guangxi, China and to develop creative leadership strategies for primary school principals to promote teachers’ creativity in Guangxi, China.

The descriptive statistics is used through the statistical package for the Social Sciences (SPSS) software to analyze the quantitative data which describes frequency distribution, percentage, means, standard deviation (S.D.) and PNI modified. The content analysis is used on the qualitative study.

The results of data analysis are presented as follows:

4.1 The conceptual framework of creative leadership of primary school principals to promote teachers’ creativity

4.2 The current and desirable states of creative leadership of primary school principals to promote teachers’ creativity in Guangxi, China.

4.3 Strengths, weaknesses, opportunities and threats of the creative leadership of primary school principals to promote teachers’ creativity in Guangxi, China.

4.4 Development of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China.

#### 4.1 The conceptual framework of creative leadership of primary school principals to promote teachers' creativity

Five academic experts individually examined the suitability and feasibility of the conceptual framework of creative leadership of primary school principals to promote teachers' creativity. The results of evaluation are showed in the table 6 and the table 7.

Table 6: Evaluation of conceptual framework related the roles of creative leadership of primary school principals by experts

The roles of creative leadership of primary school principals	Suitability		Feasibility		Should be modified	
	Number	Percent	Number	Percent	Number	Percent
1. <b>Personal:</b> To facilitate the creative abilities of every teacher of school	5	100.00	5	100.00	0	0.00
1.1 Engage every teacher using their creative potential in teaching	5	100.00	5	100.00	0	0.00
1.2 Energize every teacher' imagination for teaching	5	100.00	5	100.00	0	0.00
1.3 Provide learning opportunities to enhance creativity in teaching	5	100.00	5	100.00	0	0.00
2. <b>Group:</b> To form and facilitate dynamic creative teacher teams	5	100.00	5	100.00	0	0.00
2.1 Facilitate diversity in teacher teams	5	100.00	5	100.00	0	0.00
2.2 Facilitate collaboration in teacher teams	5	100.00	5	100.00	0	0.00
2.3 Offer time for teacher teams to work on their passion	5	100.00	5	100.00	0	0.00
3. <b>Culture:</b> To promote a school culture of innovation	5	100.00	5	100.00	0	0.00
3.1 Promote a flexible school culture	5	100.00	5	100.00	0	0.00
3.2 Promote an inquiring school culture	5	100.00	5	100.00	0	0.00
3.3 Create creative school workspaces	5	100.00	5	100.00	0	0.00
<b>Total</b>		100.00		100.00		0.00

In the overview, table 6 indicates the conceptual framework that related the roles of creative leadership of primary school principals has suitability and feasibility at 100%.

Table 7: Evaluation of conceptual framework related the key skills of creative teachers by experts

The key skills of creative teachers	Suitability		Feasibility		Should be modified	
	Number	Percent	Number	Percent	Number	Percent
1. Modeling creative working processes	5	100.00	5	100.00	0	0.00
2. Encouraging students' creativity	5	100.00	5	100.00	0	0.00
3. Identifying students' creativity	5	100.00	5	100.00	0	0.00
4. Developing students' creativity	5	100.00	5	100.00	0	0.00
<b>Total</b>		100.00		100.00		0.00

In the overview, table 7 indicates the conceptual framework that related the key skills of creative teachers has suitability and feasibility at 100%.

Therefore, the conceptual framework of creative leadership of primary school principals to promote teachers' creativity was set as Figure 1. In addition, the conceptual framework can be applied to create a research tool used in the further research.

#### **4.2 The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China**

The results of data analysis on the current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China include three parts:

##### 4.2.1 Demographic data of sample schools and informants

4.2.2 The current and desirable states of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the internal environment.

4.2.3 The current and desirable states of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the external environment.

The details of each part are as follows:

#### 4.2.1 Demographic data of informants

Table 8: Number and Percentage of Informants

Demographic Data		Total ( N= 485 )	
		School principals ( N= 161 ) Heads of subject ( N= 81 ) Teachers ( N= 243 )	
		Number	Percentage
<b>Gender</b>	Male	177	36.5
	Female	308	63.5
<b>Age</b>	Below 30	100	20.6
	30-40	160	33
	41-50	185	38.1
	51-60	40	8.2
<b>Highest Level of Education</b>	Below Bachelor	195	40.2
	Bachelor	281	57.9
	Master	7	1.4
	Doctor	2	0.4
<b>Length of time in current position</b>	Below 5 years	93	19.2
	5-10 years	58	12.0
	11-15 years	62	12.8
	16 years up	272	56.1

The table 8 shows that there are 485 informants who are 80 school principals, 81 vice-principals, 81 subject heads and 243 teachers. 63.5% of the informants are female and 36.5% are male. The biggest group of the informants, 185 people, aged between 41-50 years old, is 38.1% of all the informants. The other groups of the informants are 30-40 years old, under 30 years old, and 51-60 years old, respectively. 281 people or 57.9% of all the informants have Bachelor's Degree as their highest level of education; the others have under Bachelor's Degree, Master's Degree and Doctoral Degree respectively. The biggest group of the informants whose length of time in the current position is 16 years up are 272 people or 56.1% of all the informants. The others have less than 5 years, 11-15 years and 5-10 years respectively as their length of time in the current position.



#### 4.2.2 The current and desirable states of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the internal environment

The current and desirable states of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the internal environment are presented in the table with the information included. The analysis provides an overall picture followed by the analysis of each aspect as follows:

Table 9: The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the overall analysis of the internal environment

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	Current State				Desirable State			
	$\bar{X}$	S.D	Level	Order	$\bar{X}$	S.D	Level	Order
1. Personal: To facilitate the creative abilities of every teacher of school	3.42	0.87	Moderate	1	4.82	0.35	Highest	1
2. Group: To form and facilitate dynamic creative teacher teams	3.34	0.93	Moderate	3	4.81	0.38	Highest	2
3. Culture: To promote a school culture of innovation	3.35	0.90	Moderate	2	4.81	0.40	Highest	3
<b>Total</b>	<b>3.37</b>	<b>0.87</b>	<b>Moderate</b>		<b>4.81</b>	<b>0.36</b>	<b>Highest</b>	

Based on the analysis of the internal environment on the table 9, the findings indicate that an overall picture of the current state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is at a moderate level ( $\bar{X}=3.37$ , S.D=0.87). When considering each aspect, the principal facilitates the creative abilities of every teacher of school to promote teachers' creativity has the highest mean value ( $\bar{X}=3.42$ , S.D =0.87), then the principal promotes a school culture of innovation to enhance teachers' creativity ( $\bar{X} =3.35$ , S.D =0.90) and the principal

forms and facilitates dynamic creative teacher teams to promote teachers' creativity ( $\bar{X}=3.34$ , S.D =0.93) respectively.

Based on the analysis of the internal environment, the findings indicates that an overall picture of the desirable state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is at a highest level ( $\bar{X}=4.81$ , S.D =0.36). When considering each aspect, the principal facilitates the creative abilities of every teacher of school to promote teachers' creativity has the highest mean value ( $\bar{X}=4.82$ , S.D =0.35), then the principal forms and facilitates dynamic creative teacher teams to promote teachers' creativity ( $\bar{X}=4.81$ , S.D =0.38) and the principal promotes a school culture of innovation to enhance teachers' creativity ( $\bar{X}=4.81$ , S.D = 0.40)) respectively.

The above analysis can be displayed in the figure 4

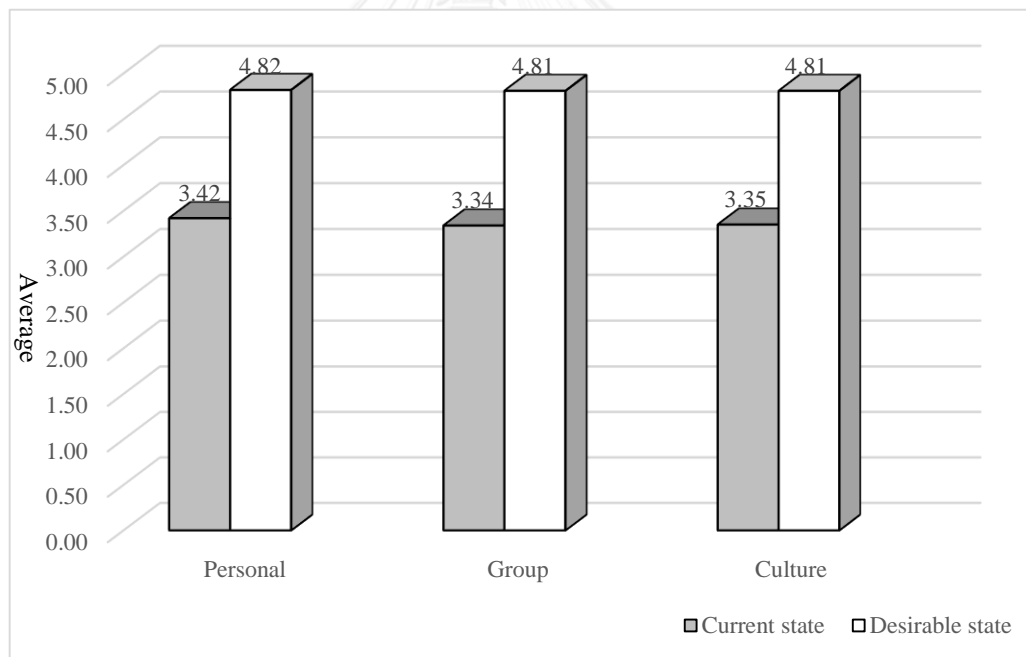


Figure 4: The comparison of current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China

Table 10: The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the internal environment on the personal area

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	Current State				Desirable State			
	$\bar{X}$	S.D	Level	Order	$\bar{X}$	S.D	Level	Order
<b>1. Personal: To facilitate the creative abilities of every teacher of school</b>	<b>3.42</b>	<b>0.87</b>	<b>Moderate</b>		<b>4.82</b>	<b>0.35</b>	<b>Highest</b>	
1.1 To engage every teacher using their creative potential in teaching to promote teachers' creativity in ...	3.46	0.94	Moderate	1	4.83	0.38	Highest	1
1.2.1 modeling creative working processes	3.51	1.05	High	(1)	4.81	0.47	Highest	(4)
1.2.2 encouraging students' creativity	3.45	1.04	Moderate	(3)	4.83	0.45	Highest	(2)
1.2.3 identifying students' creativity	3.45	1.03	Moderate	(2)	4.82	0.43	Highest	(3)
1.2.4 developing students' creativity	3.41	1.05	Moderate	(4)	4.86	0.39	Highest	(1)
1.2 To energize every teacher's imagination for teaching to promote teachers' creativity in ...	3.38	0.96	Moderate	3	4.80	0.40	Highest	3
1.2.1 modeling creative working processes	3.44	1.05	Moderate	(3)	4.80	0.46	Highest	(2)
1.2.2 encouraging students' creativity	3.34	1.04	Moderate	(4)	4.81	0.44	Highest	(1)
1.2.3 identifying students' creativity	3.36	1.07	Moderate	(2)	4.79	0.47	Highest	(4)
1.2.4 developing students' creativity	3.37	1.06	Moderate	(1)	4.79	0.46	Highest	(3)
1.3 To provide every teacher learning opportunities to enhance creativity in teaching to promote teachers' creativity in ...	3.43	0.95	Moderate	2	4.82	0.39	Highest	2
1.2.1 modeling creative working processes	3.47	1.04	Moderate	(1)	4.82	0.43	Highest	(2)
1.2.2 encouraging students' creativity	3.39	1.04	Moderate	(4)	4.81	0.46	Highest	(4)
1.2.3 identifying students' creativity	3.43	1.05	Moderate	(3)	4.82	0.45	Highest	(3)
1.2.4 developing students' creativity	3.45	1.02	Moderate	(2)	4.83	0.44	Highest	(1)

Based on the analysis of the personal area of the internal environment, the findings indicate that an overall picture of the current state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the personal aspect is at a moderate level ( $\bar{X}=3.42$ , S.D=0.87). When considering each aspect of the personal area, the principal engages every teacher using their creative potential in teaching to promote teachers' creativity has the highest mean value ( $\bar{X}=3.46$ , S.D =0.94), then the principal provides every teacher learning opportunities to enhance creativity in teaching to promote teachers' creativity ( $\bar{X}=3.43$ , S.D =0.95)

and the principal energizes every teacher's imagination for teaching to promote teachers' creativity (  $\bar{X}$  =3.38, S.D =0.96), respectively.

Based on the analysis of the personal area of the internal environment, the findings indicate that an overall picture of the desirable state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the personal area is at a highest level (  $\bar{X}$  =4.82, S.D =0.35). When considering each aspect of the personal area, the principal engages every teacher using their creative potential in teaching to promote teachers' creativity has the highest mean value (  $\bar{X}$  =4.83, S.D =0.38), then the principal provides every teacher learning opportunities to enhance creativity in teaching to promote teachers' creativity (  $\bar{X}$  =4.82, S.D =0.39) and the principal energizes every teacher's imagination for teaching to promote teachers' creativity (  $\bar{X}$  =4.80, S.D =0.40) respectively.

The above analysis can be displayed in the figure 5

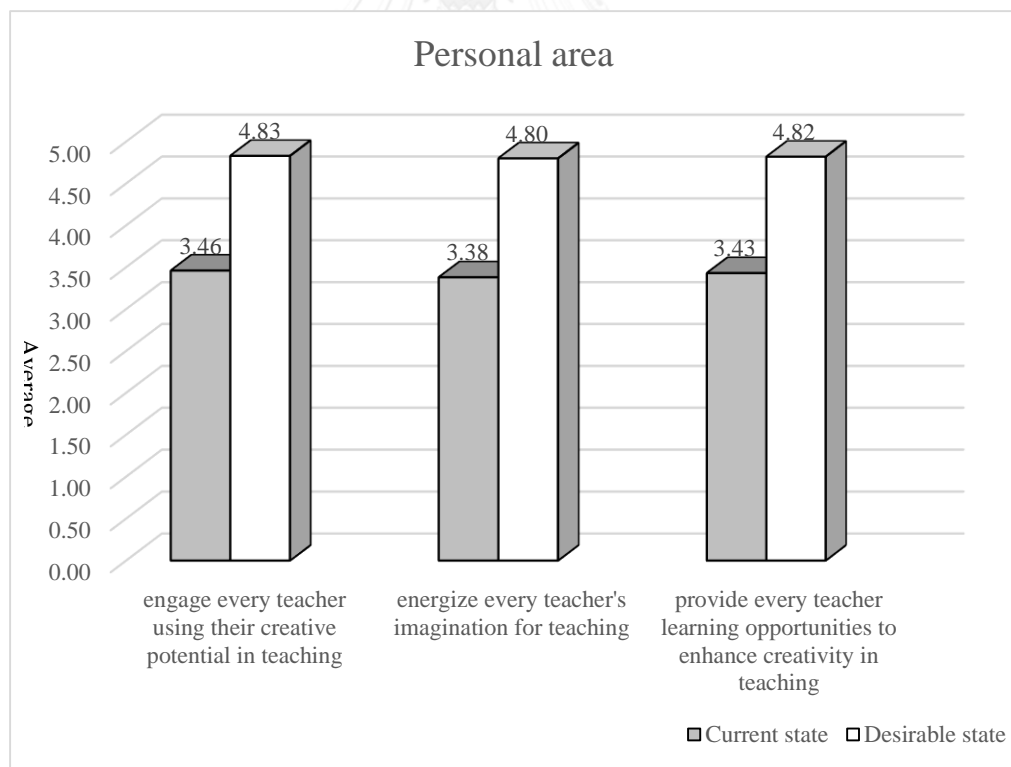


Figure 5: The comparison of current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the personal area

Table 11: The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the internal environment on the group area

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	Current State				Desirable State			
	$\bar{X}$	S.D	Level	Order	$\bar{X}$	S.D	Level	Order
<b>2. Group: To form and facilitate dynamic creative teacher teams</b>	<b>3.34</b>	<b>0.93</b>	<b>Moderate</b>		<b>4.81</b>	<b>0.383</b>	<b>Highest</b>	
2.1 To facilitate diversity in teacher teams to promote teachers' creativity in...	3.36	0.97	Moderate	2	4.80	0.44	Highest	3
2.1.1 modeling creative working processes	3.41	1.07	Moderate	(1)	4.80	0.48	Highest	(3)
2.1.2 encouraging students' creativity	3.35	1.09	Moderate	(3)	4.80	0.46	Highest	(1)
2.1.3 identifying students' creativity	3.33	1.02	Moderate	(4)	4.80	0.47	Highest	(2)
2.1.4 developing students' creativity	3.36	1.06	Moderate	(2)	4.80	0.48	Highest	(3)
2.2 To facilitate collaboration in teacher to promote teachers' creativity teams in...	3.41	0.97	Moderate	1	4.82	0.39	Highest	1
2.2.1 modeling creative working processes	3.50	1.05	Moderate	(1)	4.80	0.45	Highest	(4)
2.2.2 encouraging students' creativity	3.34	1.06	Moderate	(4)	4.83	0.42	Highest	(1)
2.2.3 identifying students' creativity	3.40	1.05	Moderate	(2)	4.82	0.44	Highest	(3)
2.2.4 developing students' creativity	3.39	1.06	Moderate	(3)	4.83	0.43	Highest	(2)
2.3. To offer time for teacher teams to work on their passion to promote teachers' creativity in...	3.26	1.08	Moderate	3	4.80	0.43	Highest	2
2.3.1 modeling creative working processes	3.28	1.16	Moderate	(1)	4.80	0.47	Highest	(2)
2.3.2 encouraging students' creativity	3.27	1.11	Moderate	(2)	4.80	0.48	Highest	(3)
2.3.3 identifying students' creativity	3.23	1.14	Moderate	(4)	4.80	0.48	Highest	(3)
2.3.4 developing students' creativity	3.27	1.15	Moderate	(3)	4.81	0.44	Highest	(1)

Based on the analysis of the group area of the internal environment, the findings indicate that an overall picture of the current state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the group aspect is at a moderate level ( $\bar{X}=3.34$ , S.D=0.93). When considering each aspect of the group area, the principal facilitates collaboration in teacher teams to promote teachers' creativity has the highest mean value ( $\bar{X} =3.41$ , S.D =0.97), then the principal facilitates diversity in teacher teams to promote teachers' creativity ( $\bar{X} =3.36$ , S.D =0.97) and the principal offers time for teacher teams to work on their passion to promote teachers' creativity ( $\bar{X} =3.26$ , S.D =1.08), respectively.

Based on the analysis of the group area of the internal environment, the findings indicate that an overall picture of the desirable state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the group area is at a highest level ( $\bar{X}=4.82$ , S.D =0.353). When considering each aspect of the group area, the principal facilitates collaboration in teacher teams to promote teachers' creativity has the highest mean value ( $\bar{X}=4.82$ , S.D =0.39), then the principal offers time for teacher teams to work on their passion to promote teachers' creativity ( $\bar{X}=4.80$ , S.D =0.43) and the principal facilitates diversity in teacher teams to promote teachers' creativity ( $\bar{X}=4.80$ , S.D =0.44), respectively.

The above analysis can be displayed in the figure 6

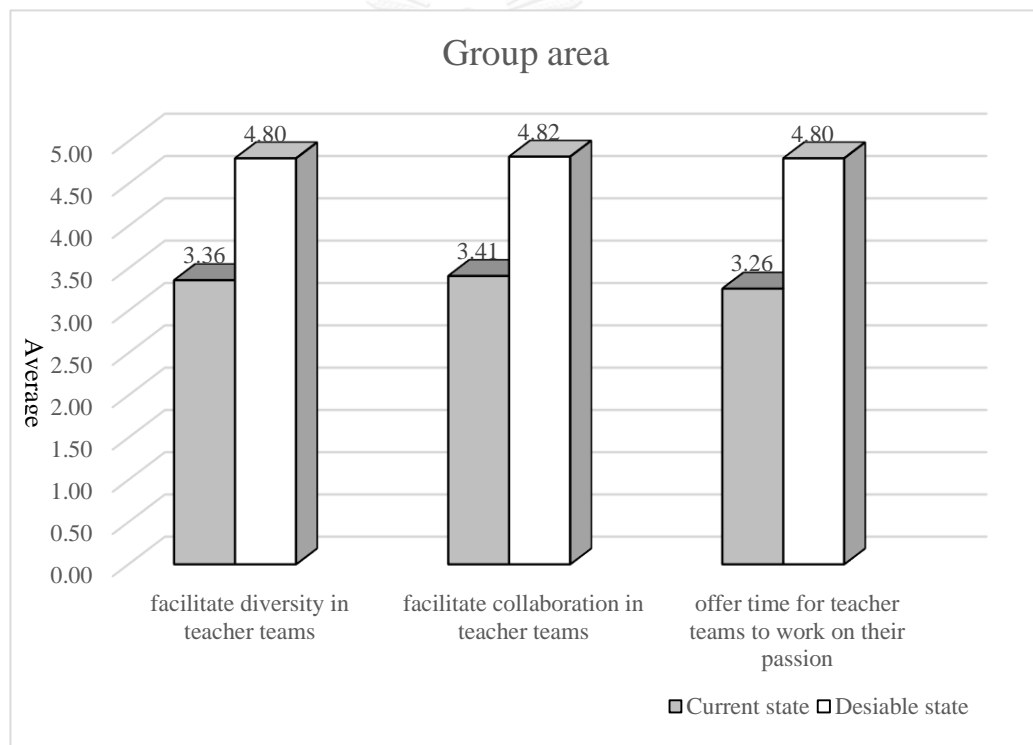


Figure 6: The comparison of current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the group

Table 12: The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the internal environment on the culture area

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	Current State				Desirable State			
	$\bar{X}$	S.D	Level	Order	$\bar{X}$	S.D	Level	Order
<b>3. Culture: To promote a school culture of innovation</b>	<b>3.35</b>	<b>0.90</b>	<b>Moderate</b>		<b>4.81</b>	<b>0.40</b>	Highest	
3.1 To promote a flexible school culture to promote teachers' creativity in...	3.39	0.98	Moderate	1	4.82	0.41	Highest	1
3.1.1 modeling creative working processes	3.45	1.08	Moderate	(1)	4.82	0.44	Highest	(1)
3.1.2 encouraging students' creativity	3.37	1.06	Moderate	(3)	4.82	0.45	Highest	(2)
3.1.3 identifying students' creativity	3.36	1.05	Moderate	(4)	4.82	0.45	Highest	(2)
3.1.4 developing students' creativity	3.38	1.07	Moderate	(2)	4.81	0.47	Highest	(3)
3.2 To promote an inquiring school culture to promote teachers' creativity in...	3.36	0.98	Moderate	2	4.79	0.46	Highest	3
3.2.1 modeling creative working processes	3.42	1.06	Moderate	(1)	4.79	0.51	Highest	(3)
3.2.2 encouraging students' creativity	3.31	1.08	Moderate	(4)	4.80	0.49	Highest	(2)
3.2.3 identifying students' creativity	3.37	1.04	Moderate	(2)	4.79	0.51	Highest	(3)
3.2.4 developing students' creativity	3.36	1.08	Moderate	(3)	4.80	0.47	Highest	(1)
3.3 To create creative school workspaces to promote teachers' creativity in...	3.30	0.96	Moderate	3	4.81	0.41	Highest	2
3.3.1 modeling creative working processes	3.34	1.04	Moderate	(1)	4.81	0.46	Highest	(3)
3.3.2 encouraging students' creativity	3.28	1.04	Moderate	(4)	4.80	0.49	Highest	(4)
3.3.3 identifying students' creativity	3.29	1.06	Moderate	(3)	4.81	0.44	Highest	(2)
3.3.4 developing students' creativity	3.30	1.06	Moderate	(2)	4.83	0.41	Highest	(1)

Based on the analysis of the culture area of the internal environment, the findings indicate that an overall picture of the current state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the culture aspect is at a moderate level ( $\bar{X}=3.35$ , S.D=0.90). When considering each aspect of the culture area, the principal promotes a flexible school culture to enhance teachers' creativity has the highest mean value ( $\bar{X} =3.39$ , S.D =0.98), then the principal promotes an inquiring school culture to enhance teachers' creativity ( $\bar{X} =3.36$ , S.D =0.98) and the principal creates creative school workspaces to promote teachers' creativity ( $\bar{X} =3.30$ , S.D =0.96) respectively.

Based on the analysis of the culture area of the internal environment, the findings indicate that an overall picture of the desirable state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the culture area is at a highest level ( $\bar{X}=4.82$ , S.D =0.35). When considering each aspect of the culture area, the principal promotes a flexible school culture to enhance teachers' creativity has the highest mean value ( $\bar{X}=4.82$ , S.D =0.41), then the principal creates creative school workspaces to promote teachers' creativity ( $\bar{X}=4.81$ , S.D =0.41) and the principal promotes an inquiring school culture to enhance teachers' creativity ( $\bar{X}=4.79$ , S.D =0.46) respectively.

The above analysis can be displayed in the figure 7

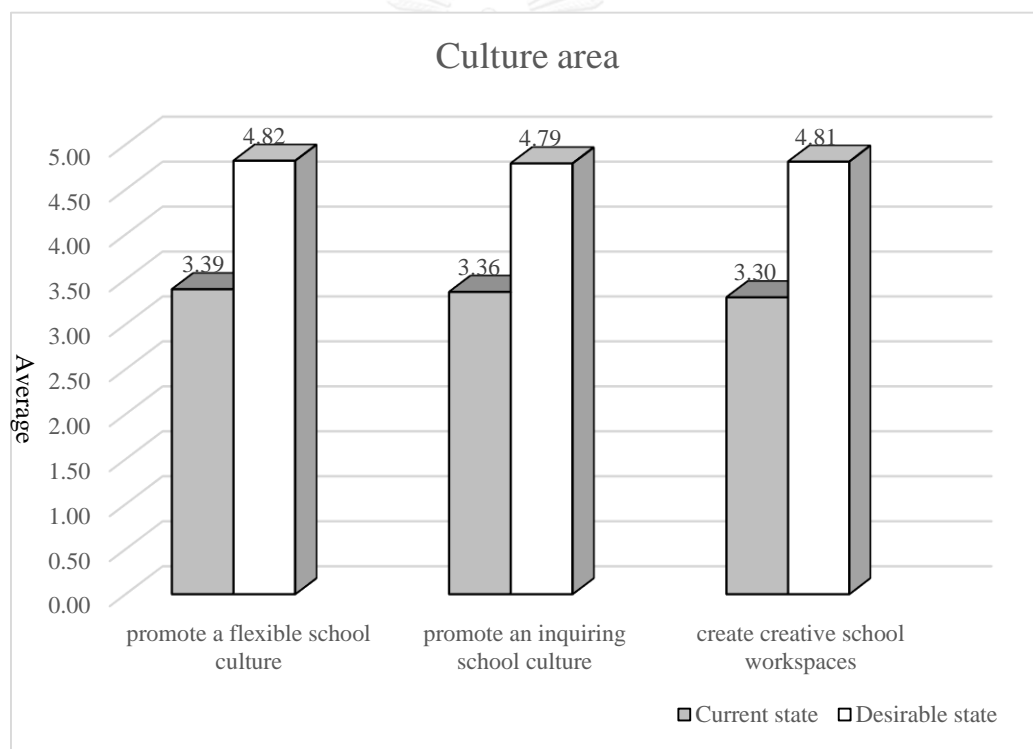


Figure 7: The comparison of current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the culture area



### 4.2.3 The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the external environment

The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the external environment are presented in the following tables with the information included. The analysis provides an overall picture followed by the analysis of each aspect as follows:

Table 13: The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the overall analysis of the external environment

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China		External Environment									
		Policy		Economic		Socio-culture		Technology		Overall	
		Current state	Desirable state	Current state	Desirable state	Current state	Desirable state	Current state	Desirable state	Current state	Desirable state
1. Personal: To facilitate the creative abilities of every teacher of school	$\bar{X}$	3.37	4.80	3.27	4.79	3.30	4.79	3.30	4.79	3.31	4.79
	S.D	0.84	0.39	0.88	0.40	0.88	0.39	0.89	0.39	0.85	0.38
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest
2. Group: To form and facilitate dynamic creative teacher teams	$\bar{X}$	3.32	4.78	3.26	4.78	3.29	4.79	3.28	4.78	3.29	4.78
	S.D	0.89	0.43	0.90	0.40	0.89	0.39	0.89	0.43	0.87	0.40
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest
3. Culture: To promote a school culture of innovation	$\bar{X}$	3.34	4.80	3.27	4.79	3.29	4.79	3.29	4.79	3.30	4.79
	S.D	0.825	0.40	0.88	0.41	0.88	0.43	0.89	0.42	0.85	0.40
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest
<b>Total</b>	$\bar{X}$	<b>3.34</b>	<b>4.79</b>	<b>3.27</b>	<b>4.78</b>	<b>3.29</b>	<b>4.79</b>	<b>3.29</b>	<b>4.78</b>	<b>3.30</b>	<b>4.79</b>
	S.D	<b>0.82</b>	<b>0.48</b>	<b>0.86</b>	<b>0.38</b>	<b>0.85</b>	<b>0.379</b>	<b>0.86</b>	<b>0.39</b>	<b>0.83</b>	<b>0.38</b>
	Level	<b>Middle</b>	<b>Highest</b>	<b>Middle</b>	<b>Highest</b>	<b>Middle</b>	<b>Highest</b>	<b>Middle</b>	<b>Highest</b>	<b>Middle</b>	<b>Highest</b>
	Order	<b>1</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>-</b>	<b>-</b>

From the analysis of the external environment, the findings reveal an overall picture of the current state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is at a moderate level ( $\bar{X}=3.30$ , S.D = 0.83). When considering each aspect, the political and government policy aspect has the highest mean value ( $\bar{X}=3.34$ , S.D = 0.82), then the socio-culture ( $\bar{X}=3.29$ , S.D = 0.85), the technology ( $\bar{X}=3.29$ , S.D = 0.86) and the economy ( $\bar{X}=3.27$ , S.D = 0.86) respectively.

From the analysis of the external environment, the findings reveal an overall picture of the desirable state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is at a highest level ( $\bar{X} = 4.79$ , S.D = 0.38). When considering each aspect, the socio-culture has a highest mean value ( $\bar{X} = 4.79$ , S.D = 0.38), then the political and government policy ( $\bar{X} = 4.79$ , S.D = 0.48), the economy ( $\bar{X} = 4.78$ , S.D = 0.38) and the technology ( $\bar{X} = 4.78$ , S.D = 0.39), respectively.

The above analysis can be displayed in the figure 8

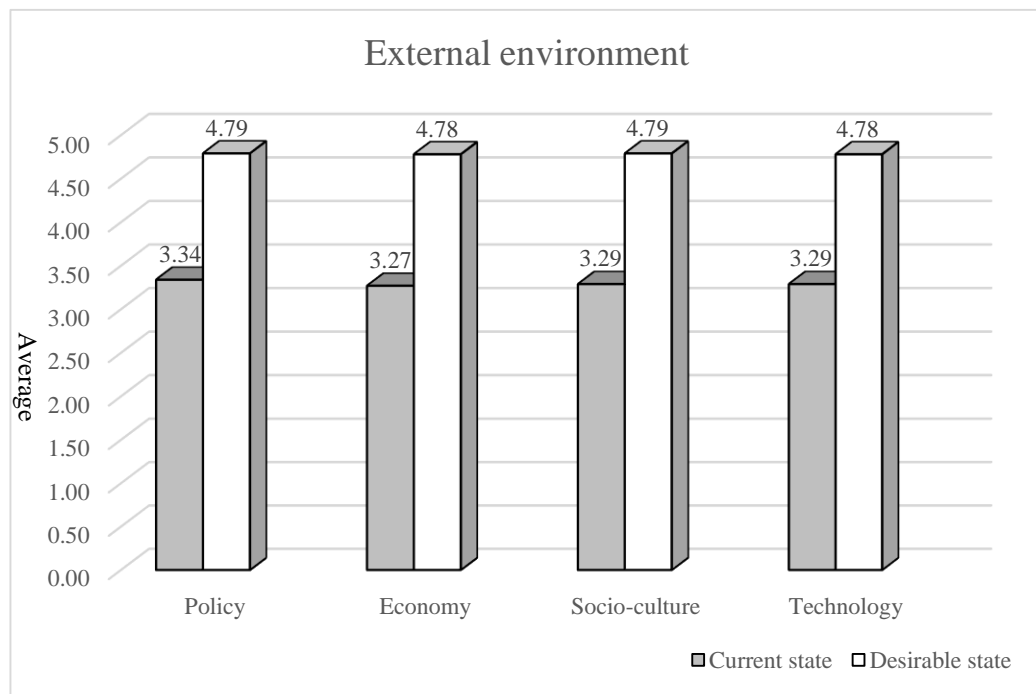


Figure 8: The comparison of current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the external environment

Table 14: The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the external environment on the personal area

Creative leadership of primary School principals to promote teachers' creativity in Guangxi, China	External Environment										
	Policy		Economic		Socio-culture		Technology		Overall		
	Current state	Desirable state	Current state	Desirable state	Current state	Desirable state	Current state	Desirable state	Current state	Desirable state	
1. Personal: To facilitate the creative abilities of every teacher of school	X	3.37	4.80	3.27	4.79	3.30	4.79	3.30	4.79	3.31	4.79
	S.D	0.84	0.39	0.88	0.40	0.88	0.39	0.89	0.39	0.85	0.38
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest
	Order	1	1	4	4	2	3	3	2	-	-
1.1 To engage every teacher using their creative potential in teaching	X	3.38	4.81	3.25	4.78	3.33	4.81	3.29	4.82	3.31	4.80
	S.D	0.90	0.40	0.96	0.46	0.96	0.41	1.00	0.40	0.89	0.37
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest
1.2 To energize every teachers' imagination for teaching	$\bar{X}$	3.32	4.79	3.26	4.78	3.24	4.77	3.28	4.79	3.28	4.78
	S.D	0.94	0.47	0.99	0.44	0.97	0.45	0.98	0.43	0.90	0.41
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest
1.3 To provide every teacher learning opportunities to enhance creativity in teaching	$\bar{X}$	3.40	4.79	3.31	4.79	3.31	4.79	3.32	4.75	3.34	4.78
	S.D	0.93	0.43	0.92	0.43	0.97	0.43	0.95	0.47	0.88	0.40
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest

Based on the analysis of the personal area of the external environment, the findings indicate that an overall picture of the current state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the personal area is at a moderate level ( $\bar{X}=3.31$ , S.D=0.85). When considering each aspect, the political and government policy aspect has a highest mean value ( $\bar{X}=3.37$ , S.D = 0.84), then the socio-culture ( $\bar{X}=3.30$ , S.D = 0.88), the technology ( $\bar{X}=3.30$ , S.D = 0.89), and the economy ( $\bar{X}=3.27$ , S.D = 0.88), respectively.

Based on the analysis of the personal area of the external environment, the findings indicate that an overall picture of the desirable state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the personal area is at a highest level ( $\bar{X}=4.79$ , S.D = 0.38). When considering each aspect, the political and government policy aspect has a highest mean value ( $\bar{X}=4.80$ , S.D = 0.39), then the technology ( $\bar{X}=4.79$ , S.D = 0.39), the socio-culture ( $\bar{X}=4.79$ , S.D = 0.39), and the economy ( $\bar{X}=4.79$ , S.D = 0.40), respectively.

The above analysis can be displayed in the figure 9

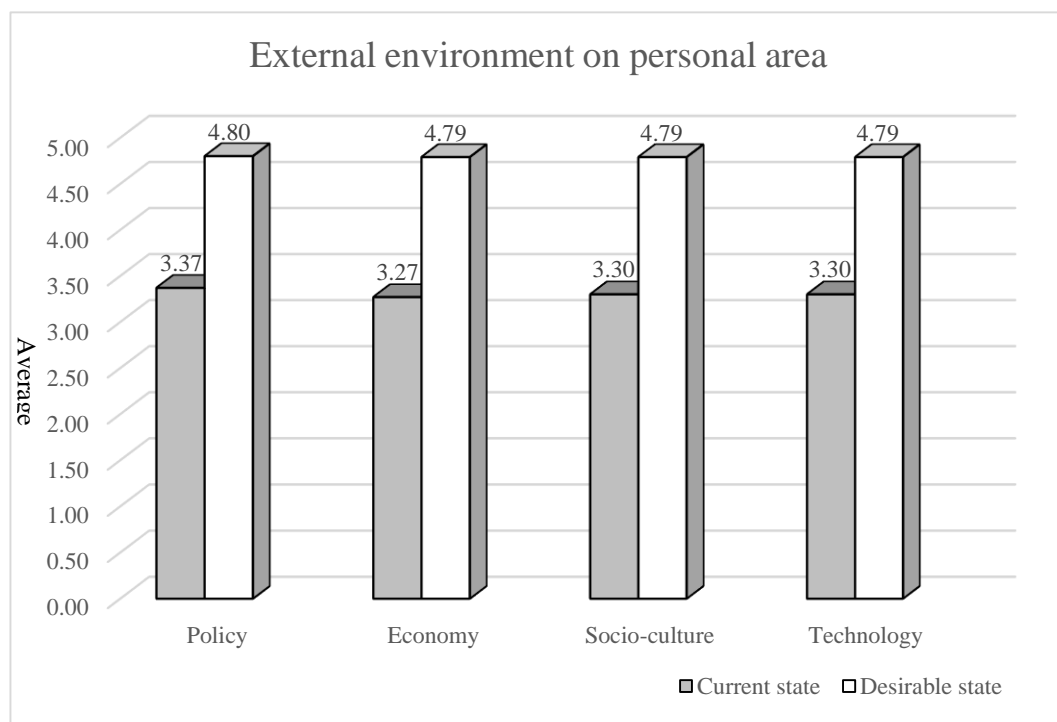


Figure 9: The comparison of current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the external environment on personal area

Table 15: The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the external environment on the group area

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	External Environment										
	Policy		Economic		Socio-culture		Technology		Overall		
	Current state	Desirable state	Current state	Desirable state	Current state	Desirable state	Current state	Desirable state	Current state	Desirable state	
2. Group: To form and facilitate dynamic creative teacher teams	$\bar{X}$	3.32	4.78	3.26	4.78	3.29	4.79	3.28	4.78	3.29	4.78
	S.D	0.89	0.43	0.89	0.400	0.90	0.39	0.89	0.43	0.87	0.40
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest
	Order	1	4	4	2	2	1	3	3	-	-
2.1 To facilitate diversity in teacher teams	$\bar{X}$	3.33	4.77	3.27	4.78	3.30	4.77	3.30	4.78	3.30	4.78
	S.D	0.93	0.47	0.93	0.44	0.94	0.44	0.95	0.45	0.88	0.40
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest
2.2 To facilitate collaboration in teacher teams	$\bar{X}$	3.36	4.78	3.28	4.79	3.30	4.81	3.29	4.79	3.31	4.79
	S.D	0.94	0.46	0.95	0.43	0.94	0.42	0.93	0.43	0.88	0.40
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest
2.3 To offer time for teacher teams to work on their passion	$\bar{X}$	3.27	4.77	3.22	4.78	3.26	4.79	3.25	4.76	3.25	4.79
	S.D	1.03	0.48	1.02	0.45	1.00	0.43	1.00	0.49	0.96	0.40
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest

Based on the analysis of the group area of the external environment, the findings indicate that an overall picture of the current state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the group area is at a moderate level ( $\bar{X}=3.29$ , S.D=0.87). When considering each aspect, the political and government policy has a highest mean value ( $\bar{X}=3.32$ , S.D = 0.89), then the socio-culture ( $\bar{X}=3.29$ , S.D = 0.90), the technology ( $\bar{X}=3.28$ , S.D = 0.89), and the economy ( $\bar{X}=3.26$ , S.D = 0.89), respectively.

Based on the analysis of the group area of the external environment, the findings indicate that an overall picture of the desirable state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the group area is at a highest level ( $\bar{X}=4.78$ , S.D = 0.40). When considering each aspect, the socio-culture has a highest mean value ( $\bar{X}=4.79$ , S.D = 0.39), then the economy ( $\bar{X}=4.78$ , S.D = 0.40), the technology ( $\bar{X}=4.78$ , S.D = 0.43), and the political and government policy ( $\bar{X}=4.78$ , S.D = 0.43), respectively.

The above analysis can be displayed in the figure 10

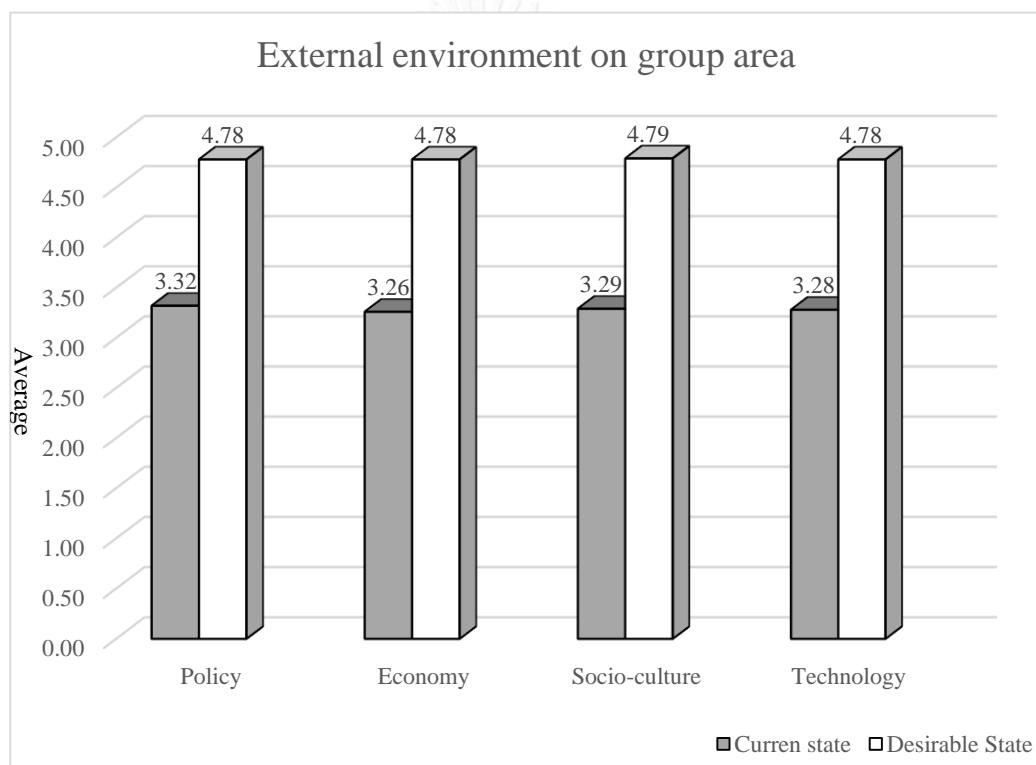


Figure 10: The comparison of current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the external environment on group area

Table 16: The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the external environment on the culture area

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	External Environment										
	Policy		Economic		Socio-culture		Technology		Overall		
	Current state	Desirable state	Current state	Desirable state	Current state	Desirable state	Current state	Desirable state	Current state	Desirable state	
3. Culture: To promote a school culture of innovation	$\bar{X}$	3.34	4.80	3.27	4.79	3.29	4.79	3.29	4.79	3.30	4.79
	S.D	0.83	0.40	0.88	0.41	0.88	0.43	0.89	0.42	0.85	0.40
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest
	Order	1	1	4	2	2	4	3	3	-	-
3.1 To promote a flexible school culture	$\bar{X}$	3.33	4.80	3.28	4.79	3.28	4.78	3.29	4.77	3.30	4.77
	S.D	0.91	0.42	0.95	0.46	0.94	0.48	0.96	0.49	0.89	0.43
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest
3.2 To promote an inquiring school culture	$\bar{X}$	3.36	4.80	3.26	4.78	3.29	4.78	3.30	4.81	3.30	4.79
	S.D	0.90	0.44	0.92	0.46	0.92	0.45	0.94	0.43	0.86	0.42
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest
3.3 To create creative school workspaces	$\bar{X}$	3.35	4.79	3.26	4.79	3.29	4.80	3.26	4.79	3.29	4.79
	S.D	0.91	0.45	0.96	0.43	0.98	0.43	0.95	0.43	0.90	0.41
	Level	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest	Middle	Highest

Based on the analysis of the culture area of the external environment, the findings indicate that an overall picture of the current state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the culture area is at a moderate level ( $\bar{X}=3.30$ , S.D=0.85). When considering each aspect, the political and government policy has a highest mean value ( $\bar{X}=3.34$ , S.D = 0.83), then the socio-culture ( $\bar{X}=3.29$ , S.D = 0.88), the technology ( $\bar{X}=3.29$ , S.D = 0.89), and the economy ( $\bar{X}=3.27$ , S.D = 0.88), respectively.

Based on the analysis of the culture area of the external environment, the findings indicate that an overall picture of the desirable state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the

culture area is at a highest level ( $\bar{X}=4.79$ , S.D = 0.40). When considering each aspect, the political and government policy has a highest mean value ( $\bar{X}=4.80$ , S.D = 0.40), then the economy ( $\bar{X}=4.79$ , S.D = 0.41), the technology ( $\bar{X}=4.79$ , S.D = 0.42), and the socio-culture ( $\bar{X}=4.79$ , S.D = 0.43), respectively.

The above analysis can be displayed in the figure 11

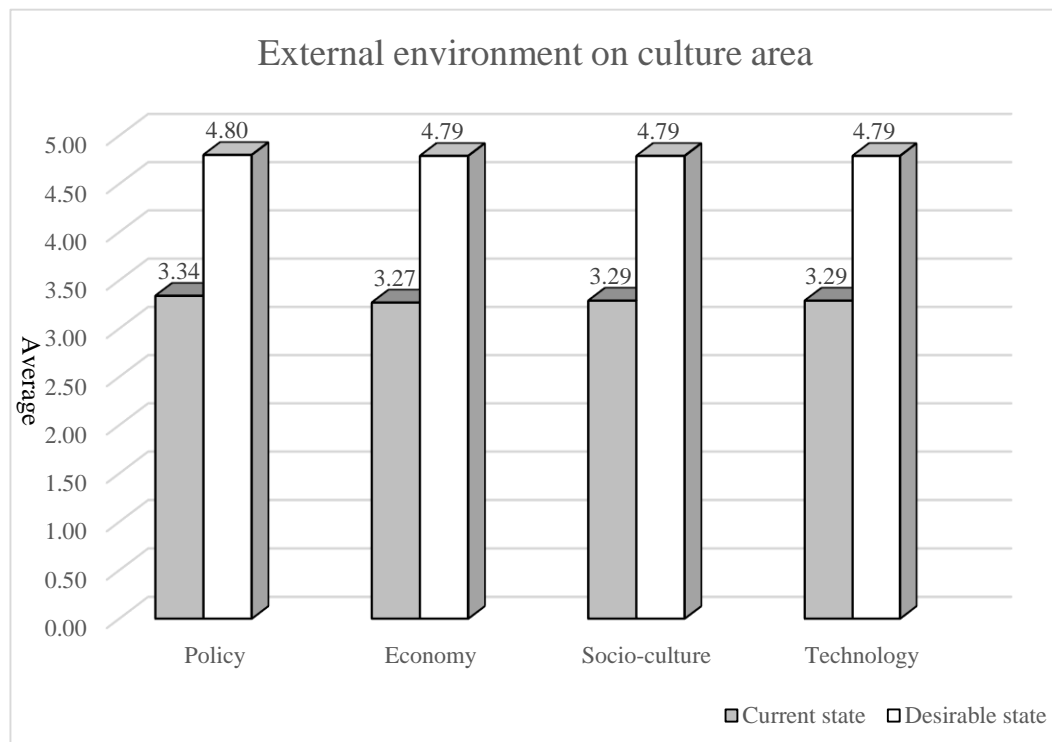


Figure 11: The comparison of current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the external environment on culture area

### 4.3 Strengths, weaknesses, opportunities and threats of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China

The results of the data analysis to identify strengths, weaknesses, opportunities and threats of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China include two parts as follows:

4.3.1 The analysis of the internal environment of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China



4.3.2 The analysis of the external environment of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China

The details of each part are as follows:

#### **4.3.1 The analysis of the internal environment of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China**

The researcher conducted an analysis of the internal environment employing the data collected in the questionnaires and organized the priority of needs of the data using the PNIModified. The highest PNIModified subtracted by the lowest PNIModified and divided by two; the difference which is the mid interval value is used to identify the two groups, the high PNIModified and the low PNIModified. The aspects obtaining the high PNIModified are identified as the weaknesses of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China. Those obtaining the low PNIModified are identified as the strengths of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China.

From the results of PNIModified of the internal environment, the highest PNIModified value is 0.472, and the lowest PNIModified value is 0.396. Therefore, the PNIModified of the internal environment organized in two groups of high and low PNIModified displayed as follows:

$$(0.472 - 0.396) \div 2 = 0.038$$

The mid interval value is used to organize the two PNIModified groups as follows:

The high PNIModified values are 0.472- 0.434

The low PNIModified values are 0.396- 0.433

The results of PNIModified in an overall picture are displayed in the **table 17, 18** below.

Table 17: The PNIModified of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the overall analysis of the internal environment

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	PNIModified	Order	S/W
<b>1. Personal:</b> To facilitate the creative abilities of every teacher of school	0.409	3	S
<b>2. Group:</b> To form and facilitate dynamic creative teacher teams	0.440	1	W
<b>3. Culture:</b> To promote a school culture of innovation	0.436	2	W
<b>Total</b>	<b>0.427</b>		

The findings on the analysis of each area of the internal environment of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the table 17 indicate that the group area has the highest PNIModified, 0.440, then the culture area obtaining PNIModified, 0.436, respectively are identified as the weaknesses of creative leadership primary school principals to promote teachers' creativity in Guangxi, China. The area gaining the low PNIModified include the personal area obtaining PNIModified, 0.409 is identified as the strength of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China. All these can be displayed in the figure 12:

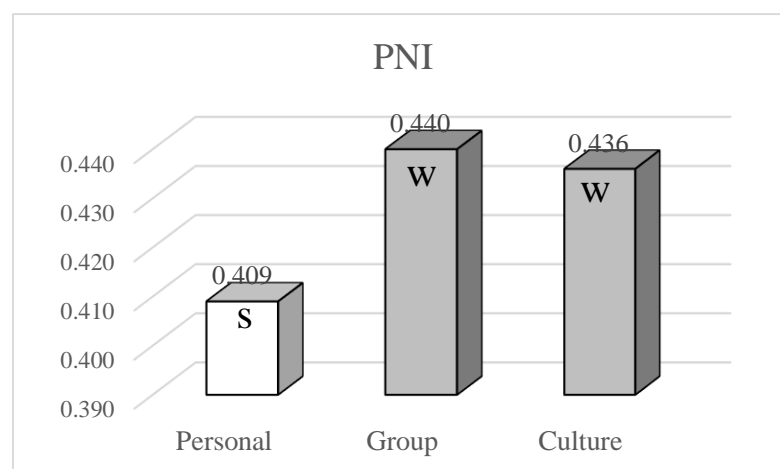


Figure 12: The comparison of PNIModified of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China

Table 18: The  $PNI_{Modified}$  of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the internal environment under each aspect is displayed on the table as follows:

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	$PNI_{Modified}$	Order	S/W
<b>1. Personal:</b> To facilitate the creative abilities of every teacher of school	0.409	3	S
1.1 To engage every teacher using their creative potential in teaching	0.396	(9)	S
1.2 To energize every teacher's imagination for teaching	0.420	(6)	S
1.3. To provide every teacher learning opportunities to enhance creativity in teaching	0.405	(8)	S
<b>2. Group:</b> To form and facilitate dynamic creative teacher teams	0.440	1	W
2.1 To facilitate diversity in teacher teams	0.429	(3)	S
2.2 To facilitate collaboration in teacher teams	0.413	(7)	S
2.3 To offer time for teacher teams to work on their passion	0.472	(1)	W
<b>3. Culture:</b> To promote a school culture of innovation	0.436	2	W
3.1 To promote a flexible school culture	0.422	(5)	S
3.2 To promote an inquiring school culture	0.426	(4)	S
3.3 To create creative school workspaces	0.458	(2)	W
<b>Total</b>	<b>0.427</b>		

The findings on the analysis of the each aspect of the internal environment of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the table 18 indicate that offering time for teacher teams to work on their passion to promote teachers' creativity obtaining the highest  $PNI_{Modified}$ , 0.472, and then creating creative school workspaces to promote teachers' creativity obtaining the highest  $PNI_{Modified}$ , 0.458, respectively are identified as the weaknesses of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China. The aspects gaining the low  $PNI_{Modified}$  include engaging every teacher using their creative potential in teaching obtaining  $PNI_{Modified}$ , 0.396, then

providing every teacher learning opportunities to enhance creativity in teaching obtaining  $PNI_{Modified}$ , 0.405; facilitating collaboration in teacher teams to promote teachers' creativity obtaining  $PNI_{Modified}$ , 0.413; energizing every teacher's imagination for teaching obtaining the highest  $PNI_{Modified}$ , 0.420; promoting a flexible school culture to enhance teachers' creativity obtaining  $PNI_{Modified}$ , 0.422; and promoting an inquiring school culture to enhance teachers' creativity obtaining the  $PNI_{Modified}$ , 0.426, and facilitating diversity in teacher teams obtaining the  $PNI_{Modified}$ , 0.429 are respectively identified as the strengths of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China.

The above analysis can be displayed in the figure 13

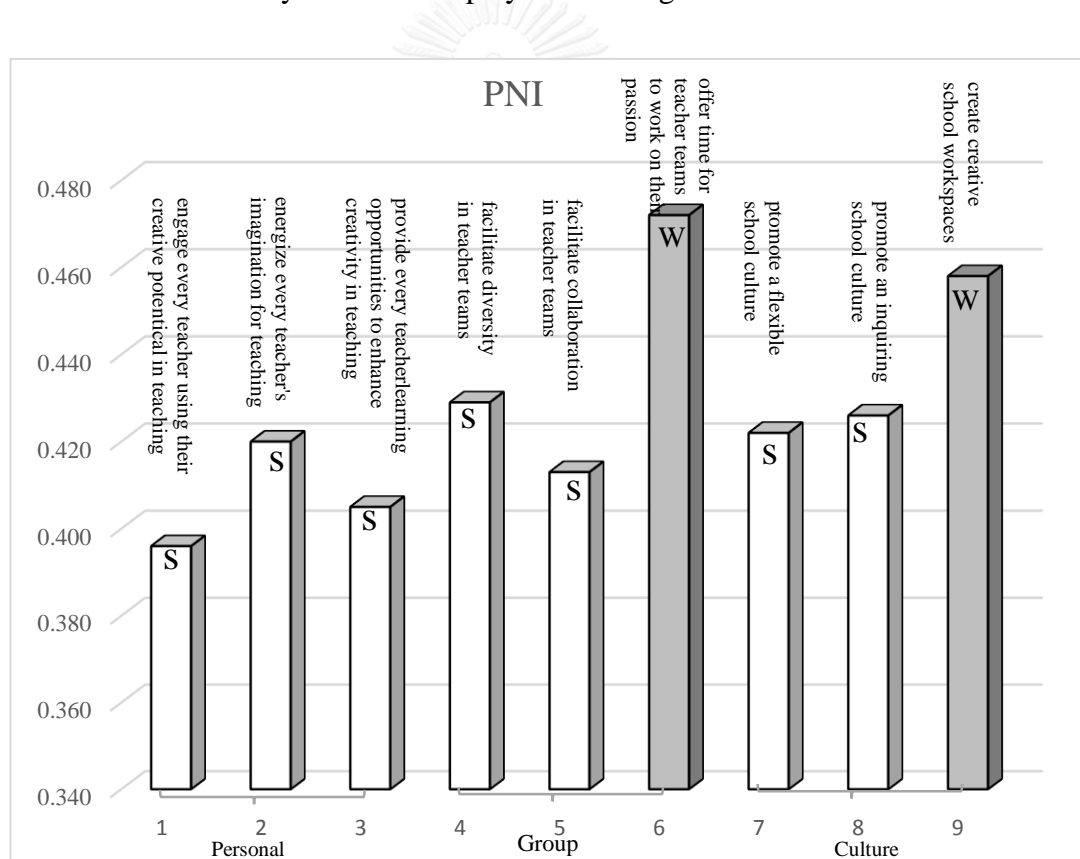


Figure 13: The comparison of  $PNI_{Modified}$  of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on each aspect of personal, group and culture area

#### 4.3.2 The analysis of the external environment of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China

The researcher conducted an analysis of the external environment employing the data collected in the questionnaires and organized the priority of needs of the data using the PNIModified. The highest PNI Modified subtracted by the lowest PNIModified and divided by two; the difference which is the mid interval value is used to identify the two groups, the high PNIModified and the low PNIModified. The aspects obtaining the high PNIModified are identified as the threats of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China. Those obtaining the low PNIModified are identified as the opportunities of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China.

From the results of PNIModified of the external environment, the highest PNIModified value is 0.484, and the lowest PNIModified value is 0.409. Therefore, the PNIModified of the external environment organized in two groups of high and low PNIModified displayed as follows:

$$(0.484 - 0.409) \div 2 = 0.037$$

The mid interval value is used to organize the two PNIModified groups as follows:

The high PNI Modified values are 0.484- 0.446

The low PNI Modified values are 0.409- 0.445

The results of PNIModified in an overall picture are displayed in the **table 19, 20** below.

Table 19: The PNI Modified of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the overall analysis of the external environment

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	External Environment											
	Policy			Economy			Socio-culture			Technology		
	PNI	Order	O/T	PNI	Order	O/T	PNI	Order	O/T	PNI	Order	O/T
1. Personal: To facilitate the creative abilities of every teacher of school	0.424		O	0.465		T	0.452		T	0.452		T
2. Group: To form and facilitate dynamic creative teacher teams	0.440		O	0.466		T	0.456		T	0.457		T
3. Culture: To promote a school culture of innovation	0.437		O	0.465		T	0.456		T	0.456		T
<b>Total</b>	<b>0.434</b>	<b>4</b>	<b>O</b>	<b>0.462</b>	<b>1</b>	<b>T</b>	<b>0.456</b>	<b>2</b>	<b>T</b>	<b>0.453</b>	<b>3</b>	<b>T</b>

The findings on the analysis of each aspect of the external environment of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the table 19 indicate that the economic aspect has the highest PNI<sub>Modified</sub>, 0.462, then the socio-cultural aspect obtaining PNI<sub>Modified</sub>, 0.456, and the technological aspect obtaining PNI<sub>Modified</sub>, 0.453 respectively are identified as the threats of creative leadership primary school principals to promote teachers' creativity in Guangxi, China. The aspect gaining the low PNI<sub>Modified</sub> include the political and government policy aspect obtaining PNI<sub>Modified</sub>, 0.434 is identified as the opportunity of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China. The above analysis can be displayed in the figure 14

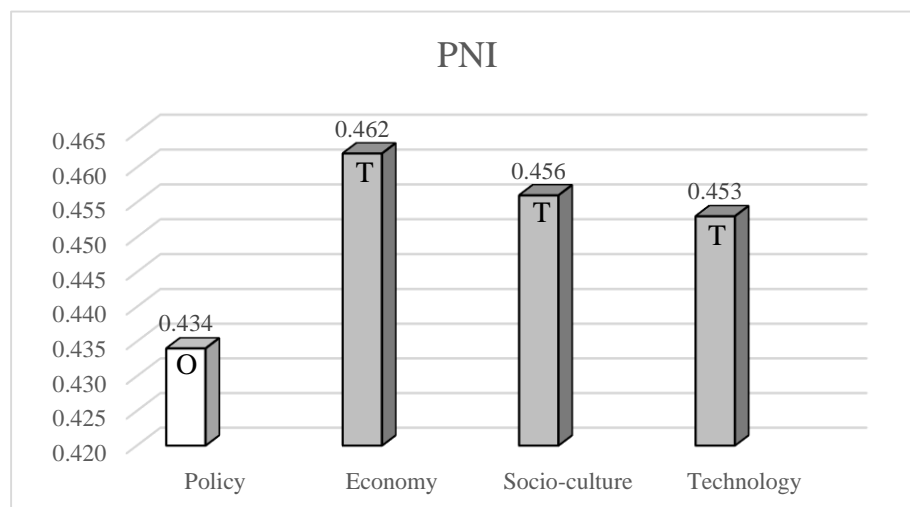


Figure 14: The comparison of PNI<sub>Modified</sub> of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China from external environment

Table 20: The PNIModified of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the overall analysis of the external environment under each aspect is displayed on the table as follows:

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	External Environment							
	Policy		Economy		Socio-culture		Technology	
	PNI	O/T	PNI	O/T	PNI	O/T	PNI	O/T
1. Personal: To facilitate the creative abilities of every teacher of school	0.424	O	0.465	T	0.452	T	0.452	T
1.1 To engage every teacher using their creative potential in teaching	0.423	O	0.471	T	0.444	O	0.465	T
1.2 To energize every teacher's imagination for teaching	0.443	O	0.466	T	0.472	T	0.460	T
1.3 To provide every teacher opportunities to enhance creativity in teaching	0.409	O	0.447	T	0.447	T	0.431	O
2. Group: To form and facilitate dynamic creative teacher teams	0.440	O	0.466	T	0.456	T	0.457	T
2.1 To facilitate diversity in teacher teams	0.432	O	0.462	T	0.445	O	0.448	T
2.2 To facilitate collaboration in teacher teams	0.423	O	0.460	T	0.458	T	0.456	T
2.3 To offer time for teacher teams to work on their passion	0.459	T	0.484	T	0.469	T	0.465	T
3. Culture: To promote a school culture of innovation	0.437	O	0.465	T	0.456	T	0.456	T
3.1 To promote a flexible school culture	0.441	O	0.460	T	0.457	T	0.450	T
3.2 To promote an inquiring school culture	0.429	O	0.466	T	0.453	T	0.458	T
3.3 To create creative school workspaces	0.430	O	0.469	T	0.459	T	0.469	T
<b>Total</b>	<b>0.434</b>	<b>O</b>	<b>0.462</b>	<b>T</b>	<b>0.456</b>	<b>T</b>	<b>0.453</b>	<b>T</b>

Based on the analysis of each aspect of the external environment of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China on the table 20, the findings reveal that:

The political and government policy which has the low PNIModified become an opportunity in providing every teacher learning opportunities to enhance creativity in teaching (PNIModified= 0.409), then engaging every teacher using their creative potential in teaching (PNIModified= 0.423), facilitating collaboration in teacher teams (PNIModified= 0.423), promoting an inquiring school culture (PNIModified= 0.429), creating creative school workspaces (PNIModified= 0.430), facilitating diversity in teacher teams (PNIModified= 0.432) and promoting a flexible school culture (PNIModified= 0.441) respectively; on the other hand, the political and government

policy with the high PNI Modified as a threat in offering time for teacher teams to work on their passion (PNI Modified= 0.459).

The Guangxi economy which has the high PNI Modified as threat in offering time for teacher teams to work on their passion (PNI Modified= 0.484), then engaging every teacher using their creative potential in teaching (PNI Modified= 0.471), creating creative school workspaces (PNI Modified= 0.469), promoting an inquiring school culture and energizing every teacher's imagination for teaching (PNI Modified= 0.466), facilitating diversity in teacher teams (PNI Modified= 0.462), facilitating collaboration in teacher teams and promoting a flexible school culture (PNI Modified= 0.460), and providing every teacher learning opportunities to enhance creativity in teaching (PNI Modified= 0.447) respectively.

The Guangxi socio- culture which has the high PNI Modified as threat in energizing every teacher's imagination for teaching (PNI Modified= 0.472), offering time for teacher teams to work on their passion (PNI Modified= 0.469), creating creative school workspaces (PNI Modified= 0.459), facilitating collaboration in teacher teams (PNI Modified= 0.458), promoting a flexible school culture (PNI Modified= 0.457), promoting an inquiring school culture (PNI Modified= 0.453) and providing every teacher learning opportunities to enhance creativity in teaching (PNI Modified= 0.447) respectively; on the other hand, the Guangxi socio- culture which has the low PNI Modified becomes an opportunity in facilitating diversity in teacher teams (PNI Modified= 0.445) and engaging every teacher using their creative potential in teaching (PNI Modified= 0.444) respectively.

The Guangxi technology which has the high PNI Modified as threat creating creative school workspaces (PNI Modified= 0.469), engaging every teacher using their creative potential in teaching (PNI Modified= 0.465), offering time for teacher teams to work on their passion (PNI Modified= 0.465), energizing every teacher's imagination for teaching (PNI Modified= 0.460), promoting an inquiring school culture (PNI Modified= 0.458), facilitating collaboration in teacher teams (PNI Modified= 0.456), promoting a flexible school culture (PNI Modified= 0.450) and facilitating diversity in teacher teams (PNI Modified= 0.448) respectively; on the other hand, the Guangxi technology which has the low PNI Modified becomes an opportunity in providing every teacher learning opportunities to enhance creativity in teaching (PNI Modified= 0.431).



In summary, based on the results analysis of PNIModified displayed in the table 18 and table 20, the strengths, weaknesses, opportunities and threats of each aspect of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the overall analysis of the internal and external environment can be displayed in the table 21 below.

Table 21: The PNIModified of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the overall analysis of the internal and external environment

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	Internal environment	S	Political and government policy	O	Guangxi economy	O	Guangxi socio-culture	O	Guangxi technology	O
		/		/		/		/		/
		W		T		T		T		T
1. Personal: To facilitate the creative abilities of every teacher of school	0.409	S	0.424	O	0.465	T	0.452	T	0.452	T
1.1 to engage every teacher using their creative potential in teaching	0.396	S	0.432	O	0.471	T	0.444	O	0.465	T
1.2 to energize every teacher's imagination for teaching	0.420	S	0.443	O	0.466	T	0.472	T	0.460	T
1.3 to provide every teacher learning opportunities to enhance creativity in teaching	0.405	S	0.409	O	0.447	T	0.447	T	0.431	O
2. Group: To form and facilitate dynamic creative teacher teams	0.440	W	0.440	O	0.466	T	0.456	T	0.457	T
2.1 to facilitate diversity in teacher teams	0.429	S	0.432	O	0.462	T	0.445	O	0.448	T
2.2 to facilitate collaboration in teacher teams	0.413	S	0.423	O	0.460	T	0.458	T	0.456	T
2.3 to offer time for teacher teams to work on their passion	0.472	W	0.459	T	0.484	T	0.469	T	0.465	T
3. Culture: To promote a school culture of innovation	0.436	W	0.437	O	0.465	T	0.456	T	0.456	T
3.1 to promote a flexible school culture	0.422	S	0.441	O	0.460	T	0.457	T	0.450	T
3.2 to promote an inquiring school culture	0.426	S	0.429	O	0.466	T	0.453	T	0.458	T
3.3 to create creative school workspaces	0.458	W	0.430	O	0.469	T	0.459	T	0.469	T

The summary data from the table 21 will be applied to the table 22.

#### **4.4 Development of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

There are five parts of the development of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China.

4.4.1 The researcher design the first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China using the analyzed information obtained from the TOWS Matrix.

4.4.2 The individual specialists and stakeholders examine the suitability and feasibility of the first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China.

4.4.3 Revise the first draft and develop the second draft

4.4.4 The focus group examine the suitability and feasibility of the second draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China.

4.4.5 The researcher revises the second draft and produces the final, complete version of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China.

The details are as follows:

##### **4.4.1 The researcher design the first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China using the analyzed information obtained from the TOWS Matrix**

Designing the first draft of creative leadership strategies consists of two processes as follows:

4.4.1.1 Create the TOWS Matrix and summarize the results of the TOWS Matrix analysis

4.4.1.2 Formulate the first draft of creative leadership strategies based on the results of TOWS Matrix analysis

#### **4.4.1.1 Create the TOWS Matrix and summarize the results of the TOWS Matrix analysis**

The researcher create the TOWS Matrix and summarize the results of the TOWS Matrix analysis based on the research findings of the strengths, weaknesses, opportunities and threats with the PNIModified; the detailed steps as follows:

Step 1: Classify the strengths, weaknesses, opportunities and threats of the creative leadership for primary school principals to promote teachers' creativity in Guangxi, China as appeared in the table 22.

Step 2: Use TOWS Matrix to match the strengths, weaknesses, opportunities and threats, pairs are identified as strengths-opportunities (SO), weaknesses-opportunities (WO), strengths-threats (ST) and weaknesses-threats (WT) as appeared in the table 23.

Step 3: Summary the results of the TOWS Matrix analysis of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China are identified as appeared in the table 24.

Table 22: The strengths, weaknesses, opportunities and threats of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China based on the table 21

<b>Strengths (S)</b>	<b>Weaknesses (W)</b>	<b>Opportunities (O)</b>	<b>Threats (T)</b>
<p>S1: to engage every teacher using their creative potential in teaching ( 0.396 )</p> <p>S2: to energize every teacher's imagination for teaching ( 0.420 )</p> <p>S3: to provide every teacher learning opportunities to enhance creativity in teaching ( 0.405 )</p> <p>S4: to facilitate diversity in teacher teams ( 0.429 )</p> <p>S5: to facilitate collaboration in teacher teams ( 0.413 )</p> <p>S6: to promote a flexible school culture ( 0.422 )</p> <p>S7: to promote an inquiring school culture ( 0.426 )</p>	<p>W1: to offer time for teacher teams to work on their passion (0.472 )</p> <p>W2: to create creative school workspaces (0.458 )</p>	<p><b>Political and government policy:</b></p> <p>O1: to engage every teacher using their creative potential in teaching (0.432 )</p> <p>O2: to energize every teacher's imagination for teaching ( 0.443 )</p> <p>O3: to provide every teacher learning opportunities to enhance creativity in teaching (0.409)</p> <p>O4: to facilitate diversity in teacher teams ( 0.432 )</p> <p>O5: to facilitate collaboration in teacher teams ( 0.423 )</p> <p>O6: to promote a flexible school culture ( 0.441 )</p> <p>O7: to promote an inquiring school culture ( 0.429 )</p> <p>O8: to create creative school workspaces (0.430 )</p> <p><b>Guangxi socio-culture:</b></p> <p>O1: to engage every teacher using their creative potential in teaching (0.444 )</p> <p>O2: to facilitate diversity in teacher teams (0.445 )</p> <p><b>Guangxi technology:</b></p> <p>O1: to provide every teacher learning opportunities to enhance creativity in teaching (0.431)</p>	<p><b>Political and government policy:</b></p> <p>T1: to offer time for teacher teams to work on their passion (0.459 )</p> <p><b>Guangxi economy:</b></p> <p>T1: to engage every teacher using their creative potential in teaching ( 0.471 )</p> <p>T2: to energize every teacher's imagination for teaching (0.466 )</p> <p>T3: to provide every teacher learning opportunities to enhance creativity in teaching ( 0.447 )</p> <p>T4: to facilitate diversity in teacher teams (0.462)</p> <p>T5: to facilitate collaboration in teacher teams ( 0.460 )</p> <p>T6: to offer time for teacher teams to work on their passion (0.484 )</p> <p>T7: to promote a flexible school culture (0.460)</p> <p>T8: to promote an inquiring school culture(0.466)</p> <p>T9: to create creative school workspaces (0.469)</p> <p><b>Guangxi socio-culture:</b></p> <p>T1: to energize every teacher's imagination for teaching ( 0.472 )</p> <p>T2: to provide every teacher learning opportunities to enhance creativity in teaching ( 0.447 )</p> <p>T3: to facilitate collaboration in teacher teams (0.458)</p> <p>T4: to offer time for teacher teams to work on their passion (0.469 )</p> <p>T5: to promote a flexible school culture ( 0.457)</p> <p>T6: to promote an inquiring school culture(0.453)</p> <p>T7: to create creative school workspaces (0.459 )</p> <p><b>Guangxi technology:</b></p> <p>T1: to engage every teacher using their creative potential in teaching ( 0.465 )</p> <p>T2: to energize every teacher's imagination for teaching (0.460 )</p> <p>T3: to facilitate diversity in teacher teams (0.448)</p> <p>T4: to facilitate collaboration in teacher teams ( 0.456 )</p> <p>T5: to offer time for teacher teams to work on their passion (0.465)</p> <p>T6: to promote a flexible school culture ( 0.450 )</p> <p>T7: to promote an inquiring school culture(0.458)</p> <p>T8: to create creative school workspaces ( 0.469 )</p>

Table 23: TOWS Matrix of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China

S/W O/T	Strengths (S)	Weaknesses (W)
<b>Opportunities (O)</b>	<p><b>SO1</b> Political and government policy, and socio-culture become opportunities that contribute to the strength of engaging every teacher using their creative potential in teaching (0.432, 0.444, 0.396)</p> <p><b>SO2</b> Political and government policy become an opportunity that contributes the strength of energizing every teacher's imagination for teaching (0.443, 0.420)</p> <p><b>SO3</b> Political and government policy, and technology become opportunities that contribute to the strength of providing learning opportunities to enhance creativity in teaching (0.409, 0.431, 0.405)</p> <p><b>SO4</b> Political and government policy, and socio-culture become opportunities that contribute to the strength of facilitating diversity in teacher teams (0.432, 0.445, 0.429)</p> <p><b>SO5</b> Political and government policy becomes an opportunity that contributes to the strength of facilitating collaboration in teacher teams (0.423, 0.413)</p> <p><b>SO6</b> Political and government policy becomes an opportunity that contribute to the strength of promoting a flexible school culture (0.441, 0.450)</p> <p><b>SO7</b> Political and government policy becomes an opportunity that contributes to the strength of promoting an inquiring school culture (0.429, 0.426)</p>	<p><b>WO1</b> Political and government policy becomes an opportunity that reduces the weakness of creating creative school workspaces (0.430, 0.458)</p>
<b>Threats (T)</b>	<p><b>ST1</b> Economy and technology become threats to the strength of engaging every teacher using their creative potential in teaching (0.471, 0.465, 0.396)</p> <p><b>ST2</b> Economy, socio-culture, and technology become threats to the strength of energizing every teacher's creativity for teaching to promote teachers' creativity (0.466, 0.472, 0.460, 0.420)</p> <p><b>ST3</b> Economy and socio-culture become threats to the strength of providing learning opportunities to enhance creativity in teaching (0.447, 0.447, 0.405)</p> <p><b>ST4</b> Economy and technology become threats to the strength of facilitating diversity in teacher teams to promote teachers' creativity (0.462, 0.448, 0.429 )</p> <p><b>ST5</b> Economy, socio-culture, and technology become threats to the strength of facilitating collaboration in teacher teams (0.460, 0.456, 0.458, 0.413)</p> <p><b>ST6</b> Economy, socio-culture and technology become threats to the strength of promoting a flexible school culture (0.460, 0.457, 0.450, 0.422)</p> <p><b>ST7</b> Economy, socio-culture, and technology become threats to the strength of promoting an inquiring school culture (0.466, 0.453, 0.458, 0.426)</p>	<p><b>WT1</b> Political and government policy, economy, socio-culture and technology become threats to the weakness of offering time for teacher teams to work on their passion (0.459, 0.484, 0.469, 0.465, 0.472 )</p> <p><b>WT2</b> Economy, socio-culture, and technology become threats to the weakness of creating creative school workspaces (0.469, 0.459, 0.469, 0.458)</p>

Table 24: Summary of the results of the TOWS Matrix analysis of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China

<b>Creative leadership for primary school principals to promote teachers' creativity in Guangxi, China.</b>	<b>The TOWS Matrix analysis</b>
<b>1. Personal area: to facilitate the creative abilities of every teacher of school (SO, ST)</b>	
1.1 engaging every teacher using their creative potential in teaching to promote teachers' creativity (SO, ST)	<p><b><u>Strength-Opportunity (SO)</u></b> Political and government policy and socio-cultural factors become opportunities that contribute to the strength of engaging every teacher using their creative potential in teaching to promote teachers' creativity</p> <p><b><u>Strength-Threat (ST)</u></b> Economic and technological factors become threats to the strength of engaging every teacher using their creative potential in teaching to promote teachers' creativity</p>
1.2 energizing every teacher's creativity for teaching to promote teachers' creativity (SO, ST)	<p><b><u>Weakness-Opportunity (SO)</u></b> Political and government policy becomes an opportunity that contributes to the strength of energizing every teacher's imagination for teaching to promote teachers' creativity</p> <p><b><u>Weakness-Threat (ST)</u></b> Economic, socio-cultural and technological factors become threats to the strength of energizing every teacher's creativity for teaching to promote teachers' creativity</p>
1.3 providing learning opportunities to enhance creativity in teaching to promote teachers' creativity (SO, ST)	<p><b><u>Strength-Opportunity (SO)</u></b> Political and government policy and technological factors become opportunities that contribute to the strength of providing learning opportunities to enhance creativity in teaching to promote teachers' creativity</p> <p><b><u>Strength-Threat (ST)</u></b> Economic and socio-cultural factors become threats to the strength of providing learning opportunities to enhance creativity in teaching to promote teachers' creativity</p>
<b>2. Group area: to form and facilitate the dynamic and creative teacher teams (WO, WT)</b>	
2.1 facilitating diversity in teacher teams to promote teachers' creativity (SO, ST)	<p><b><u>Strength-Opportunity (SO)</u></b> Political and government policy and socio-cultural factors become opportunities that contribute to the strength of facilitating diversity in teacher teams to promote teachers' creativity</p> <p><b><u>Strength-Threat (ST)</u></b> Economic and technological factors become threats to the strength of facilitating diversity in teacher teams to promote teachers' creativity</p>

2.2 facilitating collaboration in teacher teams to promote teachers' creativity (SO, ST)	<p><b><u>Strength-Opportunity (SO)</u></b></p> <p>Political and government policy becomes an opportunity that contributes to the strength of facilitating collaboration in teacher teams to promote teachers' creativity</p> <p><b><u>Strength-Threat (ST)</u></b></p> <p>Economic, socio-cultural and technological factors become threats to the strength of facilitating collaboration in teacher teams to promote teachers' creativity</p>
2.3 offering time for teacher teams to work on their passion to promote teachers' creativity (WT)	<p><b><u>Weakness-Threat (WT)</u></b></p> <p>Political and government, economic, socio-cultural and technological factors become threats to the weakness of offering time for teacher teams to work on their passion to promote teachers' creativity</p>
<b>3. Culture area: to promote a school culture of innovation (WO, WT)</b>	
3.1 promoting a flexible school culture to enhance teachers' creativity (SO, ST)	<p><b><u>Strength-Opportunity (SO)</u></b></p> <p>Political and government policy becomes an opportunity that contributes to the strength of promoting a flexible school culture to enhance teachers' creativity</p> <p><b><u>Strength-Threat (ST)</u></b></p> <p>Economic, socio-cultural and technological factors become threats to the strength of promoting a flexible school culture to enhance teachers' creativity</p>
3.2 promoting an inquiring school culture to enhance teachers' creativity (SO, ST)	<p><b><u>Strength-Opportunity (SO)</u></b></p> <p>Political and government policy becomes an opportunity that contributes to the strength of promoting an inquiring school culture to enhance teachers' creativity</p> <p><b><u>Strength-Threat (ST)</u></b></p> <p>Economic, socio-cultural and technological factors become threats to the strength of promoting an inquiring school culture to enhance teachers' creativity</p>
3.3 creating creative school workspaces to promote teachers' creativity (WO, WT)	<p><b><u>Weakness-Opportunity (WO)</u></b></p> <p>Political and government policy becomes an opportunity that reduces the weakness of creating creative school workspaces to promote teachers' creativity</p> <p><b><u>Weakness-Threat (WT)</u></b></p> <p>Economic, socio-cultural and technological factors become threats to the weakness of creating creative school workspaces to promote teachers' creativity</p>

#### **4.4.1.2 Formulate the first draft of creative leadership strategies based on the results of TOWS Matrix**

The first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China are formulated based on the results of TOWS Matrix and the PNIModified. The detailed steps as follows:

Step 1: The formulated main strategies based on the conceptual framework of the roles of creative leadership are prioritized by the PNIModified as follows: 1) forming and facilitating dynamic creative teacher teams 2) promoting a school culture of innovation 3) facilitating creative ability of every teacher of school

Step 2: The formulated sub-strategies based on the components of each role of creative leadership are prioritized by the PNIModified as follows: 1) forming and facilitating dynamic creative teacher teams includes three subcomponents as follows: 1.1) offering time for teacher teams to work on their passion 1.2) facilitating diversity in teacher teams 1.3) facilitating collaboration in teacher teams; 2) promoting a school culture of innovation includes three subcomponents as follows: 2.1) creating creative school workspaces 2.2) promoting an inquiring school culture 2.3) promoting a flexible school culture; 3) facilitating creative ability of every teacher of school includes three subcomponents as follows: 3.1) energizing every teacher' imagination for teaching 3.2) providing every teacher learning opportunities to enhance creativity in teaching 3.3) engaging every teacher using their creative potential in teaching.

Step 3: The procedures are defined based on the analysis of the internal and external environment as follows:

1) The external environment includes the political and public policy, the economy, the socio-culture and the technology.

2) The internal environment includes the components of each role of creative leadership which are the following: (1) engaging every teacher using their creative potential in teaching (2) energizing every teacher's imagination for teaching (3) providing every teacher learning opportunities to enhance creativity in teaching (4) facilitating diversity in teacher teams (5) facilitating collaboration in teacher teams (6) offering time for teacher teams to work on their passion (7) promoting a flexible school



culture (8) promoting an inquiring school culture (9) creating creative school workspaces.

The main strategies, sub-strategies and procedures are displayed in the table 25 and table 26.

Table 25: The first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China based on the PNIModified and TOWS Matrix

TOWS Matrix	Main Strategies	Sub-strategies
<p><b>WT</b> Political and government policy, economic, socio-cultural and technological factors become threats to the weakness of offering time for teacher teams to work on their passion to promote teachers' creativity</p>	<p><b>1. Group: (WO, WT)</b> The strategy to develop principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity</p>	<p>1.1 Enhance political and government policy, economy, socio-culture and technology to develop the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity</p>
<p><b>SO</b> Political and government policy, and socio-cultural factors become opportunities that contribute to the strength of facilitating diversity in teacher teams to promote teachers' creativity</p> <p><b>ST</b> Economic and technological factors become threats to the strength of facilitating diversity in teacher teams to promote teachers' creativity</p>		<p>1.2 Increase support of political and government policy and technology, and enhance economy and socio-culture to develop the principals' creative leadership in facilitating diversity in teacher teams to foster students' creativity</p>
<p><b>SO</b> Political and government policy becomes an opportunity that contributes to the strengths of facilitating collaboration in teacher teams to promote teachers' creativity</p> <p><b>ST</b> Economic, socio-cultural, and technological factors become threats to the strength of facilitating collaboration in teacher teams to promote teachers' creativity</p>		<p>1.3 Increase support of political and government policy, and enhance economy socio-culture, and technology to develop the principals' creative leadership in facilitating collaboration in teacher teams to foster students' creativity</p>
<p><b>WO</b> Political and government policy becomes an opportunity that reduces the weakness of creating creative school workspaces to promote teachers' creativity</p> <p><b>WT</b> Economic, socio-cultural, and technological factors become threats to the weakness of creating creative school workspaces to promote teachers' creativity</p>	<p><b>2. Culture: (WO, WT)</b> The strategy to develop principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity</p>	<p>2.1 Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers to foster students' creativity</p>
<p><b>SO</b> Political and government policy becomes an opportunity that contributes to the strength of promoting an inquiring school culture to enhance teachers' creativity</p>		<p>2.2 Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the</p>

<p><b>ST</b> Economic, socio-cultural, and technological factors become threats to the strength of promoting an inquiring school culture to enhance teachers' creativity</p>		<p>principals' creative leadership in promoting an inquiring school culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
<p><b>SO</b> Political and government policy becomes an opportunity that contributes to the strength of promoting a flexible school culture to enhance teachers' creativity</p> <p><b>ST</b> Economic, socio-cultural and technological factors become threats to the strength of promoting a flexible school culture to enhance teachers' creativity</p>		<p>2.3 Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in promoting a flexible school culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
<p><b>SO</b> Political and government policy becomes an opportunity that contributes to the strength of energizing every teacher's imagination for teaching to promote teachers' creativity</p> <p><b>ST</b> Economic, socio-cultural, and technological factors become threats to the strength of energizing every teacher's creativity for teaching to promote teachers' creativity</p>	<p><b>1. Personal: (SO, ST)</b> The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity</p>	<p>3.1 Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in energizing every teacher's imagination for teaching to foster students' creativity</p>
<p><b>SO</b> Political and government policy, and technological factors become opportunities that contribute to the strength of providing learning opportunities to enhance creativity in teaching to promote teachers' creativity</p> <p><b>ST</b> Economic and socio-cultural factors become threats to the strength of providing learning opportunities to enhance creativity in teaching to promote teachers' creativity</p>		<p>3.2 Increase support of political and government policy and technology, and enhance economy and socio-culture to develop the principals' creative leadership in providing every teacher learning opportunities to promote creativity in teaching to foster students' creativity</p>
<p><b>SO</b> Political and government policy and socio-cultural factors become opportunities that contribute to the strength of engaging every teacher using their creative potential in teaching to promote teachers' creativity</p> <p><b>STI</b> Economic and technological factors become threats to the strength of engaging every teacher using their creative potential in teaching to promote teachers' creativity</p>		<p>3.3 Increase support of political and government policy and socio-culture, and enhance economy and technology to develop the principals' creative leadership in engaging every teacher using their creative potential in teaching to foster students' creativity</p>

Based on the table 25, creative leadership strategies for primary school principals to promote teachers creativity in Guangxi, China obtained the TOWS Matrix analysis include three main strategies and nine sub-strategies.

Table 26: The first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China

<b>Main Strategy 1</b>	<p><b>Group:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity</p>
Sub-strategy 1.1	<p>Enhance political and government policy, economy, socio-culture and technology to develop the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <p>1) establishes a policy to develop the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity;</p> <p>2) gives school principals and teachers enough time to foster students' creativity</p> <p>2. Department of Education of Guangxi implements the above policy and allocates the appropriate budget to all primary schools</p> <p>3.1 The school principals understand that time is an essential resource for teaching creativity</p> <p>3.2 School principals offer teachers discretionary time and freedom to do what they are most passionate about</p> <p>3.3 The school principals provide teachers time to work together during the school day and to understand how their colleagues teach</p> <p>3.4 The school principals provide teacher teams a significant space of time for planning creative teaching and teaching creativity and then assessing whether they had accomplished their goals</p> <p>3.5 The school principals give teacher teams prep time, having time for professional development at least once a week</p> <p>3.6 The school principals reduce teaching or other workloads and allocate time for meetings and observation</p> <p>3.7 The school principals support teacher teams to work effectively with innovative information technologies</p>

<b>Main Strategy 1</b>	<p><b>Group:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity</p>
Sub-strategy1.2	<p>Increase support of political and government policy and socio-culture , and enhance economy and technology to develop the principals' creative leadership in facilitating diversity in teacher teams to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <p>1) establishes a policy to develop the principals' creative leadership in facilitating diversity in teacher teams to enhance creativity in teaching to foster students' creativity;</p> <p>2) changes the current curriculum design: changes the branch teaching to integrated curriculum teaching through the study of the STEAM curriculum;</p> <p>3) realizes the context of every school and embrace the different talents of teachers and students.</p> <p>2. Department of Education of Guangxi implements the above policy and allocates the appropriate budget and educational resources to all primary schools.</p> <p>3.1 The school principals show appreciation in the different teaching thinking and practices of every teacher and encourage teachers to celebrate the diversity of cultures, languages, and teaching styles reflected in school.</p> <p>3.2 The school principals create space for interaction between disciplines and viewpoints by implementing Cross-Disciplinary Teams</p> <p>3.3 The school principals create creative teacher teams which bring together teachers from different backgrounds: teachers who think differently, who may be of different ages and genders, or with different cultural backgrounds and professional experiences, such as:</p> <p>1) creating teacher teams form interdisciplinary/different grades</p> <p>2) creating teacher teams from the different disciplines but the same grade</p> <p>3) creating teacher teams from the same discipline in the same grade</p> <p>4) creating teacher teams consisting of the younger and older teachers</p> <p>3.4 The school principals move forward the notion of creativity thrives on diversity, host roundtable discussions for teachers and encourage teacher teams to share how they have expanded they view of teaching creativity for their students' learning.</p>

<b>Main Strategy 1</b>	<p><b>Group:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity</p>
Sub-strategy 1.3	<p>Increase support of political and government policy, and enhance economy socio-culture, and technology to develop the principals' creative leadership in facilitating collaboration in teacher teams to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <p>1) establishes a policy to develop the principals' creative leadership in facilitating collaboration in teacher teams to foster students' creativity;</p> <p>2) encourages teachers to teach collaboratively;</p> <p>3) provides guidelines to Collaborative Problem Defining and Collaborative Problem Worth Solving.</p> <hr/> <p>2. Department of Education of Guangxi implements the above policy and allocates appropriate budget and educational resources to all primary schools.</p> <hr/> <p>3.1 The school principals involve the teachers working together in a shared process in which their interaction affects the nature of teaching and its outcome.</p> <hr/> <p>3.2 The school principals facilitate a creative teamwork process which has to be based on two key principles 1) all participants, "accept every offer that is made." The aim not to negate other people's contributions but to build on them, a process known as 'plussing'. 2) "always make your work partners look good". The aim is not to judge what they produce but to help make something of it and raise everybody's game.</p> <hr/> <p>3.3 The school principals support and guide teachers to take advantage of technology for collaborative teaching and learning between teachers and students</p> <hr/> <p>3.4 The school principals focus on building three capabilities (creative abrasion, creative agility and creative resolution) required for collective creativity to teacher teams in order to know how to do Collaborative Problem Worth Solving, how to do discovery-driven learning and how to do integrated decision making</p> <hr/> <p>3.5 The school principals facilitate open and frequent communication by arranging face-to-face meetings, and dedicating collaboration rooms where every teacher's slices of genius can be unleashed and harnessed, and turned into work of collective genius</p> <hr/> <p>3.6 The school principals transform school into a Professional Learning Community (PLC) that encourages and inspires sharing and collaboration for collaborative creative thinking in teaching.</p>

<b>Main Strategy 2</b>	<p><b>Culture:</b></p> <p>The strategy to develop the principals’ creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students’ creativity</p>
Sub-strategy 2.1	<p>Increase support of political and government policy, and enhance economy, socio- culture and technology to develop the principals’ creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers to foster students’ creativity</p>
Procedures:	<ol style="list-style-type: none"> <li>1. Ministry of Education <ol style="list-style-type: none"> <li>1) establishes a policy to develop the principals’ creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers for fostering students’ creativity;</li> <li>2) supports educational infrastructure resources to all primary schools.</li> </ol> </li> <li>2. Department of Education of Guangxi implements the above policy to all primary school; allocates appropriate budget and educational resources to all primary schools.</li> <li>3. Local enterprises provide support of human and material resources, technology and funds for hardware teaching facilities.</li> <li>4.1 The school principals allow teachers to personalize their workspace; create shared spaces for meetings and workshops; and provide spaces for shared planning, follow-up, and assessment of teaching creativity projects.</li> <li>4.2 The school principals unites the “brother schools” resources based on sharing and mutual benefits and exchange of needed goods for the construction of creative teaching and learning environment.</li> <li>4.3 The school principals combines the extraordinary resources in the local community with the extraordinary talents of teachers to create creative workplace where people are willing and able to share and combine their talents and passions</li> <li>4.4 The school principals collaborate with local businesses and government entities to provide teaching equipment, office and classroom design which facilitate creative teaching and learning.</li> <li>4.5 The school principals interact with Internet connection to support new information technologies to facilitate personalized teaching to respond the needs of students’ personality development.</li> </ol>

<b>Main Strategy 2</b>	<p><b>Culture:</b></p> <p>The strategy to develop the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Sub-strategy 2.2	<p>Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in promoting an inquiring school culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Procedures:	<ol style="list-style-type: none"> <li>1. Ministry of Education       <ol style="list-style-type: none"> <li>1) establishes a policy to develop the principals' creative leadership in promoting an inquiring school culture that encourages the individual and team creativity of teachers for fostering students' creativity;</li> <li>2) changes using standardized test scores to judge the quality of teaching and learning;</li> <li>3) gives high priority to personalized learning and creative teaching as important components of schooling;</li> <li>4) seeks alternative tools to supply the presently dominating standardized tests as measures of educational quality;</li> <li>5) accepts the errors and gives forgiveness.</li> </ol> </li> <li>2. Department of Education of Guangxi implements the above policy to all primary schools; provides educational technology support and training to all primary schools; and allocates appropriate budget to all primary schools</li> <li>3. Middle school, university and employers determine how well students are qualified; Parents need to know if their children are making progress in school and are on target</li> <li>4.1 The school principals reconstruct and maintain the dominant school culture which focuses more on teaching and learning, not only testing</li> <li>4.2 The school principals empower every teacher to work through their unique talents and expertise in order to encourage teachers to explore various approaches of creative teaching</li> <li>4.3 The school principals self-consciously relinquish control, leading to more delegation and to more empowerment of younger teachers, who often have clearer minds and fresher ideas.</li> <li>4.4 The school principals combine the extraordinary resources in the business, in multimedia, in the Internet with the extraordinary talents of teachers to provide an opportunity to foster students' creativity</li> <li>4.5 The school principals create a mistake-tolerant culture, and use failure as a learning opportunity.</li> <li>4.6 The school principals increase training significantly and particularly for heads of a particular subject; school leadership team model and support creativity</li> </ol>

<b>Main Strategy 2</b>	<p><b>Culture:</b></p> <p>The strategy to develop the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Sub-strategy 2.3	<p>Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in promoting a flexible school culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <ol style="list-style-type: none"> <li>1) establishes a policy to develop the principals' creative leadership in promoting a flexible school culture that encourages individual and team creativity of teachers for fostering students' creativity;</li> <li>2) creates Rigorous Decision- Making System which embraces discussion and debate;</li> <li>3) minimizes standardized testing and have more accountability;</li> <li>4) transfers responsibility and authority from the government level to the local level and school level for getting the job done.</li> </ol> <p>2. Department of Education of Guangxi implements the above policy to all primary school; transfers responsibility and authority from the local level and school level to the teachers and students; allocates appropriate budget to all primary schools.</p> <p>3.1 The school principals evolve flexible school structure:</p> <ol style="list-style-type: none"> <li>1) loose hierarchies that means those who run the organizations should be accessible to those who work within them</li> <li>2) create a flexible schedule and interdisciplinary opportunities for teachers and students, and allow teachers to stray away from the limits of their subject matters</li> <li>3) foster an open culture, encourage teachers to listen and rethink upon reflection, critiquing from different collaborators</li> <li>4) re-invent principal, teachers and students relationships: with the internet and new channels, school principals have to take advantage of new technologies to understand, interact with and serve their colleagues and students</li> <li>5) keep innovating in how they lead and communicate with the teachers and students</li> <li>6) delegate decision making of teaching and learning to the teachers and students for motivating and mobilizing teachers to do their best in realizing the school's purposes.</li> </ol> <p>3.2 The school principals evolve flexible working process by:</p> <ol style="list-style-type: none"> <li>1) changing the style of leadership away from command and control to collaboration and teamwork</li> <li>2) emphasizing the collaboration teamwork process and embrace different ideas by creating interdisciplinary teacher teams.</li> <li>3) training a generalist group of leaders who know how to learn and operate in collaboration teamwork</li> </ol>



<b>Main Strategy 3</b>	<p><b>Personal:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity</p>
Sub-strategy 3.1	<p>Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in energizing every teacher's imagination for teaching to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <p>1) establishes a policy to develop the principals' creative leadership in energizing every teacher's imagination for teaching to foster students' creativity; and</p> <p>2) changes education imposing on students the same standardized content to enabling students to pursue their passion and strength through students' voice and choice, a broad and flexible curriculum, personalized teaching and assessment, and mentoring and advising.</p> <p>2. Department of Education of Guangxi implements the above policy and allocates the appropriate budget and educational resources to all primary schools.</p> <p>3.1 The school principals give every teacher freedom to take risks in the teaching, autonomy in the teaching content, teaching styles and students' assessment. They should allow every teacher to discover and develop their own natural intelligence and value irreverence, the lively, the dynamic, the surprising, the playful school climate.</p> <p>3.2 The school principals provide every teacher ICT (Information Communications Technology) support and direct them to understand and study deep knowledge of the most recent advances of the creative teaching and learning in the subject they teach, then guide them to combine it with their own context to appropriately apply it in their classroom.</p> <p>3.3 The school principals create a "teacher learning workshop" system: every teacher is consistently encouraged to go to listen and learn in any course in the students' curriculum; then give feedback and discuss it. This is a second opportunity for improving individual creative thinking and design. Additionally, there is a constant flow of new ideas running through the whole school. Teachers are constantly meeting each other from different areas of the school and are reminded that they are all part of a single effort.</p>

<b>Main Strategy 3</b>	<p><b>Personal:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity</p>
Sub-strategy 3.2	<p>Increase support of political and government policy and technology, and enhance economy and socio-culture to develop the principals' creative leadership</p> <p>in providing every teacher learning opportunities to promote creativity in teaching to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <p>1) establishes a policy to develop the principals' creative leadership in providing every teacher learning opportunities to enhance creativity in teaching to foster students' creativity;</p> <p>2) attributes a high status to the teaching profession;</p> <p>3) invites education experts to train teachers for professional development in teaching creativity;</p> <p>4) allocates budget each year to the professional development of teachers and school principals</p> <p>2. Department of Education of Guangxi</p> <p>1) implements the above policy to all primary schools;</p> <p>2) provides guidance and necessary regulations that each primary school must keep in mind in its curriculum development activities, creative teaching and personalize students' assessment; and</p> <p>3) reduces influence on budgetary decisions made by schools.</p> <p>3.1 The school principals finance professional development for teachers each year</p> <p>3.2 The school principals show commitment to professional development of each teacher in the techniques and practical skills of creative teaching.</p> <p>3.3 The school principals support training related new models of teaching in Product-Oriented- Instruction, Problem-Based-Instruction, Project- Based-Instruction, Team- Based-Instruction, Research- Based-Instruction and Event-Based-Instruction and also clearly communicate that it is something valued and allowed.</p> <p>3.4 The school principals transform school into a Professional Learning Community (PLC) for teachers' professional development. For example, the school principals create the Peer Coaching and Mentoring System to develop the teachers' abilities of observation, analysis, discussion, exchange, reflection and collaboration in teaching creativity practices.</p> <p>3.5 The school principals organize every teacher to learn the local intelligence for managing teaching and learning that link closely with the community.</p> <p>3.6 The school principals support teachers to learn how to creatively use new technologies in personalized teaching for catering the interests, abilities and learning styles of every student.</p>

<b>Main Strategy 3</b>	<p><b>Personal:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity</p>
Sub-strategy 3.3	<p>Increase support of political and government policy and socio-culture, and enhance economy and technology to develop the principals' creative leadership in engaging every teacher using their creative potential in teaching to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <p>1) establishes a policy to develop the principals' creative leadership in engaging every teacher using their creative potential in teaching to foster students' creativity;</p> <p>2) cancels using standardized test scores to determine the performance and income of school principals and teachers; and</p> <p>3) gives the subjects of drama, dance, arts, music and sports the same status as the subjects of mathematics and languages.</p> <p>2. Department of Education of Guangxi implements the above policy and allocates the appropriate budget and educational resources to all primary schools.</p> <p>3.1 The school principals motivate and encourage every teacher to be involved in creative teaching practices which is accomplished by</p> <p>1) setting high expectations about the degree of creativity and innovation in the school</p> <p>2) putting in a policy that anyone, no matter what their level or role, is allowed to express some ideas to the school principals about how they feel about modeling creative working processes, encouraging students' creativity, identifying students' creativity, and developing students' creativity; and making sure that all the voices in the school speak up and are heard</p> <p>3) valuing every teacher's contribution of creative teaching in any subject</p> <p>3.2 The school principals ensure that every teacher in the school is playing to their creative strengths which is accomplished by</p> <p>1) allowing every teacher to play out their passion in teaching, such as, give freedom to determine their own teaching content and methods.</p> <p>2) putting every teacher in situations of teaching creativity and giving them challenges that reveal their creative abilities.</p> <p>3) establishing an "interdisciplinary visit" system which encourages a greater understanding between subjects of each other's work and helps to create a strong sense of common culture.</p> <p>4) giving every teacher technological support to creatively manage teaching and learning in the classroom.</p>

#### 4.4.2 The individual specialists and stakeholders examine the suitability and feasibility of the first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China

The results of the examination on the suitability and feasibility of the first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China by the individual specialists and stakeholders are presented as follows:

Table 27: The status of the specialists and stakeholders who examine the suitability and validity of the first draft of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China

Item	Status of specialists/stakeholders	Number	Percentage
1	Education specialists	2	7
2	Education administration specialists	3	10
3	Educational administration specialists from the Department of Education of Guangxi	1	3
4	School Administrators from primary school of Guangxi	10	33
5	School Teachers from primary school of Guangxi	14	47
	Total	30	100

Based on the table 27, there are thirty specialists and stakeholders who examine the suitability and feasibility of the first draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China. Two of them are education specialists, three of them are educational administration specialists, one of them is educational administration specialists from the Department of Education of Guangxi, ten of them are administrators form primary school of Guangxi and fourteen of them are teachers from primary school of Guangxi.

Table 28: The results of the examination on the suitability and feasibility of the first draft of main strategies of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China by the individual specialists and stakeholders are as follows:

Main Strategy	Suitability		Feasibility		Should be modified	
	Number	Percent	Number	Percent	Number	Percent
1. The strategy to develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity	30	100.00	30	100.00	0	0.00
2. The strategy to develop the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity	30	100.00	30	100.00	0	0.00
3. The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity	30	100.00	30	100.00	0	0.00
<b>Total Mean</b>	-	100.00	-	100.00	-	0.00

Based on the table 28, the main strategies of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China have suitability and feasibility at 100%.

Table 29: The results of the examination on the suitability and feasibility of the first draft of Sub-strategies of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China by the individual specialists and stakeholders are as follows:

Main strategy and sub-strategy	Suitability		Feasibility		Should be modified	
	Number	Percent	Number	Percent	Number	Percent
1. The strategy to develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity						
1.1 Enhance political and government policy, economy, socio-culture and technology to develop the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity	30	100.00	30	100.00	0	0.00
1.2 Increase support of political and government policy and socio-culture, and enhance economy and technology to develop the principals' creative leadership in facilitating diversity in teacher teams to foster students' creativity	30	100.00	30	100.00	0	0.00
1.3 Increase support of political and government policy, and enhance economy socio-culture and technology to develop the principals' creative leadership in facilitating collaboration in teacher teams to foster students' creativity	30	100.00	30	100.00	0	0.00
2. The strategy to develop the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity						
2.1 Increase support of political and government policy, and enhance economy, socio- culture and technology to develop the principals' creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers to foster students' creativity	30	100.00	30	100.00	0	0.00
2.2 Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in promoting an inquiring school culture that encourages the individual and team creativity of teachers to foster students' creativity	30	100.00	30	100.00	0	0.00
2.3 Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in promoting a flexible school culture that encourages the individual and team creativity of teachers to foster students' creativity	30	100.00	30	100.00	0	0.00

Main strategy and sub-strategy	Suitability		Feasibility		Should be modified	
	Number	Percent	Number	Percent	Number	Percent
3. The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity						
3.1 Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in energizing every teacher's imagination for teaching to foster students' creativity	30	100.00	30	100.00	0	0.00
3.2 Increase support of political and government policy and technology, and enhance economy and socio-culture to develop the principals' creative leadership in providing every teacher learning opportunities to promote creativity in teaching to foster students' creativity	30	100.00	30	100.00	0	0.00
3.3 Increase support of political and government policy and socio-culture, and enhance economy and technology to develop the principals' creative leadership in engaging every teacher using their creative potential in teaching to foster students' creativity	30	100.00	30	100.00	0	0.00
<b>Total Mean</b>	-	100.00		100.00	-	0.00

Based on the table 29, the sub-strategies of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China have suitability and feasibility at 100%.

Table 30: The results of the examination on the suitability and feasibility of the first draft of procedures of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China by the individual specialists and stakeholders are as follows:

Main strategy/ sub-strategy/ procedure	Suitability		Feasibility		Should be modified	
	Number	Percent	Number	Percent	Number	Percent
1. The strategy to develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity						
1.1 Enhance political and government policy, economy, socio-culture technology to develop the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity						
<b>1. Ministry of Education</b> 1) establishes a policy to develop the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity; 2) gives school principals and teachers enough time to foster students' creativity	29	96.67	28	93.33	2	6.67
<b>2. Department of Education of Guangxi</b> implements the above policy and allocates the appropriate budget to all primary schools	30	100.00	29	96.67	1	3.33
3.1 <u>The school principals</u> understand that time is an essential resource for teaching creativity	30	100.00	30	100.00	0	0.00
3.2 School principals offer teachers discretionary time and freedom to do what they are most passionate about	30	100.00	30	100.00	0	0.00
3.3 <u>The school principals</u> provide teachers time to work together during the school day and to understand how their colleagues teach	30	100.00	29	96.67	1	3.33
3.4 <u>The school principals</u> provide teacher teams a significant amount of time in planning creative teaching and teaching creativity and then assessing whether they had accomplished their goals	30	100.00	30	100.00	0	0.00
3.5 <u>The school principals</u> give teacher teams prep time, having time for professional development at least once a week	29	96.67	29	96.67	1	3.33
3.6 <u>The school principals</u> reduce teaching or other workloads and allocate time for meetings and observation	29	96.67	29	96.67	1	3.33
3.7 <u>The school principals</u> support teacher teams to work effectively with innovative information technologies	30	100.00	30	100.00	0	0.00
1.2 Increase support of political and government policy and socio-culture, and enhance economy and technology to develop the principals' creative leadership in facilitating diversity in teacher teams to foster students' creativity						
<b>1. Ministry of Education</b> 1) establishes a policy to develop the principals' creative leadership in facilitating diversity in teacher teams to enhance creativity in teaching to foster students' creativity;	29	96.67	28	93.33	2	6.67



2) changes the current curriculum design: changes the branch teaching to integrated curriculum teaching through the study of the STEAM curriculum; 3) realizes the context of every school and embrace the different talents of teachers and students.						
<b>2. Department of Education of Guangxi</b> implements the above policy; allocates the appropriate budget and educational resources to all primary schools.	30	100.00	29	96.67	1	3.33
3.1 <u>The school principals</u> show appreciation in the different teaching thinking and practices of every teacher and encourage teachers to celebrate the diversity of cultures, languages, and teaching styles reflected in school.	30	100.00	29	96.67	1	3.33
3.2 <u>The school principals</u> create space for interaction between disciplines and viewpoints by implementing Cross-Disciplinary Teams	30	100.00	30	100.00	0	0.00
3.3 <u>The school principals</u> create creative teacher teams which bring together teachers from every different backgrounds: teachers who think differently, who may be of different ages and genders, or with different cultural backgrounds and professional experiences, such as: 1) creating teacher teams form interdisciplinary/different grades 2) creating teacher teams from the different disciplines but the same grade 3) creating teacher teams from the same discipline in the same grade 4) creating teacher teams consisting of the younger and older teachers	30	100.00	30	100.00	0	0.00
3.4 <u>The school principals</u> move forward the notion of creativity thrives on diversity, host roundtable discussions for teachers and encourage teacher teams to share how they have expanded they view of teaching creativity for their students' learning	30	100.00	30	100.00	0	0.00
1.3 Increase support of political and government policy, and enhance economy socio-culture, and technology to develop the principals' creative leadership in facilitating collaboration in teacher teams to foster students' creativity						
<b>1. Ministry of Education</b> 1) establishes a policy to develop the principals' creative leadership in facilitating collaboration in teacher teams to foster students' creativity; 2) encourages teachers to teach collaboratively; 3) provides guidelines to Collaborative Problem Defining and Collaborative Problem Worth Solving.	30	100.00	30	100.00	0	0.00
<b>2. Department of Education of Guangxi</b> implements the above policy and allocates the appropriate budget and educational resources to all primary schools.	29	96.67	29	96.67	1	3.33
3.1 <u>The school principals</u> involve the teachers working together in a shared process in which their interaction affects the nature of teaching and its outcome.	30	100.00	30	100.00	0	0.00
3.2 <u>The school principals</u> facilitate a creative teamwork process which has to be based on two key principles 1) all participants, "accept every offer that is made." The aim not to negate other people's contributions but to build on them, a process known	29	96.67	29	96.67	1	3.33

as ‘plussing’. 2) “always make your work partners look good”. The aim is not to judge what they produce but to help make something of it and raise everybody’s game.						
3.3 <u>The school principals</u> support and guide teachers to take advantage of technology for collaborative teaching and learning between teachers and students	30	100.00	30	100.00	0	0.00
3.4 <u>The school principals</u> focus on building three capabilities (creative abrasion, creative agility and creative resolution) required for collective creativity to teacher teams in order to know how to do Collaborative Problem Worth Solving, how to do discovery-driven learning and how to do integrated decision making	30	100.00	30	100.00	0	0.00
3.5 <u>The school principals</u> facilitate open and frequent communication by arranging face-to-face meetings, and dedicating collaboration rooms where every teacher’s slices of genius can be unleashed and harnessed, and turned into work of collective genius	27	90.00	28	93.33	3	10.00
3.6 <u>The school principals</u> transform school into a Professional Learning Community (PLC) that encourages and inspires sharing and collaboration for creative thinking and design in teaching.	30	100.00	30	100.00	0	0.00
<b>2. The strategy to develop the principals’ creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students’ creativity</b>						
2.1 Increase support of political and government policy, and enhance economy, socio- culture and technology to develop the principals’ creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers to foster students’ creativity						
<b>1. Ministry of Education</b> 1) establishes a policy of developing the principals’ creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers for fostering students’ creativity; 2) supports educational infrastructure resources to all primary schools.	30	100.00	29	96.67	1	3.33
<b>2. Department of Education of Guangxi</b> implements the above policy to all primary school; allocates appropriate budget and educational resources to all primary schools.	30	100.00	30	100.00	0	0.00
<b>3. Local enterprises</b> provide support of human and material resources, technology and funds for hardware teaching facilities.	29	96.67	29	96.67	1	3.33
4.1 <u>The school principals</u> allow teachers to personalize their workspace; create shared spaces for meetings and workshops; and provide spaces for shared planning, follow-up, and assessment of teaching creativity projects.	29	96.67	29	96.67	1	3.33
4.2 <u>The school principals</u> unites the “brother schools” resources based on sharing and mutual benefits and exchange of needed goods for the construction of creative teaching and learning environment.	30	100.00	30	100.00	0	0.00
4.3 <u>The school principals</u> combines the extraordinary resources in the local community with the extraordinary talents of teachers to create creative workplace where people are willing and able to share and combine their talents and passions	30	100.00	30	100.00	0	0.00
4.4 <u>The school principals</u> collaborate with local businesses and government entities to provide	30	100.00	30	100.00	0	0.00

teaching equipment, office and classroom design which facilitate creative teaching and learning						
4.5 The school principals interact with Internet connection to support new information technologies to facilitate personalized teaching to respond the needs of students' personality development.	29	96.67	29	96.67	1	3.33
2.2 Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in promoting an inquiring school culture that encourages the individual and team creativity of teachers to foster students' creativity						
<b>1. Ministry of Education</b> 1) establishes a policy to develop the principals' creative leadership in promoting an inquiring school culture that encourages the individual and team creativity of teachers for fostering students' creativity; 2) changes using standardized test scores to judge the quality of teaching and learning; 3) gives high priority to personalized learning and creative teaching as important components of schooling; 4) seeks alternative tools to supplant the presently dominating standardized tests as measures of educational quality; 5) accepts the errors and values forgiveness.	28	93.33	28	93.33	2	6.67
2. <b>Department of Education of Guangxi</b> implements the above policy to all primary schools; provides educational technology support and training to all primary schools; and allocates appropriate budget to all primary schools	30	100.00	30	100.00	0	0.00
3. <b>Middle school, university and employers</b> need to determine how well students are qualified; <b>Parents</b> need to know if their children are making progress in school and are on target	30	100.00	30	100.00	0	0.00
4.1 <u>The school principals</u> reconstruct and maintain the dominant school culture which focuses on teaching and learning, but not testing	29	96.67	27	90.00	3	10.00
4.2 <u>The school principals</u> empower every teacher to work through their unique talents and expertise in order to encourage teachers to explore various approaches of creative teaching	29	96.67	29	96.67	1	3.33
4.3 <u>The school principals</u> self-consciously relinquish control, leading to more delegation and to more empowerment of younger teachers, who often have clearer minds and fresher ideas.	29	96.67	29	96.67	1	3.33
4.4 <u>The school principals</u> combine the extraordinary resources in the business, in multimedia, in the Internet with the extraordinary talents of teachers to provide an opportunity to foster students' creativity	30	100.00	30	100.00	0	0.00
4.5 <u>The school principals</u> create a mistake-tolerant culture, and use failure as a learning opportunity	29	96.67	28	93.33	2	6.67
4.6 <u>The school principals</u> increase training significantly and particularly for heads of a particular subject; school leadership team model and support creativity	30	100.00	29	96.67	1	3.33
2.3 Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in promoting a flexible school culture that encourages the individual and team creativity of teachers to foster students' creativity						
<b>1. Ministry of Education</b> 1) establishes a policy to develop the principals' creative leadership in promoting a flexible school culture that encourages individual and team creativity of teachers for fostering students' creativity;	28	93.33	27	90.00	3	10.00

2) creates Rigorous Decision- Making System which embraces discussion and debate; 3) minimizes standardized testing and have more accountability; 4) transfers responsibility and authority from the government level to the local level and school level for getting the job done.						
<b>2. Department of Education of Guangxi</b> implements the above policy to all primary school; transfers responsibility and authority from the local level and school level to the teachers and students; allocates appropriate budget to all primary schools.	30	100.00	30	100.00	0	0.00
<b>3.1 The school principals</b> evolve flexible school structure: 1) loose hierarchies that means those who run the organizations should be accessible to those who work within them 2) create a flexible schedule and interdisciplinary opportunities for teachers and students, and allow teachers to stray away from the limits of their subject matters 3) foster an open culture, encourage teachers to listen and rethink upon reflection, critiquing from different collaborators 4) reinvent principal, teachers and students relationships: with the internet and new channels, school principals have to take advantage of new technologies to understand, interact with and serve their colleagues and students 5) keep innovating in how they lead and communicate with the teachers and students 6) delegate decision making of teaching and learning to the teachers and students for motivating and mobilizing teachers to do their best in realizing the school's purposes	28	93.33	28	93.33	2	6.67
<b>3.2 The school principals</b> evolve flexible working process by: 1) changing the style of leadership away from command and control to collaboration and teamwork 2) emphasizing the collaboration teamwork process and embrace different ideas by creating interdisciplinary teacher teams. 3) training a generalist group of leaders who know how to learn and operate in collaboration teamwork	29	96.67	29	96.67	1	3.33
<b>3. The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity</b>						
<b>3.1 Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in energizing every teacher's imagination for teaching to foster students' creativity</b>						
<b>1. Ministry of Education</b> 1) establishes a policy to develop the principals' creative leadership in energizing every teacher's imagination for teaching to foster students' creativity; and 2) changes education imposing on students the same standardized content to enabling students to pursue their passion and strength through students' voice and choice, a broad and flexible curriculum, personalized teaching and assessment, and mentoring and advising.	28	93.33	28	93.33	2	6.67
<b>2. Department of Education of Guangxi</b> implements the above policy and allocates the appropriate budget and educational resources to all primary schools.	30	100.00	29	96.67	1	3.33
<b>3.1 The school principals</b> give every teacher freedom to take risks in the teaching, autonomy in	29	96.67	29	96.67	1	3.33

the teaching content, teaching styles and students' assessment. They should allow every teacher to discover and develop their own natural intelligence and value irreverence, the lively, the dynamic, the surprising, the playful school climate.						
3.2 <u>The school principals</u> provide every teacher ICT (Information Communications Technology) support and direct them to understand and study deep knowledge of the most recent advances of the creative teaching and learning in the subject they teach, then guide them to combine it with their own context to apply it in their classroom.	30	100.00	30	100.00	0	0.00
3.3 <u>The school principals</u> create a "teacher learning workshop" system: every teacher is consistently encouraged to go to listen and learn in any course in the students' curriculum; then give feedback and discuss it. This is a second opportunity for improving individual creative thinking and design. Additionally, there is a constant flow of new ideas running through the whole school. Teachers are constantly meeting each other from different areas of the school and are reminded that they are all part of a single effort.	30	100.00	28	93.33	2	6.67
3.2 Increase support of political and government policy and technology, and enhance economy and socio-culture to develop the principals' creative leadership in providing every teacher learning opportunities to promote creativity in teaching to foster students' creativity						
<b>1. Ministry of Education</b> 1) establishes a policy to develop the principals' creative leadership in providing every teacher learning opportunities to enhance creativity in teaching to foster students' creativity; 2) attributes a high status to the teaching profession; 3) invites education experts to train teachers for professional development in teaching creativity; 4) allocates budget each year to the professional development of teachers and school principals	30	100.00	30	100.00	0	0.00
<b>2. Department of Education of Guangxi</b> 1) implements the above policy to all primary schools; 2) provides guidance and necessary regulations that each primary school must keep in mind in its curriculum development activities, creative teaching and personalize students' assessment; and 3) reduces influence on budgetary decisions made by schools.	30	100.00	29	96.67	1	3.33
3.1 <u>The school principals</u> finance professional development for teachers each year	30	100.00	30	100.00	0	0.00
3.2 <u>The school principals</u> show commitment to professional development of each teacher in the techniques and practical skills of creative teaching.	28	93.33	27	90.00	3	10.00
3.3 <u>The school principals</u> support training related new models of teaching in Product-Oriented-Instruction, Problem-Based-Instruction, Project-Based-Instruction, Team- Based-Instruction, Research- Based-Instruction and Event-Based-Instruction and also clearly communicate that it is something valued and allowed.	30	100.00	28	93.33	2	6.67
3.4 <u>The school principals</u> transform school into a Professional Learning Community (PLC) for teachers' professional development. For example, the school principals create the Peer Coaching and Mentoring System to develop the teachers' abilities of observation, analysis, discussion, exchange, reflection and collaboration in teaching creativity practices.	30	100.00	29	96.67	1	3.33
3.5 <u>The school principals</u> organize every teacher to learn the local intelligence for managing teaching and learning that link closely with the community.	28	93.33	28	93.33	2	6.67

3.6 <u>The school principals</u> support teachers to learn how to creatively use new technologies in personalized teaching for catering the interests, abilities and learning styles of every student.	30	100.00	30	100.00	0	0.00
3.3 Increase support of political and government policy and socio-culture, and enhance economy and technology to develop the principals' creative leadership in engaging every teacher using their creative potential in teaching to foster students' creativity						
<b>1. Ministry of Education</b> 1) establishes a policy to develop the principals' creative leadership in engaging every teacher using their creative potential in teaching to foster students' creativity; 2) cancels using standardized test scores to determine the performance and income of school principals and teachers; and 3) gives the subjects of drama, dance, arts, music and sports the same status as the subjects of mathematics and languages.	26	86.67	23	76.67	8	26.67
<b>2. Department of Education of Guangxi</b> implements the above policy and allocates the appropriate budget and educational resources to all primary schools.	28	93.33	28	93.33	3	10.00
3.1 <u>The school principals</u> motivate and encourage every teacher to be involved in creative teaching practices which is accomplished by 1) setting high expectations about the degree of creativity and innovation in the school 2) putting in a policy that anyone, no matter what their level or role, is allowed to express ideas to the school principals about how they feel about modeling creative working processes, encouraging students' creativity, identifying students' creativity, and developing students' creativity; and making sure that all the voices in the school speak up and are heard 3) valuing every teacher's contribution of creative teaching in any subject	29	96.67	29	96.67	2	6.67
3.2 <u>The school principals</u> ensure that every teacher in the school is playing to their creative strengths which is accomplished by 1) allowing every teacher to play out their passion in teaching, such as, give freedom to determine their own teaching content and methods 2) putting every teacher in situations of teaching creativity and giving them challenges that reveal their creative abilities 3) establishing an "interdisciplinary visit" system which encourages a greater understanding between subjects of each other's work and helps to create a strong sense of common culture 4) giving every teacher technological support to creatively manage teaching and learning in the classroom	27	90.00	24	80.00	7	23.33
<b>Total Mean</b>	-	97.81	-	96.45	-	3.82

Based on the table 30, in the overview, the procedures of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China have suitability at 97.81% and feasibility at 96.45%, and the procedures should

be modified at 3.82%, In addition, the procedure that should be modified the most is the item number 3.3 (1), then the item number 3.3 (3.3), and the number 1.3 (3.5), the item number 2.2 (4.1), the item number 2.3 (1), the item number 3.2 (3.2) and the item number 3.3 (2) respectively.

In addition, the specialists and stakeholders have suggestions on the development of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China as follows:

1. The procedures should be modified to be more practical so than the school principals can bring the procedures into practice.
2. The researcher should add more detailed information on the some procedures
3. The researcher should correct the language in writing to be more accurate and clear

Therefore, based on the examination of the first draft of creative leadership strategies, the researcher have produced the second draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China based on the suggestions of specialists and stakeholders as the table 31.

Table 31: The second draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China

<b>Main Strategy 1</b>	<b>Group:</b> The strategy to develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity
Sub-strategy 1.1	Enhance political and government policy, economy, socio-culture and technology to develop the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity
Procedures:	<p>1. Ministry of Education</p> <p>1) establishes and implements a policy to develop the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity;</p> <p>2) gives school principals and teachers enough time to foster students' creativity before evaluating students' creativity.</p> <p>2. Department of Education of Guangxi</p> <p>1) implements the above policy 2) allocates the appropriate budget to all schools to cover the necessary expenditures and 3) reduces non-teaching loads of teachers</p> <p>3.1 The school principals understand that time is an essential resource for teaching creativity</p> <p>3.2 School principals offer teachers discretionary time and freedom to do what they are most passionate about</p> <p>3.3 The school principals provide teachers time to work together during the school day and to understand how their colleagues teach to foster students' creativity</p> <p>3.4 The school principals provide teacher teams a significant amount of time in planning creative teaching and teaching creativity and then assessing whether they had accomplished their goals</p> <p>3.5 The school principals give teacher teams prep time, having time for professional development at least once a week</p> <p>3.6 The school principals reduce teaching or other workloads and allocate time for meetings and observation</p> <p>3.7 The school principals support teacher teams to work effectively with innovative information technologies</p>



<b>Main Strategy 1</b>	<p><b>Group:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity</p>
Sub-strategy1.2	<p>Increase support of political and government policy and socio-culture, and enhance economy and technology to develop the principals' creative leadership in facilitating diversity in teacher teams to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <p>1) establishes a policy to develop the principals' creative leadership in facilitating diversity in teacher teams to enhance creativity in teaching to foster students' creativity;</p> <p>2) changes the current curriculum design: changes the branch teaching to integrated curriculum teaching through the study of the STEAM curriculum;</p> <p>3) realizes the context of every school and embrace the different talents of teachers and students.</p> <p>2. Department of Education of Guangxi implements the above policy and allocates the appropriate budget and educational resources to all primary schools according to the proposed plans and projects.</p> <p>3.1 The school principals show appreciation in the different teaching thinking and practices of every teacher and encourage teachers to celebrate the diversity of cultures, languages, and teaching styles reflected the development of students' creativity in our school.</p> <p>3.2 The school principals create space for interaction between disciplines and viewpoints by implementing Cross-Disciplinary Teams</p> <p>3.3 The school principals create creative teacher teams which bring together teachers from every different backgrounds: teachers who think differently, who may be of different ages and genders, or with different cultural backgrounds and professional experiences, such as:</p> <p>1) creating teacher teams form interdisciplinary/different grades</p> <p>2) creating teacher teams from the different disciplines but the same grade</p> <p>3) creating teacher teams from the same discipline in the same grade</p> <p>4) creating teacher teams consisting of the younger and older teachers</p> <p>3.4 The school principals move forward the notion of creativity thrives on diversity, host roundtable discussions for teachers and encourage teacher teams to share how they have expanded their view of teaching creativity for their students' learning.</p>

<b>Main Strategy 1</b>	<p><b>Group:</b></p> <p>The strategy to develop the principals’ creative leadership in facilitating the team creativity of teachers to foster students’ creativity</p>
Sub-strategy 1.3	<p>Increase support of political and government policy, and enhance economy socio-culture and technology to develop the principals’ creative leadership in facilitating collaboration in teacher teams to foster students’ creativity</p>
Procedure:	<p>1. Ministry of Education</p> <p>1) establishes a policy to develop the principals’ creative leadership in facilitating collaboration in teacher teams to foster students’ creativity;</p> <p>2) encourages teachers to teach collaboratively;</p> <p>3) provides guidelines to Collaborative Problem Defining and Collaborative Problem Worth Solving.</p> <p>2. Department of Education of Guangxi implements the above policy and allocates the appropriate budget and educational resources to all primary schools in pertinent to what the schools really need to be supported.</p> <p>3.1 The school principals involve the teachers working together in a shared process in which their interaction affects the nature of teaching and its outcome.</p> <p>3.2 The school principals facilitate a creative teamwork process which has to be based on two key principles 1) all participants, “accept every offer that is made.” The aim not to negate other people’s contributions but to build on them, a process known as ‘plussing’. 2) “always make your work partners look good”. The aim is not to judge what they produce but to help make something of it and raise everybody’s game.</p> <p>3.3 The school principals support and guide teachers to take advantage of technology for collaborative teaching and learning between teachers and students</p> <p>3.4 The school principals focus on building three capabilities (creative abrasion, creative agility and creative resolution) required for collective creativity to teacher teams in order to know how to do Collaborative Problem Worth Solving, how to do discovery-driven learning and how to do integrated decision making</p> <p>3.5 The school principals facilitate open and frequent communication by arranging face-to-face meetings, and dedicating collaboration rooms where every teacher’s slices of genius can be unleashed and harnessed, and turned into work of collective genius</p> <p>3.6 The school principals transform school into a Professional Learning Community (PLC) that encourages and inspires sharing and collaboration for creative thinking and design in teaching.</p>

<b>Main Strategy 2</b>	<p><b>Culture:</b></p> <p>The strategy to develop the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Sub-strategy 2.1	<p>Increase support of political and government policy, and enhance economy, socio- culture and technology to develop the principals' creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers to foster students' creativity</p>
Procedures:	<ol style="list-style-type: none"> <li>1. Ministry of Education       <ol style="list-style-type: none"> <li>1) establishes a policy to develop the principals' creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers for fostering students' creativity;</li> <li>2) supports educational infrastructure resources to all primary schools.</li> </ol> </li> <li>2. Department of Education of Guangxi implements the above policy to all primary school and allocates appropriate budget and educational resources to all primary schools.</li> <li>3. Local enterprises provide support of human and material resources, technology and funds for hardware teaching facilities.</li> <li>4.1 The school principals allow teachers to personalize their workspace; create shared spaces for meetings and workshops; and provide spaces for shared planning, follow-up, and assessment of teaching creativity projects.</li> <li>4.2 The school principals unites the "brother schools" resources based on sharing and mutual benefits and exchange of needed goods for the construction of creative teaching and learning environment.</li> <li>4.3 The school principals combines the extraordinary resources in the local community with the extraordinary talents of teachers to create creative workplace where people are willing and able to share and combine their talents and passions</li> <li>4.4 The school principals collaborate with local businesses and government entities to provide teaching equipment, office and classroom design which facilitate creative teaching and learning</li> <li>4.5 The school principals interact with Internet connection to support new information technologies to facilitate personalized teaching to respond the needs of students' personality development.</li> </ol>

<b>Main Strategy 2</b>	<p><b>Culture:</b></p> <p>The strategy to develop the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Sub-strategy 2.2	<p>Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in promoting an inquiring school culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <p>1) establishes a policy to develop the principals' creative leadership in promoting an inquiring school culture that encourages the individual and team creativity of teachers for fostering students' creativity;</p> <p>2) changes using standardized test scores to judge the quality of teaching and learning and uses alternative tools including student creativity assessment, students' moral evaluation and students' social practical ability assessment to supplant the presently dominating standardized tests as measures of educational quality;</p> <p>3) gives high priority to personalized learning and creative teaching as important components of schooling;</p> <p>4) accepts errors and values forgiveness.</p> <p>2. Department of Education of Guangxi implements the above policy to all primary schools; provides educational technology support and training to all primary schools; and allocates appropriate budget to all primary schools</p> <p>3. Middle school, university and employers need to determine how well students are qualified; Parents should actively participate in and cooperate with school work, and need to know if their children are making progress in school and are on target</p> <p>4.1 The school principals reconstruct and maintain the dominant school culture which focuses on teaching and learning, but not testing</p> <p>4.2 The school principals empower every teacher to work through their unique talents and expertise in order to encourage teachers to explore various approaches of creative teaching and students' creativity developing.</p> <p>4.3 The school principals self-consciously relinquish control, leading to more delegation and to more empowerment of younger teachers, who often have clearer minds and fresher ideas.</p> <p>4.4 The school principals combine the extraordinary resources in the business, in multimedia, in the Internet with the extraordinary talents of teachers to provide an opportunity to foster students' creativity and construct web-based instructional database.</p> <p>4.5 The school principals create a mistake-tolerant culture, and use failure as a learning opportunity and learning experiences</p> <p>4.6 The school principals increase training significantly and particularly for heads of a particular subject; school leadership team model and support creativity development strategies</p>

<b>Main Strategy 2</b>	<p><b>Culture:</b></p> <p>The strategy to develop the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Sub-strategy 2.3	<p>Increase support of political and government policy and technology, and enhance economy and socio-culture to develop the principals' creative leadership in promoting a flexible school culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <ol style="list-style-type: none"> <li>1) establishes a policy to develop the principals' creative leadership in promoting a flexible school culture that encourages individual and team creativity of teachers for fostering students' creativity;</li> <li>2) creates Rigorous Decision- Making System which embraces discussion and debate;</li> <li>3) minimizes standardized testing and have more accountability;</li> <li>4) transfers responsibility and authority from the government level to the local level and school level for getting the job done.</li> </ol> <p>2. Department of Education of Guangxi implements the above policy to all primary school; transfers responsibility and authority from the local level and school level to the teachers and students; allocates appropriate budget to all primary schools.</p> <p>3.1 The school principals evolve flexible school structure:</p> <ol style="list-style-type: none"> <li>1) loose hierarchies that means those who run the organizations should be accessible to those who work within them</li> <li>2) create a flexible schedule and interdisciplinary opportunities for teachers and students, and allow teachers to stray away from the limits of their subject matters</li> <li>3) foster an open culture, encourage teachers to listen and rethink upon reflection, critiquing from different collaborators</li> <li>4) reinvent principal, teachers and students relationships: with the internet and new channels, school principals have to take advantage of new technologies to understand, interact with and serve their colleagues and students</li> <li>5) keep innovating in how they lead and communicate with the teachers and students</li> <li>6) delegate decision making of teaching and learning to the teachers and students for motivating and mobilizing teachers to do their best in realizing the school's purposes</li> </ol> <p>3.2 The school principals evolve flexible working process by</p> <ol style="list-style-type: none"> <li>1) changing the style of leadership away from command and control to collaboration and teamwork</li> <li>2) emphasizing the collaboration teamwork process and embrace different ideas by creating interdisciplinary teacher teams.</li> <li>3) training a generalist group of leaders who know how to learn and operate in collaboration teamwork</li> </ol>

<b>Main Strategy 3</b>	<p><b>Personal:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity</p>
Sub-strategy 3.1	<p>Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in energizing every teacher's imagination for teaching to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <p>1) establishes a policy to develop the principals' creative leadership in energizing every teacher's imagination for teaching to foster students' creativity;</p> <p>2) changes education imposing on students the same standardized content to enabling students to pursue their passion and strength through students' voice and choice, a broad and flexible curriculum, personalized teaching and assessment, and mentoring and advising; and</p> <p>3) guide parents how to understand and pay attention to the students' interest and growth, rather than standardized test scores, especially the parents in rural areas.</p> <p>4) reduces the intervention of the national curriculum to schools and encourages schools to develop curriculum based on students' needs and local realities.</p> <p>2. Department of Education of Guangxi implements the above policy and allocates the appropriate budget and educational resources as requested to all primary schools together with the needed evaluation criteria, especially rural schools.</p> <p>3.1 The school principals give every teacher freedom to take risks in the teaching; give every teacher autonomy in the teaching content, teaching styles and students' assessment; allow every teacher to discover and develop their own natural intelligence; and value irreverence, the lively, the dynamic, the surprising, the playful school climate.</p> <p>3.2 The school principals provide every teacher ICT (Information Communications Technology) support and direct them to understand and study deep knowledge of the most recent advances of the creative teaching and learning in the subject they teach, then guide them to combine it with their own context to apply it in their classroom.</p> <p>3.3 The school principals create a "teacher learning workshop" system: every teacher is consistently encouraged to go to listen and learn in any course in the students' curriculum; then give feedback and discuss it. This is a second opportunity for improving individual creative thinking and design. Additionally, there is constant flow of new idea running through the whole school. Teachers are constantly meeting each other from different areas of the school and are reminded that they are all part of a single effort. Also the creativity development specialist may be provided a needed by the teachers for individual and group consultation and advices.</p>

<b>Main Strategy 3</b>	<p><b>Personal:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity</p>
Sub-strategy 3.2	<p>Increase support of political and government policy and technology, and enhance economy and socio-culture to develop the principals' creative leadership in providing every teacher learning opportunities to promote creativity in teaching to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <ol style="list-style-type: none"> <li>1) establishes a policy to develop the principals' creative leadership in providing every teacher learning opportunities to enhance creativity in teaching to foster students' creativity;</li> <li>2) attributes a high status to the teaching profession;</li> <li>3) invites education experts to train teachers for professional development in teaching creativity;</li> <li>4) allocates budget each year to the professional development of teachers and school principals</li> </ol> <p>2. Department of Education of Guangxi</p> <ol style="list-style-type: none"> <li>1) implements the above policy to all primary schools;</li> <li>2) provides guidance and necessary regulations that each primary school must keep in mind in its curriculum development activities, creative teaching and personalize students' assessment;</li> <li>3) provides training and learning opportunities for every teacher to use new educational technology in teaching; and</li> <li>4) reduces influence on budgetary decisions made by schools.</li> </ol> <p>3.1 The school principals finance professional development for teachers each year</p> <p>3.2 The school principals show commitment to professional development of each teacher in the techniques and practical skills of creative teaching.</p> <p>3.3 The school principals support training related new models of teaching in Product-Oriented- Instruction, Problem-Based-Instruction, Project- Based-Instruction, Team- Based-Instruction, Research- Based-Instruction and Event-Based-Instruction or any other appropriate instructional methods and techniques and also clearly communicate that it is something valued and allowed.</p> <p>3.4 The school principals transform school into a Professional Learning Community (PLC) for teachers' professional development. For example, the school principals create the Peer Coaching and Mentoring System to develop the teachers' abilities of observation, analysis, discussion, exchange, reflection and collaboration in teaching creativity practices.</p> <p>3.5 The school principals organize every teacher to learn the local intelligence for managing teaching and learning that link closely with the community; and encourage every teacher to carry out the practical teaching activities in the community.</p> <p>3.6 The school principals support teachers to learn how to creatively use new technologies in personalized teaching for catering the interests, abilities and learning styles of every student.</p>

<b>Main Strategy 3</b>	<p><b>Personal:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity</p>
Sub-strategy 3.3	<p>Increase support of political and government policy and socio-culture, and enhance economy and technology to develop the principals' creative leadership in engaging every teacher using their creative potential in teaching to foster students' creativity</p>
Procedures:	<p>1. Ministry of Education</p> <p>1) further advances and implements the policy to develop the principals' creative leadership in engaging every teacher using their creative potential in teaching to foster students' creativity;</p> <p>2) establishes clearly the tasks of creative teaching including encouraging students' creativity, identifying students' creativity and developing students' creativity together with the evaluative criteria of the students' creativity.</p> <p>3) cancels using standardized test scores to determine the performance and income of school principals and teachers; and</p> <p>4) gives the subjects of drama, dance, arts, music and sports the same status as the subjects of mathematics and languages and solve the problem of shortage of art teachers in rural schools.</p> <p>2. Department of Education of Guangxi implements the above policy; allocates the appropriate budget and educational resources as requested in creativity teaching to all primary schools; and uses social media to publicize and promote creativity understanding and developing in people' life.</p> <p>3.1 The school principals motivate and encourage every teacher to be involved in creative teaching practices which is accomplished by</p> <p>1) setting high expectations about the degree of creativity and innovation in the school</p> <p>2) putting in an incentive policy that anyone, no matter what their level or role, is allowed to express ideas to the school principals about how they feel about modeling creative working processes, encouraging students' creativity, identifying students' creativity, and developing students' creativity; and making sure that all the voices in the school speak up and are heard</p> <p>3) valuing every teacher's contribution of creative teaching in any subject</p> <p>3.2 The school principals ensure that every teacher in the school is playing to their creative strengths which is accomplished by</p> <p>1) allowing every teacher to play out their passion in teaching, such as, give freedom to determine their own teaching content and methods based on the actual needs and realities of students to achieve the teaching objectives</p> <p>2) putting every teacher in situations of teaching creativity and giving them challenges that reveal their creative abilities</p> <p>3) establishing an "Interdisciplinary visit" system which encourages a greater understanding between subjects of each other's work and helps to create a strong sense of common culture</p> <p>4) giving every teacher resource and technological supports to creatively manage teaching and learning in the classroom</p>



**4.4.4 The examination of the suitability and feasibility of the second draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China by the focus group which is summarized into details as follows:**

1) The suitability of the second draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China

All members of the focus group including educational administration specialists and stakeholders agree that the main, sub-strategies and strategic procedures are suitable and comprehensive.

2) The feasibility of the second draft of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China

All members of the focus group including educational administration specialists and stakeholders agree that the main and sub-strategies are feasible. However, some procedures should be more detail into practice. Additionally, the stakeholders suggested that the related government and educational department should allocate more budgets, teaching technology training and teaching staff, especially art teaching staff to the rural schools.

Therefore, based on the suggestions of the focus group, the second draft of the creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China was revised again and then published for a final version. The details of the final version is displayed in the table 32.

**4.4.5 The final version of the creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

The final version was obtained from the second draft revised by the focus group and reviewed again by the dissertation committee and the researcher was advised to adjust some content. The details of the final version is displayed in the table 32.

Table 32: The final version of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China

<b>Main Strategy 1</b>	<b>Group:</b> The strategy to develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity
Sub-strategy 1.1	Enhance political and government policy, economy, socio-culture and technology and to develop the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity
Procedures:	<p>1. <u>Ministry of Education</u></p> <p>1) establishes and implements a policy to develop the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity;</p> <p>2) encourages schools to find and arrange time for teacher teamwork in cultivating students' creativity, and gives them enough time to foster students' creativity before evaluating students' creativity.</p> <p>2. <u>Guangxi government and education department</u></p> <p>1) implement the above policy; 2) allocate the appropriate budget to all schools to cover the necessary expenditures; 3) reduce or cut non-teaching loads to the schools and 4) allocate adequate teaching staffs to share the task of teaching to ensure the teamwork time.</p> <p>3. <u>The school principals</u> offer time for teacher teams to promote teachers' creativity in modeling creative working processes, encouraging, identifying and developing students' creativity, as follows:</p> <p>1) understand that time is an essential resource for teaching creativity</p> <p>2) offer teachers discretionary time and freedom to do what they are most passionate about</p> <p>3) provide teachers time to work together during the school day and to understand how their colleagues teach to foster students' creativity</p> <p>4) provide teacher teams a significant space of time for planning creative teaching and teaching creativity and then assessing whether they had accomplished their goals.</p> <p>5) give teacher teams prep time, having time for professional development at least once a week.</p> <p>6) reduce teaching or other workloads and allocate time for meetings and observation.</p> <p>7) support and guide teacher teams to work effectively with innovative information technologies.</p>

<b>Main Strategy 1</b>	<p><b>Group:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity</p>
Sub-strategy1.2	<p>Increase support of political and government policy and socio-culture, and enhance economy and technology to develop the principals' creative leadership in facilitating diversity in teacher teams to foster students' creativity</p>
Procedures:	<p><u>1. Ministry of Education</u></p> <p>1) establishes a policy to develop the principals' creative leadership in facilitating diversity in teacher teams to enhance creativity in teaching to foster students' creativity;</p> <p>2) changes the current curriculum design: changes the branch teaching to integrated curriculum teaching through the study of the STEAM curriculum;</p> <p>3) realizes the context of every school and embrace the different talents of teachers and students.</p> <hr/> <p><u>2. Guangxi government and education department</u> implement the above policy; allocate the appropriate budget and educational resources to all primary schools according to the proposed plans and projects.</p> <hr/> <p><u>3. The school principals</u> facilitate diversity in teacher teams to promote teachers' creativity in modeling creative working processes, encouraging, identifying and developing students' creativity, as follows:</p> <p>1) show appreciation in the different teaching thinking and practices of every teacher and encourage teachers to celebrate the diversity of cultures, languages, and teaching styles reflected the development of students' creativity in school.</p> <p>2) create space for interaction between disciplines and viewpoints by implementing Cross-Disciplinary Teams.</p> <p>3) create creative teacher teams which bring together teachers from different backgrounds: teachers who think differently, who may be of different ages and genders, or with different cultural backgrounds and professional experiences, such as:</p> <p>3.1) creating teacher teams form interdisciplinary/different grades</p> <p>3.2) creating teacher teams from the different disciplines but the same grade</p> <p>3.3) creating teacher teams from the same discipline in the same grade</p> <p>3.4) creating teacher teams consisting of the younger and older teachers</p> <p>4) move forward the notion of creativity thrives on diversity, host roundtable discussions for teachers and encourage teacher teams to share how they have expanded their view of teaching creativity for their students' learning.</p>

<b>Main Strategy 1</b>	<p><b>Group:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity</p>
Sub-strategy 1.3	<p>Increase support of political and government policy, and enhance economy socio-culture and technology to develop the principals' creative leadership in facilitating collaboration in teacher teams to foster students' creativity</p>
Procedures:	<p><b>1. Ministry of Education</b></p> <p>1) establishes a policy to develop the principals' creative leadership in facilitating collaboration in teacher teams to foster students' creativity;</p> <p>2) encourages teachers to teach collaboratively;</p> <p>3) provides guidelines to Collaborative Problem Defining and Collaborative Problem Worth Solving.</p> <hr/> <p><b>2. Guangxi government and education department</b> implement the above policy and allocate appropriate budget and educational resources to all primary schools in pertinent to what the schools really need to be supported.</p> <hr/> <p><b>3. The school principals</b> facilitate collaboration in teacher teams to promote teachers' creativity in modeling creative working processes, encouraging, identifying and developing students' creativity, as follows:</p> <p>1) involve the teachers working together in a shared process in which their interaction affects the nature of teaching and its outcome.</p> <p>2) facilitate a creative teamwork process which has to be based on two key principles 2.1) all participants, "accept every offer that is made." The aim not to negate other people's contributions but to build on them, a process known as 'plussing' 2.2) "always make your work partners look good". The aim is not to judge what they produce but to help make something of it and raise everybody's game.</p> <p>3) support and guide teachers to take advantage of technology for collaborative teaching and learning between teachers and students.</p> <p>4) focus on building three capabilities (creative abrasion, creative agility and creative resolution) required for collective creativity to teacher teams in order to know how to do Collaborative Problem Worth Solving, how to do discovery-driven learning and how to do integrated decision making.</p> <p>5) facilitate open and frequent communication by arranging face-to-face meetings, and dedicating collaboration rooms where every teacher's slices of genius can be unleashed and harnessed, and turned into work of collective genius.</p> <p>6) transform school into a Professional Learning Community (PLC) that encourages and inspires sharing and collaboration for collaborate creative thinking and design in teaching.</p>

<b>Main Strategy 2</b>	<p><b>Culture:</b></p> <p>The strategy to develop the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Sub-strategy 2.1	<p>Increase support of political and government policy and enhance economy, socio- culture and technology to develop the principals' creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers to foster students' creativity</p>
Procedures:	<p>1. <u>Ministry of Education</u></p> <p>1) establishes a policy to develop the principals' creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers for fostering students' creativity and</p> <p>2) supports educational infrastructure resources to all primary schools.</p> <p>2. <u>Guangxi government and education department</u></p> <p>1) implement the above policy to all primary school; 2) allocate appropriate budget and educational resources to all primary schools; 3) encourage and coordinate local enterprises to contribute to education; and 4) support and help schools establish teaching aids users.</p> <p>3. <u>Local enterprises</u> provide supports of human and material resources, technology and funds for hardware teaching facilities.</p> <p>4. <u>The school principals</u> create creative school workspaces to promote teachers' creativity in modeling creative working processes, encouraging, identifying and developing students' creativity, as follows:</p> <p>1) allow teachers to personalize their workspace; create shared spaces for meetings and workshops; and provide spaces for shared planning, follow-up, and assessment of teaching creativity projects.</p> <p>2) unite the "brother schools" resources based on sharing and mutual benefits and exchange of needed goods for the construction of creative teaching and learning environment.</p> <p>3) combine the extraordinary resources in the local community with the extraordinary talents of teachers to create creative workplace where people are willing and able to share and combine their talents and passions</p> <p>4) collaborate with local businesses and government entities to provide teaching equipment, office and classroom design which facilitate creative teaching and learning</p> <p>5) interact with Internet connection to support new information technologies to facilitate personalized teaching to respond the needs of students' personality development.</p>

<b>Main Strategy 2</b>	<p><b>Culture:</b></p> <p>The strategy to develop the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Sub-strategy 2.2	<p>Increase support of political and government policy and enhance economy, socio-culture and technology to develop the principals' creative leadership in promoting an inquiring school culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Procedures:	<p>1. <u>Ministry of Education</u></p> <p>1) establishes a policy to developing the principals' creative leadership in promoting an inquiring school culture that encourages the individual and team creativity of teachers for fostering students' creativity;</p> <p>2) changes using standardized test scores to judge the quality of teaching and learning and uses alternative tools including student creativity assessment, students' moral evaluation and students' social practical ability assessment to supplant the presently dominating standardized tests as measures of educational quality;</p> <p>3) gives high priority to personalized learning and creative teaching as important components of schooling;</p> <p>4) accepts errors and values forgiveness.</p> <p>2. <u>Guangxi government and education department</u></p> <p>1) implement the above policy to all primary schools; 2) provides educational technology support and training to all primary schools; 3) help all schools establish database of information teaching resources ; and 4) allocates appropriate budget to all primary schools</p> <p>3. <u>Middle school, university and employers</u> determine how well students are qualified; <u>Parents</u> should actively participate in and cooperate with school work , and need to know if their children are making progress in school and are on target</p> <p>4. <u>The school principals</u> promote an inquiring school culture to promote teachers' creativity in modeling creative working processes, encouraging, identifying and developing students' creativity, as follows:</p> <p>1) reconstruct and maintain the dominant school culture which focuses on teaching and learning, but not testing</p> <p>2) empower every teacher to work through their unique talents and expertise in order to encourage teachers to explore various approaches of creative teaching and students' creativity developing.</p> <p>3) self-consciously relinquish control, leading to more delegation and to more empowerment of younger teachers, who often have clearer minds and fresher ideas.</p> <p>4) combine the extraordinary resources in the business, in multimedia, in the Internet with the extraordinary talents of teachers to provide an opportunity to foster students' creativity and construct web-based instructional database.</p> <p>5) create a mistake-tolerant culture, and use failure as a learning opportunity and learning experiences.</p> <p>6) increase training significantly and particularly for heads of a particular subject; school leadership team model and support creativity development strategies.</p>

<b>Main Strategy 2</b>	<p><b>Culture:</b></p> <p>The strategy to develop the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Sub-strategy 2.3	<p>Increase support of political and government policy and technology and enhance economy and socio-culture to develop the principals' creative leadership in promoting a flexible school culture that encourages the individual and team creativity of teachers to foster students' creativity</p>
Procedures:	<p>1. <u>Ministry of Education</u></p> <p>1) establishes a policy to develop the principals' creative leadership in promoting a flexible school culture that encourages individual and team creativity of teachers for fostering students' creativity;</p> <p>2) creates Rigorous Decision- Making System which embraces discussion and debate;</p> <p>3) minimizes standardized testing and have more accountability;</p> <p>4) transfers responsibility and authority from the government level to the local level and school level for getting the job done.</p> <p>2. <u>Guangxi government and education department</u> implement the above policy to all primary school; transfer responsibility and authority from the local level and school level to the teachers and students; allocate appropriate budget to all primary schools.</p> <p>3. <u>The school principals</u> promote a flexible school culture to promote teachers' creativity in modeling creative working processes, encouraging, identifying and developing students' creativity, as follows:</p> <p>1) evolve flexible school structure by:</p> <p>1.1) loose hierarchies that means those who run the organizations should be accessible to those who work within them</p> <p>1.2) creating a flexible schedule and interdisciplinary opportunities for teachers and students, and allow teachers to stray away from the limits of their subject matters</p> <p>1.3) fostering an open culture, encourage teachers to listen and rethink upon reflection, critiquing from different collaborators</p> <p>1.4) reinventing principal, teachers and students relationships: with the internet and new channels, school principals have to take advantage of new technologies to understand, interact with and serve their colleagues and students</p> <p>1.5) keeping innovating in how they lead and communicate with the teachers and students</p> <p>1.6) delegating decision making of teaching and learning to the teachers and students for motivating and mobilizing teachers to do their best in realizing the school's purposes.</p> <p>2) evolve flexible working process by:</p> <p>1) changing the style of leadership away from command and control to collaboration and teamwork</p> <p>2) emphasizing the collaboration teamwork process and embrace different ideas by creating interdisciplinary teacher teams.</p> <p>3) training a generalist group of leaders who know how to learn and operate in collaboration teamwork</p>

<b>Main Strategy 3</b>	<p><b>Personal:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity</p>
Sub-strategy 3.1	<p>Increase support of political and government policy and enhance economy, socio-culture and technology to develop the principals' creative leadership in energizing every teacher's imagination for teaching to foster students' creativity</p>
Procedures:	<p>1. <u>Ministry of Education</u></p> <p>1) establishes a policy to develop the principals' creative leadership in energizing every teacher's imagination for teaching to foster students' creativity;</p> <p>2) changes education imposing on students the same standardized content to enabling students to pursue their passion and strength through students' voice and choice, a broad and flexible curriculum, personalized teaching and assessment, and mentoring and advising;</p> <p>3) guides parents how to understand and pay attention to the students' interest and growth, rather than standardized test scores, especially the parents in rural areas.</p> <p>4) reduces the intervention of the national curriculum to schools and encourages local government and education department to help schools develop curriculum based on students' needs and local realities.</p> <p>2. <u>Guangxi education department</u> should coordinates the district government to implements the above policy; improve the information teaching quality of the rural schools; and allocates the appropriate budget and educational resources as requested to all primary schools together with the needed evaluation criteria, especially rural schools.</p> <p>3. <u>The school principals</u> energize every teacher's imagination to promote teachers' creativity in modeling creative working processes, encouraging, identifying and developing students' creativity, as follows:</p> <p>1) give every teacher freedom to take risks in the teaching, autonomy in the teaching content, teaching styles and students' assessments. They should allow every teacher to discover and develop their own natural intelligence; and value irreverence, the lively, the dynamic, the surprising, the playful school climate.</p> <p>2) provide every teacher ICT (Information Communications Technology) support and direct them to understand and study deep knowledge of the most recent advances of the creative teaching and learning in the subject they teach, then guide them to combine it with their own context to appropriately apply it in their classroom.</p> <p>3) create a "teacher learning workshop" system: every teacher is consistently encouraged to go to listen and learn in any course in the students' curriculum; then give feedback and discuss it. This is a second opportunity for improving individual creative thinking and design. Additionally, there is constant flow of new idea running through the whole school. Teachers are constantly meeting each other from different areas of the school and are reminded that they are all part of a single effort. Also the creativity development specialist may be provided a needed by the teachers for individual and group consultation and advices.</p>



<b>Main Strategy 3</b>	<p><b>Personal:</b></p> <p>The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity</p>
Sub-strategy 3.2	<p>Increase support of political and government policy and technology and enhance economy and socio-culture to develop the principals' creative leadership</p> <p>in providing every teacher learning opportunities to promote creativity in teaching to foster students' creativity</p>
Procedures:	<p>1. <u>Ministry of Education</u></p> <p>1) establishes a policy to develop the principals' creative leadership in providing every teacher learning opportunities to enhance creativity in teaching to foster students' creativity;</p> <p>2) attributes a high status to the teaching profession;</p> <p>3) invites education experts to train teachers for professional development in teaching creativity;</p> <p>4) allocates budget each year to the professional development of teachers and school principals.</p> <p>2. <u>Guangxi government and education department</u></p> <p>1) implement the above policy to all primary schools;</p> <p>2) provide guidance and necessary regulations that each primary school must keep in mind in its curriculum development activities, creative teaching and personalize students' assessment;</p> <p>3) provide training and learning opportunities for every teacher to use new educational technology in teaching, especially remote rural schools; and</p> <p>4) reduce influence on budgetary decisions made by schools.</p> <p>3. <u>The school principals</u> provide every teacher's learning opportunities to promote teachers' creativity in modeling creative working processes, encouraging, identifying and developing students' creativity, as follows:</p> <p>1) finance professional development for teachers each year.</p> <p>2) show commitment to professional development of each teacher in the techniques and practical skills of creative teaching.</p> <p>3) support training related new models of teaching in Product-Oriented-Instruction, Problem-Based-Instruction, Project- Based-Instruction, Team-Based-Instruction, Research- Based-Instruction and Event-Based-Instruction or any other appropriate instructional methods and techniques and also clearly communicate that it is something valued and allowed.</p> <p>4) transform school into a Professional Learning Community (PLC) for teachers' professional development. For example, the school principals create the Peer Coaching and Mentoring System to develop the teachers' abilities of observation, analysis, discussion, exchange, reflection and collaboration in teaching creativity practices.</p> <p>5) encourage and organize every teacher to learn the local intelligence for managing teaching and learning that link closely with the community; and encourage every teacher to carry out the practical teaching activities in the community.</p> <p>6) support teachers to learn how to creatively use new technologies in personalized teaching for catering the interests, abilities and learning styles of each student.</p>

<b>Main Strategy 3</b>	<b>Personal:</b> The strategy to develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity
Sub-strategy 3.3	Increase support of political and government policy and socio-culture and enhance economy and technology to develop the principals' creative leadership in engaging every teacher using their creative potential in teaching to foster students' creativity
Procedures:	<ol style="list-style-type: none"> <li>1. <u>Ministry of Education</u> <ol style="list-style-type: none"> <li>1) further advances and implements the policy to develop the principals' creative leadership in engaging every teacher using their creative potential in teaching to foster students' creativity, at the same time, should develop effective policy to motivate teachers in fostering students' creativity;</li> <li>2) establishes clearly the tasks of creative teaching including encouraging students' creativity, identifying students' creativity and developing students' creativity together with the evaluative criteria of the students' creativity.</li> <li>3) cancels using standardized test scores to determine the performance and income of school principals and establishes a suitable evaluation system of teaching quality for the development of students' creativity;</li> <li>4) gives the subjects of drama, dance, arts, music and sports the same status as the subjects of mathematics and languages and solve the problem of shortage of art teachers in rural schools.</li> </ol> </li> <li>2. <u>Guangxi government and education department</u> <ol style="list-style-type: none"> <li>1) implement the above policy; allocate the appropriate budget and educational resources as requested in creativity teaching to all primary schools, and the allocation of manpower, material resources and titles should be biased towards those with remote and poor schools;</li> <li>2) provide schools scientific and technological hardware supports used in the instruction activities; and</li> <li>3) use social media to publicize and promote creativity understanding and developing into the people' life.</li> </ol> </li> <li>3. <u>The school principals</u> engage every teacher using their creative potential to promote teachers' creativity in modeling creative working processes, encouraging, identifying and developing students' creativity, as follows: <ol style="list-style-type: none"> <li>1) motivate and encourage every teacher to be involved in creative teaching practices which is accomplished by: <ol style="list-style-type: none"> <li>1.1) setting high expectations about the degree of creativity and innovation in the school and directing the development of creative teaching and learning</li> <li>1.2) putting in an incentive policy that anyone, no matter what their level or role, is allowed to express some ideas to the school principals about how they feel about modeling creative working processes, encouraging students' creativity, identifying students' creativity, and developing students' creativity; and making sure that all the voices in the school speak up and are heard</li> <li>1.3) valuing every teacher's contribution of creative teaching in any subject.</li> </ol> </li> <li>2) ensure that every teacher in the school is playing to their creative strengths which is accomplished by: <ol style="list-style-type: none"> <li>2.1) allowing every teacher to play out their passion in teaching, such as, give freedom to determine their own teaching content and methods based on the actual needs and realities of students to achieve the teaching objectives</li> <li>2.2) putting every teacher in situations of teaching creativity and giving them challenges that reveal their creative abilities</li> <li>2.3) establishing an "interdisciplinary visit" system which encourages a greater understanding between subjects of each other's work and helps to create a strong sense of common culture</li> <li>2.4) giving every teacher resource and technological supports to creatively manage teaching and learning in the classroom.</li> </ol> </li> </ol> </li> </ol>

## **Chapter 5**

### **Summary of Research Findings, Discussion and Recommendations**

The objectives of this research study was 1) to study the conceptual framework of creative leadership of primary school principals to promote teachers' creativity 2) to study the current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China 3) to analyze the strengths, weaknesses, opportunities and threats to the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China and 4) to develop creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China.

The research population of the research study included 144 primary schools under the Beihai city of Guangxi, China in the academic year 2015-2016. The sample population including 106 schools in Beihai city of Guangxi received a letter of invitation to participate in answering the survey questionnaire. A total of 81 schools responded to the survey, the participants include a principal, a vice-principal, a head of subject and three teachers from each school; questionnaires based on their willingness, a total of informants are 485 people. The research tools included a survey questionnaire and an evaluation form of the draft of creative leadership strategies. The quantitative data analysis of the questionnaire uses the descriptive statistics to identify frequency distribution, percentage, means and standard deviation (S.D.) and the PNI Modified. The qualitative data analysis uses the content analysis.

In this chapter, the summary of research findings, discussion and recommendations include the following details:

## **5.1 Summary of Research Findings**

### **5.1.1 The conceptual framework of creative leadership of primary school principals to promote teachers' creativity**

Based on the literature review and the examination of suitability and feasibility by educational experts, the conceptual framework of creative leadership of primary school principals to promote teachers' creativity consists of the roles of creative leadership in three areas, with each of these roles there are three core components of practice. The first role is to facilitate the creative abilities of every teacher of school which includes three components as follows: 1) engaging every teacher using their creative potential in teaching 2) energizing every teacher's imagination for teaching and 3) providing every teacher learning opportunity to enhance creativity in teaching; the second role is to form and facilitate dynamic creative teacher teams which includes three components as follows 1) facilitating diversity in teacher teams, 2) facilitating collaboration in teacher teams and 3) offering time for teacher teams to work on their passion; the third role is to promote a school culture of innovation which includes three components as follows: 1) promoting a flexible school culture, 2) promoting an inquiring school culture and 3) creating creative school workspaces.

In addition, the conceptual framework of creative leadership of primary school principals to promote teachers' creativity also consists of the key skills of creative teachers including 1) modeling creative working processes 2) encouraging students' creativity 3) identifying students' creativity 4) developing students' creativity

### **5.1.2 The current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China**

#### **1) The research findings from the internal environment**

1.1) Based on the analysis of the current state of the internal environment, the findings indicate that the overall picture of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is at a moderate level ( $\bar{X}=3.37$ ,  $S.D=0.87$ ). When considering each aspect, facilitating the creative abilities of every teacher of school has the highest mean value ( $\bar{X}=3.42$ ,  $S.D=0.87$ ), then

promoting a school culture of innovation ( $\bar{X} = 3.35$ , S.D = 0.90) and forming and facilitating dynamic creative teacher teams ( $\bar{X} = 3.34$ , S.D = 0.93) respectively.

1.2) From the analysis of the desirable state of the internal environment, the findings indicate that the overall picture of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is at a highest level ( $\bar{X} = 4.81$ , S.D = 0.36). When considering each aspect, facilitating the creative abilities of every teacher of school has the highest mean value ( $\bar{X} = 4.82$ , S.D = 0.35), then forming and facilitating dynamic creative teacher teams ( $\bar{X} = 4.81$ , S.D = 0.38) and promoting a school culture of innovation ( $\bar{X} = 4.81$ , S.D = 0.40) respectively.

## **2) The research findings from the external environment**

2.1) Based on the analysis of the current state of the external environment, the findings indicate that the overall picture of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is at a moderate level ( $\bar{X} = 3.30$ , S.D = 0.83). When considering each aspect, the political and government policy has a highest mean value ( $\bar{X} = 3.34$ , S.D = 0.82), then the socio-culture ( $\bar{X} = 3.29$ , S.D = 0.85), the technology ( $\bar{X} = 3.29$ , S.D = 0.86) and the economy ( $\bar{X} = 3.27$ , S.D = 0.86) respectively.

2.2) From the analysis of the desirable state of the external environment, the findings indicate that the overall picture of the desirable state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is at a highest level ( $\bar{X} = 4.79$ , S.D = 0.38). When considering each aspect, the socio- culture has a highest mean value ( $\bar{X} = 4.79$ , S.D = 0.38), then the political and government policy ( $\bar{X} = 4.79$ , S.D = 0.48), the economy ( $\bar{X} = 4.78$ , S.D = 0.38) and the technology ( $\bar{X} = 4.78$ , S.D = 0.39) respectively.

### **5.1.3 The strengths, weaknesses, opportunities and threats to the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China**

5.1.3.1 The strengths of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China include facilitating creative ability of every teacher obtaining the PNIModified 0.409 with three strong subcomponents consisting of engaging every teacher using their creative potential in teaching obtaining the PNIModified 0.396, providing every teacher learning opportunities to enhance creativity in teaching obtaining the PNIModified 0.405 and energizing every teacher's imagination for teaching obtaining the PNIModified 0.420.

5.1.3.2 The weaknesses of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China include forming and facilitating dynamic creative teacher teams obtaining the PNIModified 0.440 with a weak subcomponent of offering time for teacher teams to work on their passion obtaining the PNIModified 0.472. Then promoting a school culture of innovation obtaining the PNIModified 0.436 with a weak subcomponent of creating creative school workspaces obtaining the PNIModified 0.458.

5.1.3.3 The opportunity of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China includes the political and government policy obtaining the PNIModified 0.434.

5.1.3.4 The threats of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China include the economy obtaining the PNIModified 0.462, then socio-culture obtaining the PNIModified 0.456 and the technology obtaining the PNIModified 0.453.

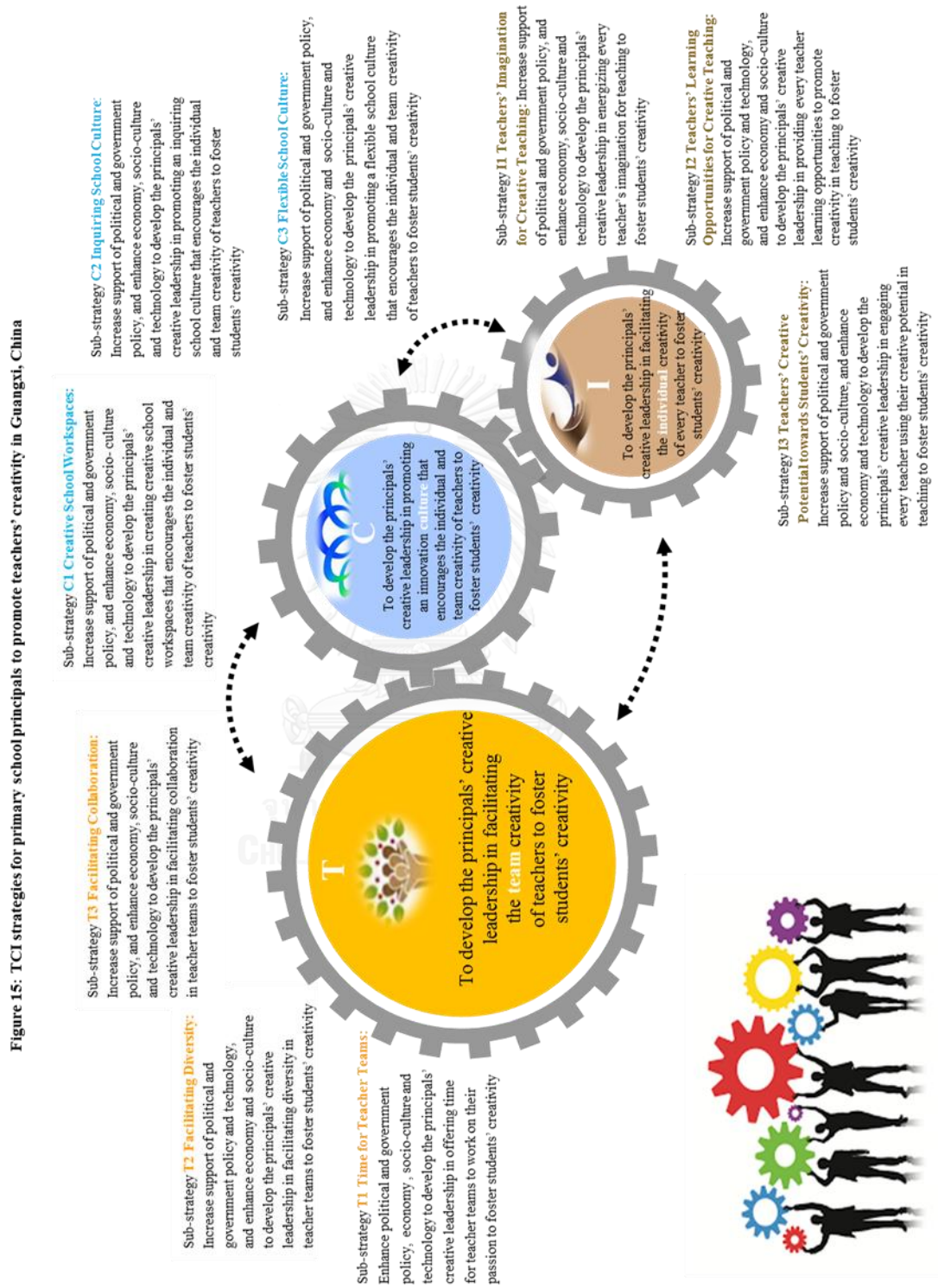
### **5.1.4 Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

Based on the research findings, the researcher define three main strategies and nine sub-strategies for creative leadership development of primary school principals to promote teachers' creativity in Guangxi, China. This creative leadership strategies are named TCI strategies. TCI, which is short of Team, Culture and Individual, consists of

three main strategies. “ **T** ” is the first strategy: to develop the principals’ creative leadership in facilitating the team creativity of teachers to foster students’ creativity ; “ **C** ” represents the second main strategy: to develop the principals’ creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students’ creativity; and “ **I** ” means the third main strategy: to develop the principals’ creative leadership in facilitating the individual creativity of every teacher to foster students’ creativity. The detailed information of TCI strategies is displayed in the figure 15, and the detailed strategic procedures are displayed in the table 32 on the pages 158- 166.



Figure 15: TCI strategies for primary school principals to promote teachers' creativity in Guangxi, China





## **5.2 Discussion of Research Findings**

### **5.2.1 The current and desirable states of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China**

#### **1) Analysis of the internal environment**

1.1) Based on the analysis of the current state of the internal environment, the research findings reveal that the overall picture of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is at a moderate level, as well as each aspect. The findings imply that the school principals should improve creative leadership in each aspect to promote teachers' creativity for fostering students' creativity. The demand for creative leadership in three areas is supported by the concept of Ken Robinson (2011), he stated that everyone in an organization is capable of contributing creative ideas to its development, more often than not creativity in organizations is driven by teams, where there is a flow of ideas between people who have different areas of expertise. Moreover, the quality of the creative work of individuals and of groups is deeply enmeshed in the general culture of the organization as a whole (Basadur, 2004). Therefore, the school principals should improve creative leadership in developing the individual and team creativity of teachers by creating an innovation culture in order to cultivate students' creativity.

When considering each aspect, facilitating the creative abilities of every teacher of school has the highest mean value, however, forming and facilitating dynamic creative teacher teams has the lowest mean value. This may be because forming and facilitating creative teacher teams is much harder than facilitating the individual creativity of every teacher which is accorded with the concept of Goodman and Dingli (2017), they concluded that conflict and tension usually arise in teams, particularly in circumstances when strong personalities clash, when communication amongst team members is ineffective or when tasks assigned to individual team members are not sensitively distributed. The organizational leaders should be constantly aware of this and eliminate possible tension by exercising empathy and listening skills and encouraging participation, this requires more effort in developing group creativity than facilitating personal creativity in the organization.

Moreover, the challenges faced in the process of forming and facilitating creative teacher team mainly show as follows: first, bringing together every teacher who thinks differently to work for the common goal is challenging for the school principals; second, bringing teachers together from different disciplines is no guarantee of creative work unless the teacher teams have working processes in which differences become strengths rather than weaknesses; third, collaboration is at the heart of creative working process that requires the school principals have leadership skills in facilitating collaboration in teacher teams; fourth, the teachers used to work alone with much pressure from the comparison of students' test scores, they lack sense and experiences of collaboration and sharing due to the competition between disciplines; fifth, time is the necessary condition for collaboration and sharing of teachers that needs the school principals provide time outside class to meet and talk. The above reasons are accorded with the research of H. Zhang and Zhang (2011) on the primary and high school teacher collaboration over the past thirty years, it was indicated that there are many problems in facilitating collaboration in teacher teamwork, such as, the teachers used to work alone and they lack awareness, motivation, skills and habits in collaboration and sharing; teacher collaboration is limited by time, working environment and other necessary support conditions; and the schools have not enough emphasized and lacked of guidance on education and scientific research.

1.2) Based on the analysis of desirable state of the internal environment, research findings reveal that the overall picture of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is at a highest level, as well as each aspect. The findings imply that teachers want to enhance creativity in teaching through the school principals improve creative leadership in developing the individual and team creativity of teachers, and creating an innovative school culture to foster students' creative learning. The concept of creative leadership is supported by Ken Robinson (2011) and Stoll & Temperley (2009). They demonstrated that the school leader must become a creative leader in order to promote creativity and innovation in school; and being a creative leader involves strategic roles in three areas of focus: 1) to facilitate the creative ability of every teacher of the school, 2) to form and facilitate dynamic creative teacher teams and 3) to promote a school culture of innovation. Within

each of these is not linear phase or step, but it is an organic process that feeds into each other in a continuous cycle of mutual enrichment.

When considering each aspect, facilitating the creative abilities of every teacher of school has the highest mean value, and the finding implies that although in the current state every teacher feel supported by their leaders to develop creative abilities to foster students' creativity, the level of individual creativity development may be insufficient and they may want to have more engagement, encouragement and learning opportunities to develop their creativity in teaching. Robinson (2011) stated that "everyone has creative potential" because everyone in an organization has different experiences of how it works and potentially valuable insights on how it might be improved. Thus, the school principals should engage every teacher using their creative potential in teaching. Additional, "innovation is the child of imagination" because a good deal of creative work, especially in the early stages, is about openly playing with ideas, riffing, doodling, improvising and exploring new possibilities. Therefore, nourishing every teacher's imagination is an essential part of growing a culture of innovation. Moreover, "we can all learn to be more creative" because there are techniques, procedures and practical skills that can be taught to most people that will facilitate some sorts of creative activity, and professional development is an vital approach to master the general skills of creative thinking (including how to work in creative teams). Consequently, the school principal should provide every teacher learning opportunities to develop techniques and skills in creative teaching.

## **2) Analysis of the external environment**

2.1) Based on the analysis of the current state of the external environment, the research findings reveal that the overall picture of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is at a moderate level, as well as each aspect. It is probably because the insufficient policy, budget and learning materials and the lacking of active parental and community involvement which are accorded with the research study on curriculum leadership of rural primary school principals in Guangxi by Cui (2015). According to his research study, one of the findings was indicated that educational system, the department of educational

administration, parents and community affect the development of curriculum leadership of school principals.

When considering each aspect, the political and government policy has a highest mean value it is probably because the political and government policy has valued and supported the creative leadership development of primary school principals in promoting teachers' creativity. According to National Medium and Long Term Plan for Science and Technology Development 2006-2020, its goal is to build an innovation-oriented country for national sustainable development (Cao, Suttmeier, & Simon, 2006); and innovative education development is the key approach to cultivate creative talents for achieving the national goal (S. Gu et al., 2009; Xiwei & Xiangdong, 2007). In addition, one of the urgent tasks of National Plan for Medium and Long Term Education Reform and Development (2010-2020) is to develop students' creativity and cultivate innovative talents (W. Zhang, 2012). The school principals are not only the core of the implementation of the education reform but also are the practitioners of deepening the education reform, as well as the teachers (Ma et al., 2014). On December 24, 2012, the Ministry of Education of China (2012) issued *Compulsory School Principal Professional Standards* (S. Liu, Xu, Grant, Strong, & Fang, 2017). It was clearly mentioned that one of professional duties of school principals in the field of educational leadership is to comprehensively improve the quality of teaching, focus on students' sense of responsibility, innovative spirit, and practical ability, respect for teachers' teaching experience and wisdom, and actively promote the teaching reform and innovation.

It was also found that, the economy has a lowest mean value it is probably because the economic level of Guangxi is still at low level, and it might not support adequate budget and resources in educational development. This finding is accorded with the research study on curriculum leadership of rural primary school principals in Guangxi by Cui (2015). According to his research study, many school administrators mentioned that the insufficient budget and learning materials are found to be problem to the school management. The responses from the Focus Group also describe that one of the problems to the school management is the insufficient budget, especially for the remote schools where there are no adequate budget and educational resource supports.

2.2) Based on the analysis of the desirable state of the external environment, the research findings reveal that the overall picture of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is at a highest level, as well as each aspect, and the desirable value of each aspect is fairly close. The findings imply that the school principals and teachers may want to have more support from the political and government policy, economy, socio-culture and technology to develop creativity in teaching and learning.

When considering each aspect, the socio- culture was found to have a highest mean value. The research finding implies that the socio- culture support may not sufficient and adequate for the schools' needs and there are more demands to employ the socio- culture support in creative leadership development to promote teachers' creativity in Guangxi. The demands for socio- culture is supported by the research study of Chu & Cravens (2012), Huang & Wiseman (2011) and Jarvis (2015), the findings of their research were indicated that the active parental and community involvement are found to increase the effectiveness of the principal leadership development. In addition, Jurevicius (2013) stated that the socio-culture which include educational level, attitudes, beliefs, average disposable income level and family structure may affect activities and performance of an organization.

### **5.2.2 Strengths, Weaknesses, Opportunities and Threats of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China**

5.2.2.1 The research findings indicate that the strength of the creative leadership for primary school principals to promote teachers' creativity in Guangxi, China includes the facilitating creative ability of every teacher of school with three subcomponents consisting of engaging every teacher using their creative potential in teaching, proving every teacher learning opportunities to enhance creativity in teaching and energizing every teacher's imagination for teaching. These three subcomponents which are found to be strengths are interrelated, the strengths of energizing every teacher's imagination for teaching and proving every teacher learning opportunities to enhance creativity in teaching are supported by engaging every teacher using their creative potential in teaching.

The concept of engaging every teacher using their creative potential in teaching is supported by the principle of creative leadership that *everyone has creative potential*. When the school principals believe that everyone in an organization has different experiences of how it works and potentially valuable insights on how it might be improved, they involve every teacher in creative teaching to foster students' creativity and give supports to ensure every teacher in the school is playing to their creative strengths. In other words, when the school principals engage every teacher using their creative potential in teaching to foster students' creativity, it becomes necessary for school principals to energize every teacher' imagination for teaching because "innovation is a child of imagination". And it is also necessary for school principals to give every teacher learning opportunities to develop their creativity in teaching. As stated by Ken Robinson (2011), being creative is not only a matter of inspiration. It requires skill, craft in the control of materials and reciprocating process of critical evaluation. There are techniques, procedures and practical skills that can be taught to teachers that will facilitate some sorts of creative activity in teaching to foster students' creativity. As a result, the school teachers feel their teaching creativity practices are respected and valued by their leaders; they have opportunities and supports to explore and develop their creative teaching; their confidence, motivation and a sense of ownership may increase and have a commitment to effectively fulfill their responsibilities for cultivating students' creativity.

5.2.2.2 The research findings reveal that the weaknesses of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China include 1) the forming and facilitating dynamic creative teacher teams 2) the promoting a school culture of innovation, respectively.

Forming and facilitating dynamic creative teacher teams is the weakest. When considering each aspect, offering time for teacher time to work on their passion has the highest PNIModified. This is probably because there are many teaching tasks and workloads to handle every day for the teachers, especially the teacher in rural school, who has teach several subjects due to lacking the teaching staffs. In addition, most primary school teachers are female teachers in Guangxi, they have to go home immediately after work hours to take care of their families because the values and

responsibility of Chinese family are particularly strong, especially married women. Moreover, the school principals may lack skills in time management. All these have probably been challenging for school principals to organize the teachers to communicate and share the experiences of creative teaching together for fostering students' creativity.

The concept of offering time for teacher time to work on their passion is supported by the principle that *creativity takes time*. Creative insights can take time to develop, and creative organizations understand that time is an essential resource for innovation. Levesque (2011) stated that before concluding the problem-solving process, the team should take the time to learn from its experience. The team needs to schedule a review of personal and team performance if all members, individually and collectively, are going to improve. It should look at what worked and what didn't to ensure that energy is not wasted by making the same mistake over and over again. Although taking time to reflect is often overlooked because of time pressure, it is a very important one. The leaders need to ensure that the team has time for introspection and learning.

With regard to the other weakness, the promoting a school culture of innovation is the second weakness, when considering each aspect, creating creative workspaces has the highest PNIModified it is probably because the school principals lack sense and understand about the creativity needs creative spaces or do not create creative workspace for teaching. Additionally, because basic office facilities and teaching resources are extremely limited in most primary schools of Guangxi, all teachers have to share only one office that will not allow teacher to personalize their workspaces needed during the creative teaching for cultivating students' creativity.

The concept of creating creative workspaces to promote teachers' creativity in fostering students' creativity is supported by the principle that *creative cultures need creative spaces*. The physical environment is a powerful embodiment of organizational culture. The size and shape of workspaces, the configuration of furnishings and equipment, the quality of lighting, fabrics and colors all create ambiances that may encourage or discourage creativity. Von Stamm (2008) stated that the physical work environment can support organizational culture and help facilitate a culture of creativity and innovation. Goodman and Dingli (2017) also stated that most individuals work directly or indirectly with other individuals and groups and need to be encouraged and

empowered in their working environments. The leaders can cultivate a suitable environment for personal and group creativity in highly challenging organizational context. Hill (2015) also stressed that leading creativity and innovation is about creating the space where people are willing and able to do the hard work of creative problem solving. The task of leaders is to create the space where everybody's slices of genius can be unleashed and harnessed, and turned into works of collective genius.

In summary, above these two subcomponents which are found to be the weakest in group and culture areas are the scope of support conditions. It implies that the school principals or external environment must urgently provide time and working environment for all teachers to explore teaching creativity for foster students' creativity. As stated by Hord (2004), the supportive conditions determine necessary resources including time, budget, spaces...for the actions to take place such as meeting, collective learning, solving problems and working collaboratively towards achieving the goals. Moreover, Von Stamm (2008) conducted a survey of over 1000 people in the UK and found that two-thirds of the British workforce believe that they would be more productive and would in fact work harder if their work environment was better – less crowded, better air conditioning, better lighting. He concluded that people are more creative, more productive, when their environment is beautiful and relaxed.

5.2.2.3 The research findings indicate that the opportunity of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China include the political and government policy. It is implied that China government and the Department of Education have established the policies and valued the development of principals' leadership in promoting teachers' creativity to foster students' creativity. Robinson (2011) has said that, "Creating a culture of innovation will only work if the initiative is led from the top of the organization. The endorsement and involvement of leaders means everything, if the environment is to change." The policy of developing principals' creative leadership in promoting teachers' creativity to foster students' creativity from the Ministry of Education or Department of Education of Guangxi reflects the requirement in leading the implement of the school tasks for the school principals, it also directs the construction of vision and mission which relate to the students' creativity and guides the school principals to achieve the school goals.



5.2.2.4 The research findings indicate that threats of the creative leadership of primary school principals to promote teachers' creativity in Guangxi, China include the economy, then socio-culture and technology aspects. The economy and socio-culture aspects which are found as threats to the creative leadership of school principals are accorded with the research study on the state and problem of management and basic education provision of schools in less developed area by Glewwe, Hanushek, Humpage, and Ravina (2011), according to their research study, many school principals mentioned that the insufficient budget, staff and learning materials and the lack of active parental and community involvement are found to be problems to the school management. The responses on the survey questionnaire and the focus group also describe problems to the school management including the insufficient budget, the lack of community involvement, the use of substance abuse around the school's neighborhood and the pollution outside the schools. In addition, the parents' attitude to learning, working outside, low level of education and their divorce status have negative impact on the students' learning.

Technology is also found as the threat to the creative leadership development of primary school principals to promote teachers' creativity, it is implied that technology has not been applied and supported widely in basic education of Guangxi. The responses on the focus group also mentioned the problems to the technology in school including the lack of the technology resource supports and the lack of technological knowledge and techniques in instructional activities. Although technology aspect is found only at the third threat from the research findings, the Guangxi Government and Educational Administration should value the application of technology in teaching and give more technological supports and training in basic education as quickly as possible. The creative use of new technologies is one of the crucial way to personalize education for fostering every students' creativity which is supported by Robinson (2011), he stated that information technologies are among the driving forces of the economic and cultural revolutions and one of the reasons why the industrial model of education is becoming obsolete. He also explained that some of the most powerful tools for promoting creativity, communication and collaboration ever devised now offer unprecedented opportunities for education to be personalized: to cater for the interests, abilities and learning styles of every student. Some countries and states are already

using web-based technologies to connect students and teachers in personalized learning programs of many sorts.

### **5.2.3 Development of creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

Based on the research findings, three main strategies and nine sub-strategies are developed. The creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China are produced based on the research findings of the strengths, weaknesses, opportunities and threats with the PNIModified.

The formulated main strategies based on the conceptual framework of the roles of creative leadership are prioritized by the PNIModified as follows: 1) forming and facilitating dynamic creative teacher teams 2) promoting a school culture of innovation 3) facilitating creative abilities of every teacher of school

The formulated sub-strategies based on the components of each role of the creative leadership of primary school principals are prioritized by the PNIModified as follows:

1) Forming and facilitating dynamic creative teacher teams includes three subcomponents as follows: 1.1) offering time for teacher teams to work on their passion 1.2) facilitating diversity in teacher teams 1.3) facilitating collaboration in teacher teams

2) Promoting a school culture of innovation includes three subcomponents as follows: 2.1) creating creative school workspaces 2.2) promoting an inquiring school culture 2.3) promoting a flexible school culture

3) Facilitating creative ability of every teacher of school includes three subcomponents as follows: 3.1) energizing every teacher's imagination for teaching 3.2) providing every teacher learning opportunities to enhance creativity in teaching 3.3) engaging every teacher using their creative potential in teaching

In addition, the three main strategies and its sub-strategies were formulated based on the TOWS matrix analysis:

1) The first main strategy: To develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity

Based on the research findings, forming and facilitating dynamic creative teacher teams are the greatest weakness; therefore, they need special and urgent attention from the school principals. The research findings indicate that the TOWS matrix analysis identifies the matches of W-O and W-T for the formulation of Min-Maxi and Min-Mini strategies which turnaround-oriented needed for reducing the weaknesses and using the opportunities to benefit at most in planning tasks and a defensive strategy for reducing weaknesses and avoiding threats for this aspect. The more detailed information about the first main strategy is described in its three sub-strategies.

2) The second main strategy: To develop the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity

Based on the research findings, promoting a school culture of innovation is found to be the weakness in the second place. The research findings indicate that TOWS matrix analysis identifies the matches of W-O and W-T for the formulation of Min-Maxi and Min-Mini strategies which turnaround-oriented needed for reducing the weaknesses and using the opportunities to benefit at most in planning tasks and a defensive strategy for reducing weaknesses and avoiding threats for this aspect. The more detailed information about the second main strategy is described in its three sub-strategies.

3) The third main strategy: To develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity

Based on the research findings indicate that facilitating creative ability of every teacher of school appear to be the strength and the TOWS matrix analysis identifies the matches of S-O and S-T for the formulation of maxi-maxi and maxi-mini strategies. This aspect of creative leadership would require a proactive strategy and a diversification strategy. The more detailed information about the third main strategy is described in its three sub-strategies.

### 5.2.3.1 First Strategy and its three sub-strategies

**Strategy 1:** To develop the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity

**Sub-strategy 1.1:** Enhance political and government policy, economy, socio-culture and technology to develop the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity

**Sub-strategy 1.2:** Increase support of political and government policy and socio-culture, and enhance economy and technology to develop the principals' creative leadership in facilitating diversity in teacher teams to foster students' creativity

**Sub-strategy 1.3:** Increase support of political and government policy, and enhance economy socio-culture and technology to develop the principals' creative leadership in facilitating collaboration in teacher teams to foster students' creativity

Based on the research findings, the forming and facilitating dynamic creative teacher teams to foster students' creativity has the highest PNI Modified which reveals three subcomponents consist of both strength and weakness; one subcomponent is identified as a weakness, another two subcomponents are identified as strengths. It is important for the school principals to reduce the weakness and increase the strengths by using the external opportunities of political and government policy and avoiding the external threats of economy, socio-culture and technology.

Facilitating the team creativity of teachers to foster students' creativity is the key in the development of principals' leadership and must be promoted. When the school principals create the conditions for the teacher to join hands to work towards the development of students' creativity, the teacher teams have the potential to bring about great changes in their students. Therefore, developing the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity must be promoted and strengthened without the intervention of the external threats.

Developing the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity must be emphasized and promoted. Ken Robinson (2011) stated that one of the principle in creative leadership is creativity takes time. Creative insights can take time to develop, and creative organizations understand that time is an essential resource for innovation. Some offer staff discretionary time to work on their own ideas. Perhaps the best-known example is

Google, where engineers can use 20 percent of their time for discretionary projects. During this time they can pursue any interest they like. If they do come up with an idea that would interest the company, they can pitch it to senior management team. Since 2005, 5 percent of all products that have been launched by Google were developed in the 20 percent discretionary time. The 20 percent allocation is a flexible provision. It is valuable in itself but also because it sends an important signal to the workforce that the company values creativity enough to give people that freedom to do what they are most passionate about (Cited by Robinson, 2011).

The school principals should continue to facilitate diversity in teacher teams to promote teachers' creativity by using the support of political and government policy. From research organizations to commercial companies, diversity is a powerful resource for creative teams and in the workforce as a whole. A more diverse workforce enable an organization to be more in tune with the needs of the changing cultural environment in which it is operating. It also provides a deep resource of different perspectives that is essential to sustain a culture of innovation (Williams & Foti, 2011).

However, diversity can be an obstacle to innovation unless teams have working processes in which differences become strengths rather than weaknesses. Collaboration is at the heart of teamwork's creative processes. Collaboration, on the other hand, involves people working together in a shared process in which their interaction affects the nature of the work and its outcomes (Rickards & Moger, 2000). Collaboration is also a process of improvisation that, according to Randy Nelson, has to be based on two key principles. First, all participants, "accept every offer that is made." The aim is not to negate other people's contributions but to build on them, a process known as 'plussing'. Second, "always make your work partners look good." The aim is not to judge what they produce but to help make something of it and raise everybody's game. Therefore, the school principals should continue facilitating collaboration in teacher teams to direct individual accomplishments toward school objectives which is accorded with the research of Q. Zhang (2007), he indicated that the reconstruction of the teacher collaboration needs to be driven by external forces, especially the support of the school leaders.

### 5.2.3.2 Second Strategy and its three sub-strategies

**Strategy 2:** To develop the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity

**Sub-strategy 2.1:** Increase support of political and government policy, and enhance economy, socio- culture and technology to develop the principals' creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers to foster students' creativity

**Sub-strategy 2.2:** Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in promoting an inquiring school culture that encourages the individual and team creativity of teachers to foster students' creativity

**Sub-strategy 2.3:** Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in promoting a flexible school culture that encourages the individual and team creativity of teachers to foster students' creativity

Based on the research findings, promoting a school culture of innovation to foster students' creativity has the second highest PNI Modified which reveals three subcomponents consist of both strength and weakness; one subcomponent is identified as a weakness, another two subcomponents are identified as strengths. It is important for the school principals to reduce the weakness and increase the strengths by using the external opportunities and avoiding the external threats.

Developing the principals' creative leadership in promoting an innovation culture must be improved and strengthened further using the support of political and government policy and trying to avoid or reduce the negative impact of the economy, socio-culture and technology on the development of innovation culture to foster students' creativity because the quality of the creative work of individuals and of groups is deeply enmeshed in the general culture of the organization as a whole.

Developing the principals' creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers for fostering students' creativity should be improved and strengthened. Because the physical

environment is a powerful embodiment of organizational culture (Robinson, 2011; Levesque, 2011). The size and shape of workspaces, the configuration of furnishings and equipment, the quality of lighting, fabrics and colors all create ambiances that may encourage or discourage creativity. The traditional design of office buildings and spaces is rooted in the nineteenth-century model of industrial work. When the emphasis is on efficient processing of tasks, the principal considerations in the workspace become productivity, maximum occupancy and uniformity. These are hardly the right environments for stimulating imagination, creativity and innovation (Williams & Foti, 2011). More flexible patterns of working time and the pervasive effects of information technologies mean that there is a blurring of boundaries between the home and office, work, play and personal time. It is often important to allow staff to personalize their workspace in ways that they find most conducive to creative work. Where collaboration matters, there is a need for shared spaces for meetings and workshops.

Von Stamm (2008) conducted a survey of over 1000 people in the UK and found that two-thirds of the British workforce believe that they would be more productive and would in fact work harder if their work environment was better – less crowded, better air conditioning, better lighting. He concluded that people are more creative, more productive, when their environment is beautiful and relaxed.

In addition, developing the principals' creative leadership in promoting an inquiring school culture that encourages individual and team creativity of teachers to foster students' creativity should be continue to increase. Innovation involves trial and error, being wrong at times and sometimes having to back up and start again. Being creative isn't all about chaos and risk. Creativity in any domain is a balance of freedom and control. In all cases, innovation involves calculating risks and the organization's tolerance for them. Meeting these challenges has called for creative leadership, to make the most of the resources within the organization (Loewenberger et al., 2014). Robinson (2011) stated that a creative leader will change the style of management to meet new circumstances: (1) Delegation and Empowerment (2) Listening rather than competing with others to produce the cleverest answer (3) Offering support and encouragement to your colleagues rather than seeking to score points.

Moreover, developing the principals' creative leadership in promoting a flexible school culture that encourages the individual and team creativity of teachers to foster

students' creativity should be still continue to increase. Robinson (2011) stated that, the internal challenge of organization is to evolve structures and processes that are flexible and responsive. The processes of creativity can be stifled by a sense that ideas are unlikely to travel up the organization or will not be taken seriously if they come from the wrong places. Innovation can be stifled by pressure from above to deliver results over the wrong timescale: by demands for the wrong sort of accountability. The need for continuous innovation involves reviewing some of the most established practices in leadership (Makri & Scandura, 2010). When John Chambers became CEO, he thought of leadership role with Cisco in three main ways: first, developing a vision and strategy of the company; second, building the team to implement that strategy; and third, communicating the strategy within and beyond the company. After he had been in the role for four or five years, he began to think differently about his role as a leader. He began to focus especially on the company cultures. "A huge part of a leadership role is to drive the culture of the company and to reinforce it." He has also changed his style of leadership away from command and control to collaboration and teamwork in order to achieve the common goals. As at Pixar, IDEO and Google, the processes that drive the culture of innovation at Cisco are collaboration and delegation (Cited by Ken Robinson, 2011).



### 5.2.3.3 Third Strategy and its three sub-strategies

**Strategy 3:** To develop the principals' creative leadership in facilitating the individual creativity of every teacher to foster students' creativity

**Sub-strategy 3.1:** Increase support of political and government policy, and enhance economy, socio-culture and technology to develop the principals' creative leadership in energizing every teacher's imagination for teaching to foster students' creativity

**Sub-strategy 3.2:** Increase support of political and government policy and technology, and enhance economy and socio-culture to develop the principals' creative leadership in providing every teacher learning opportunities to promote creativity in teaching to foster students' creativity

**Sub-strategy 3.3:** Increase support of political and government policy and socio-culture, and enhance economy and technology to develop the principals' creative leadership in engaging every teacher using their creative potential in teaching to foster students' creativity

Based on the research findings, the facilitating creative ability to foster students' creativity has become strength which reveals three subcomponents identified as the strengths. It is necessary for the school principals continue increasing the strengths by using the external opportunities and avoiding the external threats. In other words, the school principals should maintain the quality of facilitating the individual creativity of every teacher to foster students' creativity which as the strength and use them as a guidepost of their work performance.

Developing the principals' creative leadership in energizing every teacher's imagination for teaching to foster students' creativity should be improved because nourishing imagination is an essential part of growing a culture of innovation. A good deal of creative work, especially in the early stages of a project, is about openly playing with ideas, riffing, doodling, improvising and exploring new possibilities. The eventual quality of what is done depends on this process of interweaving, of making fresh connections, of breaking with convention and seeing from different perspectives. Consequently, a creative organization, as Peter Richards puts it, "is first and foremost a place that gives people freedom to take risks; second it is a place that allows people to discover and develop their own natural intelligence; third, it is a place where there

are no ‘stupid’ questions and no ‘right’ answers; and fourth, it is a place that values irreverence, the lively, the dynamic, the surprising, the playful.”

Developing the principals’ creative leadership in providing every teacher learning opportunities to enhance creativity in teaching to foster students’ creativity should be increased continuously because there are techniques, procedures and practical skills that can be taught to most people that will facilitate some sorts of creative activity. Such as, brainstorming is one of a number of approaches that are designed specifically to facilitate the first mode of creative activity: the generation of the ideas. But simply being asked to have ideas is not enough. Being creative is not only a matter of inspiration. It requires skill, craft in the control of materials and a reciprocating process of critical evaluation. There are abilities that can be taught. Professional development is at the heart of creative cultures but often, organizations are reluctant to invest in it. Many take a short-term thinking can ultimately be counter-productive because it eats away at organizational loyalties and the sense of common purpose on which creative cultures depend. The better approach is to invest in the talents and loyalties of the staff. Therefore, providing learning opportunities that advance the organization’s goals is a core role of creative leader and one of the creative culture (Cited by Robinson, 2011).

Although developing the principals’ creative leadership in engaging every teacher using their creative potential in teaching to foster students’ creativity has become strength, it should be also maintained the quality. Ken Robinson (2011) stated that everyone in an organization is capable of contributing creative ideas to its development because everyone in an organization has different experiences of how it works and potentially valuable insights on how it might be improved. Thus, the principal should engage every teacher in the creative teaching of school. In 2001, Gallup published a study that estimated that ‘actively disengaged employees’ were costing the US economy alone between \$292 and \$355 billion a year. Later studies show that engaged employees, in contrast, are more productive, profitable and create stronger customer relationships. Workplace engagement is also a powerful factor in facilitating creative thinking on how to improve business processes and customer service. According to Gallup, 59 percent of ‘engaged employees’ strongly agreed that their job brought out their most creative ideas, while only 3 percent of ‘actively disengaged employees’ said the same. Therefore, consciously engaging the whole staff

in the creative life of an organization can have huge benefits; unconsciously disengaging them can have expensive consequences.

### **5.3 Recommendations**

#### **5.3.1 Recommendations for implementing the research findings**

5.3.1.1 Ministry of Education should establish and accelerate the clear and detailed policy of developing primary school principals' creative leadership in promoting teachers' creativity to foster students' creativity by giving supports and guidance, monitoring and evaluating the implement of the educational department in Guangxi. The above recommendations are based on the research findings which indicate that the political and government policy aspect is found to be the opportunity for developing principals' creative leadership in promoting teachers' creativity to foster students' creativity. In addition, promoting creativity and innovation in organizations will only work if the initiative is led from the top of the organization. The endorsement and involvement of leaders means everything, if the environment is to change (Ken Robinson, 2011).

5.3.1.2 The Guangxi Government and Education Department should immediately allocate adequate budgets and teaching staffs to the primary schools in developing principals' creative leadership to promoting teachers' creativity for fostering students' creativity, especially the remote rural schools. Additionally, they should supervise the implement of the Prefectural Government and Education Bureau and encourage them to seek supports of funding and resources from local businesses for developing the principals' leadership in facilitate teaching creativity and creative learning. The above recommendations are based on the research findings which indicate that the economic aspect was found to have a lowest mean value in the current state of the external environment and also became the first threat for developing the principals' leadership in promoting teachers' creativity to foster students' creativity. Moreover, the school administrators from the focus group suggested that the department of educational of Guangxi should allocate more budgets and art teaching staffs to the remote rural schools.

5.3.1.3 Guangxi Education Department should implement the main strategy of developing the principals' creative leadership in facilitating the team creativity of teachers to foster students' creativity first, at the same time, Ministry of Education and Guangxi Government should assist and supervise its implementation. This is based on the PNI modified which indicate that forming and facilitating dynamic creative teacher teams is found to be the weakest. It is particularly important to note that successfully implementing this main strategy is necessary to change teachers' value of working alone to collaboration and sharing which can be transformed by enabling teachers to understand the importance and experience the power of the collaboration and sharing and creating intrinsic motivation at the same time. Moreover, getting teachers to work and think creatively together requires the school leaders to know how to synchronize the thinking of others. This includes building skills in being a process leader-not simply a content expert-to help teachers move through the creative working process. People tend to lack skills in deferral of judgment, divergent thinking, and convergent thinking. Leaders can use skills and tools to help others to work together innovatively.

In addition, a sub-strategy of increasing support of political and government policy and enhancing economy, socio-culture, and technology to develop the principals' creative leadership in offering time for teacher teams to work on their passion to foster students' creativity should be immediately implemented. The school principals should reschedule the school time for the teachers working together. This is based on the PNI modified which indicate that offering time for teacher teams to work on their passion is found to be the most urgent needs. Offering time for teacher teams is so especially important for leading interdisciplinary teams in thinking and working innovatively together that it is crucial condition for the implement of the other two sub-strategies.

5.3.1.4 Guangxi Government and Education Department should instruct school principals to implement the main strategy of developing the principals' creative leadership in promoting an innovation culture that encourages the individual and team creativity of teachers to foster students' creativity in Guangxi, China as soon as possible. This is based on the PNI modified which indicate that promoting a school culture of innovation is found to be the second weakness. It is particularly important to note that the school principals should develop an innovation culture through the curriculum, teaching, and assessment practices which all relate to the overall culture of the school.

In addition, a sub-strategy of increasing support of political and government policy and enhancing economy, socio-culture, and technology to develop the principals' creative leadership in creating creative school workspaces that encourages the individual and team creativity of teachers for fostering students' creativity should be concerned first. The school principals who lack the abilities to create the creative workspaces should look for ways that improving work environment. This is based on the PNI modified which indicate that creating creative school workspaces is found to be the most urgent needs of the main strategy. The school principals should support teachers with finding ways to make sure that they have enough structure to feel comfortable but that there is room for exploration and reflection.

However, Implementing the strategies should be notice three tips including 1) define key implementation tasks 2) review alternative approaches 3) identify key skills. Moreover, the school principals should form a leadership team to model, monitor and evaluate the implementation of the strategies; in particular, they need to evaluate whether they have been successful, and should be willing to fail, to be wrong, and to start over again with lessons learned. In other words, the school principals need to be gritty about getting teachers and students creative.

### **5.3.2 Recommendations for the future research studies**

5.3.2.1 The future research should further explore the creative leadership strategies for primary school principals to promote teachers' creativity in case studies in urban area or rural area of Guangxi.

From the discussion of the focus group, the stakeholders who come from rural and urban primary schools of Guangxi represented different ideas and demands in developing principals' creative leadership to promote teachers' creativity. This may because the schools which are located in rural and urban area might have different types of the environment which may make the teachers and students' needs vary. In additional, based on the research design, the concept of creative leadership of primary school principals were studied, analyzed and synthesized in the overall picture for all schools in Guangxi, China in order that they become the concept framework for developing

creative leadership of primary school principals to promote teachers' creativity in Guangxi, China.

5.3.2.2 The future research should apply more qualitative approaches probe into the current and desirable states of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China.

Based on the research findings, the average of the current state of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China is not much different, as well as the desirable state. Therefore, the researcher wants to comprehensively study current and desirable states with more qualitative approaches.

5.3.2.3 The future research might study on developing the economic and socio-cultural aspects for supporting the practices of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China.

Based on the research finding of external environment, the economic factor in the current state analysis was found to have a lowest mean value; and the socio-cultural factor in the desirable state analysis has a highest mean value.

5.3.2.4 The future research should also be conducted on developing success indicators for practices on each role of creative leadership.

Based on the research findings, main strategies, sub-strategies and their procedures were defined, the procedures were designed in several steps of the Ministry Education, Department of Education of Guangxi and the school principals; however, the success indicators for each strategy have not been developed.

5.3.2.5 The future research should study the strategies of academic management of primary schools to enhance students' creativity in Guangxi, China.

Based on the research findings, the PNI modified indicates that promoting a school culture of innovation to enhance teachers' creativity for fostering students' creativity is regarded as a weakness. However, the culture of school is expressed through the curriculum, teaching, and assessment practices. They all relate to the overall culture of the school in this way (Robinson & Aronica, 2015).

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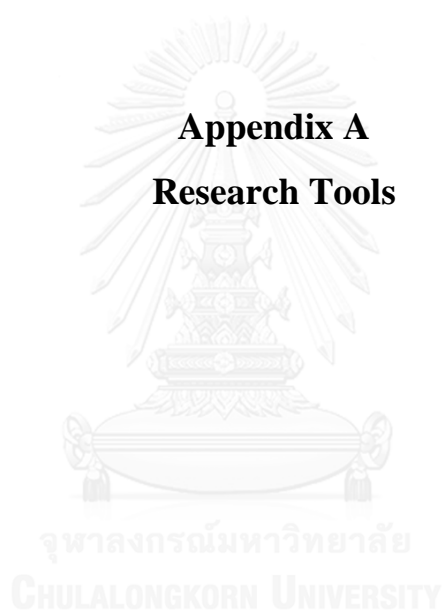


## APPENDIX



จุฬาลงกรณ์มหาวิทยาลัย  
CHULALONGKORN UNIVERSITY

**Appendix A**  
**Research Tools**



## Questionnaire

### “Creative Leadership Strategies for Primary School Principals to Promote Teachers’ Creativity in Guangxi, China”

#### Introduction

1. This questionnaire is used to collect data for the study on “Creative Leadership Strategies for Primary School Principals to Promote Teachers’ Creativity in Guangxi, China”.

2. This questionnaire is constructed to respond to the research objectives “To study the current and desirable states of creative leadership for primary school principals to promote teachers’ creativity in Guangxi, China”.

3. This questionnaire consists of two sections as follows:

Section 1: Questions about the participants’ demographic data

Section 2: Questions about the current and desirable states of the roles of creative leadership for primary school principals to promote teachers’ creativity in Guangxi, China

4. The data obtained from this questionnaire is used to analyze and interpret in overall aspect; therefore, it does not have any impact on your position.

Please kindly answer all the items and return this questionnaire with the attached envelope.

Thank you very much for your participation.

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**Section 2: Questions about the current and desirable states of the roles of creative leadership for primary school principals to promote teachers' creativity in Guangxi, China**

**Introduction:** Please tick (√) in the column from 5 to 1 that most closely matches the practical level of creative leadership for primary school principal to promote teachers' creativity.

The rating scale of 5 to 1 in the current state refers to the level of practices as follows:

- 5 = the highest level of practice in the current state
- 4 = the high level of practice in the current state
- 3 = the middle level of practice in the current state
- 2 = the low level of practice in the current state
- 1 = the lowest level of practice in the current state

The rating scale of 5 to 1 in the desirable state refers to the level of need for the practices as follows:

- 5 = the highest level of need for the practice
- 4 = the high level of need for the practice
- 3 = the middle level of need for the practice
- 2 = the low level of need for the practice
- 1 = the lowest level of need for the practice

The roles of creative leadership for primary school principals to promote teachers' creativity	Current states					Desirable states				
	5	4	3	2	1	5	4	3	2	1
<b>Personal: to engage every teacher using their creative potential in teaching</b>										
1. The principal engages every teacher using their creative potential in teaching to promote teachers' creativity in.....										
1.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
1.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
1.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
1.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1
<b>External factors affect principals to engage every teacher using their creative potential in teaching</b>										
2. Political and government policy supports the principal to engage every teacher using their creative potential in teaching to promote teachers' creativity in.....										
2.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
2.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
2.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
2.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1
3. Economy supports the principal to engage every teacher using their creative potential in teaching to promote teachers' creativity in.....										
3.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
3.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
3.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
3.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1
4. Socio-culture supports the principal to engage every teacher using their creative potential in teaching to promote teachers' creativity in.....										
4.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
4.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
4.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
4.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1
5. Technology supports the principal to engage every teacher using their creative potential in teaching to promote teachers' creativity in.....										
5.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
5.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
5.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
5.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1

The roles of creative leadership for primary school principals to promote teachers' creativity		Current states					Desirable states				
		5	4	3	2	1	5	4	3	2	1
<b>Personal: to energize every teacher's imagination for teaching</b>											
6.	The principal energizes every teacher's imagination for teaching to promote teachers' creativity in.....										
6.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
6.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
6.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
6.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
<b>External factors affect principals to energize every teacher's imagination for teaching</b>											
7.	Political and government policy supports the principal to energize every teacher's imagination for teaching to promote teachers' creativity in.....										
7.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
7.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
7.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
7.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
8.	Guangxi economy supports the principal to energize every teacher's imagination for teaching to promote teachers' creativity in.....										
8.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
8.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
8.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
8.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
9.	Guangxi socio-culture supports the principal energize every teacher's imagination for teaching to promote teachers' creativity in.....										
9.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
9.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
9.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
9.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
10.	Guangxi technology supports the principal to energize every teacher's imagination for teaching to promote teachers' creativity in.....										
10.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
10.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
10.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
10.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1

The roles of creative leadership for primary school principals to promote teachers' creativity		Current states					Desirable states				
		5	4	3	2	1	5	4	3	2	1
<b>Personal: to provide learning opportunities to enhance creativity in teaching</b>											
11.	The principal provides learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....										
11.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
11.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
11.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
11.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
<b>External factors affect principals to provide learning opportunities to enhance creativity in teaching</b>											
12.	Political and government policy supports the principal to provide learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....										
12.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
12.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
12.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
12.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
13.	Guangxi economy supports the principal to provide learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....										
13.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
13.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
13.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
13.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
14.	Guangxi socio-culture supports the principal to provide learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....										
14.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
14.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
14.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
14.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
15.	Guangxi technology supports the principal to provide learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....										
15.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
15.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
15.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
15.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1



The roles of creative leadership for primary school principals to promote teachers' creativity				Current states					Desirable states				
				5	4	3	2	1	5	4	3	2	1
<b>Group: To facilitate diversity in teacher teams</b>													
16. The principal facilitates diversity in teacher teams to promote teachers' creativity in.....													
16.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1		
16.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1		
16.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1		
16.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1		
<b>External factors affect principals to form and facilitate dynamic creative teacher teams</b>													
17. Political and government policy supports the principal to facilitate diversity in teacher teams to promote teachers' creativity in.....													
17.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1		
17.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1		
17.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1		
17.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1		
18. Guangxi economy supports the principal to facilitate diversity in teacher teams to promote teachers' creativity in.....													
18.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1		
18.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1		
18.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1		
18.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1		
19. Guangxi socio-culture supports the principal to facilitate diversity in teacher teams to promote teachers' creativity in.....													
19.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1		
19.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1		
19.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1		
19.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1		
20. Guangxi technology supports the principal to facilitate diversity in teacher teams to promote teachers' creativity in.....													
20.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1		
20.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1		
20.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1		
20.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1		

The roles of creative leadership for primary school principals to promote teachers' creativity		Current states					Desirable states				
		5	4	3	2	1	5	4	3	2	1
<b>Group: To facilitate collaboration in teacher teams</b>											
21.	The principal facilitates collaboration in teacher teams to promote teachers' creativity in.....										
21.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
21.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
21.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
21.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
<b>External factors affect principals to facilitate collaboration in teacher teams</b>											
22.	Political and government policy supports the principal to facilitate collaboration in teacher teams to promote teachers' creativity in.....										
22.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
22.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
22.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
22.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
23.	Guangxi economy supports the principal to facilitate collaboration in teacher teams to promote teachers' creativity in.....										
23.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
23.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
23.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
23.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
24.	Guangxi socio-culture supports the principal to facilitate collaboration in teacher teams to promote teachers' creativity in.....										
24.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
24.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
24.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
24.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
25.	Guangxi technology supports the principal to facilitate collaboration in teacher teams to promote teachers' creativity in.....										
25.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
25.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
25.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
25.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1

The roles of creative leadership for primary school principals to promote teachers' creativity	Current states					Desirable states				
	5	4	3	2	1	5	4	3	2	1
<b>Group: To offer time for teacher teams to work on their passion</b>										
26. The principal offers time for teacher teams to work on their passion to promote teachers' creativity in.....										
26.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
26.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
26.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
26.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1
<b>External factors affect principals to offer time for teacher teams to work on their passion</b>										
27. Political and government policy supports the principal to offer time for teacher teams to work on their passion to promote teachers' creativity in.....										
27.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
27.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
27.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
27.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1
28. Guangxi economy supports the principal to offer time for teacher teams to work on their passion to promote teachers' creativity in.....										
28.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
28.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
28.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
28.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1
29. Guangxi socio-culture supports the principal to offer time for teacher teams to work on their passion to promote teachers' creativity in.....										
29.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
29.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
29.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
29.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1
30. Guangxi technology supports the principal to offer time for teacher teams to work on their passion to promote teachers' creativity in.....										
30.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
30.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
30.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
30.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1

The roles of creative leadership for primary school principals to promote teachers' creativity		Current states					Desirable states				
		5	4	3	2	1	5	4	3	2	1
<b>Culture: To promote a flexible school culture</b>											
31.	The principal promotes a flexible school culture to enhance teachers' creativity in.....										
31.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
31.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
31.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
31.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
<b>External factors affect principals to promote a flexible school culture</b>											
32.	Political and government policy supports the principal to promote a flexible school culture to enhance teachers' creativity in.....										
32.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
32.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
32.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
32.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
33.	Guangxi economy supports the principal to promote a flexible school culture to enhance teachers' creativity in.....										
33.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
33.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
33.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
33.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
34.	Guangxi socio-culture supports the principal to promote a flexible school culture to enhance teachers' creativity in.....										
34.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
34.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
34.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
34.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
35.	Guangxi technology facilitates the principal to promote a flexible school culture to enhance teachers' creativity in.....										
35.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
35.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
35.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
35.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1

The roles of creative leadership for primary school principals to promote teachers' creativity		Current states					Desirable states				
		5	4	3	2	1	5	4	3	2	1
<b>Culture: To promote an inquiring school culture</b>											
36. The principal promotes an inquiring school culture to enhance teachers' creativity in.....											
36.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
36.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
36.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
36.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
<b>External factors affect principals to promote an inquiring school culture</b>											
37. Political and government policy supports the principal to promote an inquiring school culture to enhance teachers' creativity in.....											
37.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
37.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
37.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
37.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
38. Guangxi economy supports the principal to promote an inquiring school culture to enhance teachers' creativity in.....											
38.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
38.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
38.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
38.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
39. Guangxi socio-culture supports the principal to promote an inquiring school culture to enhance teachers' creativity in.....											
39.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
39.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
39.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
39.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1
40. Guangxi technology facilitates the principal to promote an inquiring school culture to enhance teachers' creativity in.....											
40.1	modeling creative working processes	5	4	3	2	1	5	4	3	2	1
40.2	encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
40.3	identifying students' creativity	5	4	3	2	1	5	4	3	2	1
40.4	developing students' creativity	5	4	3	2	1	5	4	3	2	1

The roles of creative leadership for primary school principals to promote teachers' creativity	Current states					Desirable states				
	5	4	3	2	1	5	4	3	2	1
<b>Culture: To create creative school workspaces</b>										
41. The principal creates creative school workspaces to promote teachers' creativity in.....										
41.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
41.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
41.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
41.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1
<b>External factors affect principals to create creative school workspaces</b>										
42. Political and government policy supports the principal to create creative school workspaces to promote teachers' creativity in.....										
42.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
42.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
42.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
42.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1
43. Guangxi economy supports the principal to create creative school workspaces to promote teachers' creativity in.....										
43.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
43.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
43.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
43.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1
44. Guangxi socio-culture supports the principal to create creative school workspaces to promote teachers' creativity in.....										
44.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
44.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
44.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
44.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1
45. Guangxi technology facilitates the principal to create creative school workspaces to promote teachers' creativity in.....										
45.1 modeling creative working processes	5	4	3	2	1	5	4	3	2	1
45.2 encouraging students' creativity	5	4	3	2	1	5	4	3	2	1
45.3 identifying students' creativity	5	4	3	2	1	5	4	3	2	1
45.4 developing students' creativity	5	4	3	2	1	5	4	3	2	1

Thank you very much for your answers.

## **Appendix B**

### **Name List of Specialists and Stakeholders**

1. A list of specialists who examine the content validity and suitability of the conceptual framework and research tool (the questionnaire)
2. A list of specialists and stakeholders who examine the first draft of the creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China
3. A list of specialists and stakeholders who participate in the focus group

**1. List of specialist who examine the content validity and suitability of the conceptual framework and research tool (the questionnaire)**

**1. Professor Dr. Yong Zhao**

Presidential Chair, Director, Institute of Global and Online Education  
Professor, Department of Educational Methodology, Policy, and Leadership  
College of Education, University of Oregon

**2. Professor Zengyou Fu**

President of the Chinese side of the CICU, Director, Sirindhorn Center for  
China-Thai Science Technology & Culture, Peking University

**3. Associate Professor Dr. Weerawat Utairat**

Director of Ph.D Program in Educational Administration, Dean of Graduate  
school in Eastern Asia University

**4. Associate Professor Dr. Duangkamol Traiwichitkun**

Professor, Educational Research Methodology and Psychology, Faculty of  
Education, Chulalongkorn University

**5. Mr. Pingying Zhang**

Deputy Director of Yinhai Distric Education Bureau, Guangxi, China



## 2. List of specialists and stakeholders who examine the first draft of the creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China

No.	Name	Title	
<b>6 Specialists</b>			
1	<b>Associate Prof. Dr. Weerawat Utairat</b>	Dean of Graduate school in Easter Asia University	
2	<b>Prof. Dr. Mingyuan Gu</b>	President of the Chinese Society of Education	
3	<b>Prof. Dr. Yong Zhao</b>	Presidential Chair, Director, Institute of Global and Online Education Professor, Department of Educational Methodology, Policy, and Leadership College of Education, University of Oregon	
4	<b>Prof. Zengyou Fu</b>	President of the Chinese side of the CICU, Director, Sirindhorn Center for China-Thai Science Technology & Culture, Peking University	
5	<b>Prof. Dr. Juanjuan Geng</b>	A Professor Guangxi Normal University	
6	<b>Mr. Pingying Zhang</b>	Deputy Director of Bureau of Education in Yin Hai district, Guangxi	
<b>24 Stakeholders:</b> selected a principal or teacher as representative from each prefecture-level city in Guangxi. There are 14 prefecture-level cities in Guangxi, China			
1	南宁 Nan ning	Mrs. Juan Zhao	School vice-principal 南宁市江南区经济开发区普罗旺斯小学
		Ms. Shengjie Chen	Teacher 南宁市江南区经济开发区普罗旺斯小学
		Ms. Qianru Song	Teacher 南宁市天桃实验学校
		Mrs. Fengxing Lu	Teacher 南宁市天桃实验学校
2	河池 He chi	Mr. Song Tan	School vice-principal 巴马县东山乡中心小学教师
		Mrs. Xiaoying Liang	Teacher 巴马县东山乡中心小学教师
3	钦州 Qin zhou	Mrs. Xiaoli Zhu	Director of discipline 钦州市钦南区犀牛脚镇岭门小
4	防城港 FCG	Mr. Lirong Huang	Teacher 广西防城港市上思县公正乡东屏小
5	贺州 He zhou	Mrs. Xiaohong Zhong	Teacher 广西贺州市昭平县昭平镇上岸小学
		Mrs. Guoying Zuo	Teacher 贺州市八步区贺街镇双莲中学
6	百色 Bai se	Mr. Zongxian Luo	School principal 广西百色市田东县祥周镇康元小学
7	柳州 Liu zhou	Mr. Yangle Xie	Director of discipline 广西柳州市柳邕路第一小学教育集
8	玉林 Yu lin	Mr. Qingyuan Que	School vice-principal 玉林地区小学
		Ms. Guiping Lu	Teacher 玉林地区小学
9	来宾 Lai bin	Mrs. Jifeng Huang	School vice-principal 来宾市兴宾区第二小学
		Mrs. Jinli Li	Teacher 来宾市兴宾区第二小学
10	崇左 Chong zuo	Mr. Wenyuan Wu	Teacher 广西崇左市卜寨小
		Mr. Xinxing Zhao	Teacher 广西崇左大新城南九年一贯制学校
		Mrs. Meimei Ren	Teacher 广西扶绥县实验小
11	北海 Bei hai	Mrs. Chunxia Zhang	Head of Grade 广西北海市海城区第八小学
12	梧州 Wu zhou	Mrs. Xiaoling Guo	Teacher 梧州市题甫小学
13	桂林 Gui lin	Mrs. Guihong Liao	School vice-principal 广西省桂林市临桂区城区第二小学
		Mrs. Weihuang Huang	Teacher 广西省桂林市临桂区城区第二小学
14	贵港 Gui gang	Mr. Weiqiang Luo	School principal 贵港市港南区东津镇洋七桥小学

### 3. List of Focus Group Informants

No.	Name	Title
1	张平英	副局长 广西北海市银海区教育局
2	张均轩	School principal 北海市银海区银滩镇禾沟小学
3	沈国华	School Principal 北海市银海区银滩镇龙潭小学
4	陈功武	School Principal 北海市银海区银滩正曲湾小学
5	钟启东	School Principal 北海市银海区银滩镇关井小学
6	李光	School Vice-Principal 北海市银海区银滩镇中心小学
7	裴春风	School Vice-principal 北海市银海区银滩镇中心小学
8	周旭文	School Principal 北海市银海区银滩镇中心小学
9	冯洁	School Principal 北海市银海区银滩镇下村小学
10	姜世玲	School Principal 北海市银海区银滩镇和兴小学
11	朱其智	School Principal 北海市银海区银滩镇丰海小学
12	吴伟强	School Principal 北海市银海区银滩镇电建小学
13	谭全海	Teacher 北海市银海区银滩镇中心小学
14	莫全萍	Teacher 北海市银海区银滩镇下村小学
15	冯佳娟	Teacher 北海市银海区银滩镇中心小学
16	林炳平	Teacher 北海市银海区银滩镇咸田小学
17	叶庆	Teacher 北海市银海区银滩镇北背岭小学
18	陈国梅	Teacher 北海市银海区银滩镇咸田小学
19	周杏花	Teacher 北海市银海区银滩镇丰海小学

**Appendix C**  
**Letters of Cooperation**



จุฬาลงกรณ์มหาวิทยาลัย  
CHULALONGKORN UNIVERSITY

No. 0512.6 (2747) / 790



Division of Educational Management  
Faculty of Education, Chulalongkorn  
University Phayathai Road,  
Pathumwan Bangkok 10330, Thailand

September 26, 2016

**Subject: Request for cooperation to confirm theoretical framework of a research**

**Dear Associate Prof. Dr. Weerawat Utairat**

**Attachment: Dissertation proposal summary and theoretical framework**

On behalf of the Faculty of Education, Chulalongkorn University, I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, one of the students of our Doctor of Philosophy Program in Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D. and Assistant Professor Nantarat Charoenkul, Ph.D.

In this research, Miss Zhang Qing Ling needs to confirm the theoretical framework of a doctoral dissertation research from experts who specialize in Educational Administration or related field in education.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for confirming the theoretical framework as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,



(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-2562

No. 0512.6 (2747) / 792



Division of Educational Management  
Faculty of Education, Chulalongkorn  
University Phayathai Road,  
Pathumwan Bangkok 10330, Thailand

September 26, 2016

**Subject: Request for cooperation to confirm theoretical framework of a research**

**Dear Associate Prof. Dr. Duangkamol Traiwichitkhun**

**Attachment: Dissertation proposal summary and theoretical framework**

On behalf of the Faculty of Education, Chulalongkorn University, I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, one of the students of our Doctor of Philosophy Program in Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D. and Assistant Professor Nantarat Charoenkul, Ph.D.

In this research, Miss Zhang Qing Ling needs to confirm the theoretical framework of a doctoral dissertation research from experts who specialize in Educational Administration or related field in education.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for confirming the theoretical framework as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-2562

No. 0512.6 (2747) / ๗๙๖



Division of Educational Management  
Faculty of Education, Chulalongkorn  
University Phayathai Road,  
Pathumwan Bangkok 10330, Thailand

September 26, 2016

**Subject: Request for cooperation to confirm theoretical framework of a research**

**Dear Mr. Zhang Pingying, Deputy Director of Yin Hai District Education Bureau**

**Attachment: Dissertation proposal summary and theoretical framework**

On behalf of the Faculty of Education, Chulalongkorn University, I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, one of the students of our Doctor of Philosophy Program in Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "**Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China**". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D. and Assistant Professor Nantarat Charoenkul, Ph.D.

In this research, Miss Zhang Qing Ling needs to confirm the theoretical framework of a doctoral dissertation research from experts who specialize in Educational Administration or related field in education.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for confirming the theoretical framework as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-2562

No. 0512.6 (2747) / 0842



Division of Educational Management  
Faculty of Education, Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

October 07, 2016

**Subject: Request for cooperation to confirm theoretical framework of a research**

**Dear Prof. Dr. Yong Zhao**

**Attachment: Operational definition and theoretical framework**

On behalf of the Faculty of Education, Chulalongkorn University, I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, one of the students of our Doctor of Philosophy Program in Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "**Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China**". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D. and Assistant Professor Nantarat Charoenkul, Ph.D.

In this research, Miss Zhang Qing Ling needs to confirm the theoretical framework of a doctoral dissertation research from experts who specialize in Educational Administration or related field in education.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for confirming the theoretical framework as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-256

No. 0512.6 (2747) / ๘๐๐



Division of Educational Management  
Faculty of Education, Chulalongkorn  
University Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

September 26, 2016

**Subject:** Request for cooperation to check content validity measurement of instrument

**Dear** Prof. Fu Zengyou

**Attachment:** Dissertation proposal summary and research instrument

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, one of the students of our Doctor of Philosophy Program in Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "**Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China**". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D. and Assistant Professor Nantarat Charoenkul, Ph.D.

In this research, Miss Zhang Qing Ling needs to check content validity measurement of instrument of a doctoral dissertation research from experts who specialize in Educational Administration or related field in education.

We do hope that you will grant permission to Miss Zhang Qing Ling to check content validity measurement of instrument of a doctoral dissertation research as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management  
Tel. 0 2218-2565 - 97 Ext. 7062  
Fax 0 2218-2562



No. 0512.6 (2747) / ๘๐1



Division of Educational Management  
Faculty of Education, Chulalongkorn  
University Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

September 26, 2016

**Subject:** Request for cooperation to check content validity measurement of instrument

**Dear** Mr. Zhang Pingying, Deputy Director of Yin Hai District Education Bureau

**Attachment:** Dissertation proposal summary and research instrument

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, one of the students of our Doctor of Philosophy Program in Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "**Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China**". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D. and Assistant Professor Nantarath Charoenkul, Ph.D.

In this research, Miss Zhang Qing Ling needs to check content validity measurement of instrument of a doctoral dissertation research from experts who specialize in Educational Administration or related field in education.

We do hope that you will grant permission to Miss Zhang Qing Ling to check content validity measurement of instrument of a doctoral dissertation research as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-2562

No. 0512.6 (2747) / 804



Division of Educational Management  
Faculty of Education, Chulalongkorn  
University Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

September 26, 2016

**Subject:** Request for cooperation to check content validity measurement of instrument

**Dear** Associate Prof. Dr. Weerawat Utairat

**Attachment:** Dissertation proposal summary and research instrument

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, one of the students of our Doctor of Philosophy Program in Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "**Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China**". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D. and Assistant Professor Nantarath Charoenkul, Ph.D.

In this research, Miss Zhang Qing Ling needs to check content validity measurement of instrument of a doctoral dissertation research from experts who specialize in Educational Administration or related field in education.

We do hope that you will grant permission to Miss Zhang Qing Ling to check content validity measurement of instrument of a doctoral dissertation research as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-2562

No. 0512.6 (2747) / ๘๐๖



Division of Educational Management  
Faculty of Education, Chulalongkorn  
University Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

September 26, 2016

**Subject:** Request for cooperation to check content validity measurement of instrument

**Dear** Associate Prof. Dr. Duangkamol Traiwichitkhun

**Attachment:** Dissertation proposal summary and research instrument

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, one of the students of our Doctor of Philosophy Program in Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D. and Assistant Professor Nantarat Charoenkul, Ph.D.

In this research, Miss Zhang Qing Ling needs to check content validity measurement of instrument of a doctoral dissertation research from experts who specialize in Educational Administration or related field in education.

We do hope that you will grant permission to Miss Zhang Qing Ling to check content validity measurement of instrument of a doctoral dissertation research as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-2562

No. 0512.6 (2747) / ๐843



Division of Educational Management  
Faculty of Education, Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

October 07, 2016

**Subject: Request for cooperation to check content validity measurement of instrument**

**Dear Prof. Dr. Yong Zhao**

**Attachment: Operational definition and research instrument**

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, one of the students of our Doctor of Philosophy Program in Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "**Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China**". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D. and Assistant Professor Nantarat Charoenkul, Ph.D.

In this research, Miss Zhang Qing Ling needs to check content validity measurement of instrument of a doctoral dissertation research from experts who specialize in Educational Administration or related field in education.

We do hope that you will grant permission to Miss Zhang Qing Ling to check content validity measurement of instrument of a doctoral dissertation research as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management  
Tel. 0 2218-2565 - 97 Ext. 7062  
Fax 0 2218-25

No. 0512.6 (2747) / 798



Division of Educational Management  
 Faculty of Education, Chulalongkorn  
 University Phayathai Road, Pathumwan  
 Bangkok 10330, Thailand

September 26, 2016

**Subject: Request for cooperation to collect data****To Department of Education of Guangxi Zhuang Autonomous Region****Attachment: Questionnaires**

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, one of the students of our Doctor of Philosophy Program in Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D. and Assistant Professor Nantararat Charoenkul, Ph.D.

In this research, Miss Zhang Qing Ling needs to collect data from primary school principals and teachers of Beihai city, Guangxi.

We do hope that you will grant permission to Miss Zhang Qing Ling to collect data as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-2562

No. 0512.6 (2747) / ๐85



Division of Educational Management  
Faculty of Education, Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

February 20, 2017

**Subject: Request for cooperation to evaluate the suitability and feasibility of strategy**

**Dear Prof. Dr. Juanjuan Geng**

**Attachment: Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, a doctoral candidate in the division of Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "**Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China**". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D.

In this research, Miss Zhang Qing Ling needs to evaluate the suitability and feasibility of creative leadership strategy of a doctoral dissertation research from experts who specialize in Educational Administration or related field in education.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for evaluating the suitability and feasibility of strategy as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-256



No. 0512.6 (2747) / ๐86



Division of Educational Management  
Faculty of Education, Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

February 20, 2017

**Subject: Request for cooperation to evaluate the suitability and feasibility of strategy**

**Dear Prof. Dr. Yong Zhao**

**Attachment: Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, a doctoral candidate in the division of Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D.

In this research, Miss Zhang Qing Ling needs to evaluate the suitability and feasibility of creative leadership strategy of a doctoral dissertation research from experts who specialize in Educational Administration or related field in education.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for evaluating the suitability and feasibility of strategy as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management  
Tel. 0 2218-2565 - 97 Ext. 7062  
Fax 0 2218-256



No. 0512.6 (2747) /

Division of Educational Management  
Faculty of Education, Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

February 20, 2017

**Subject: Request for cooperation to evaluate the suitability and feasibility of strategy**

**Dear Prof. Dr. Mingyuan Gu**

**Attachment: Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

On behalf of the Faculty of Education, Chulalongkorn University, I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, a doctoral candidate in the division of Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "**Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China**". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D.

In this research, Miss Zhang Qing Ling needs to evaluate the suitability and feasibility of creative leadership strategy of a doctoral dissertation research from experts who specialize in Educational Administration or related field in education.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for evaluating the suitability and feasibility of strategy as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management  
Tel. 0 2218-2565 - 97 Ext. 7062  
Fax 0 2218-256





No. 0512.6 (2747) / ๐87

Division of Educational Management  
Faculty of Education, Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

February 20, 2017

**Subject: Request for cooperation to evaluate the suitability and feasibility of strategy**

**Dear Ms. Weihua Huang** one of the teachers in primary school of Guilin City, Guangxi

**Attachment: Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, a doctoral candidate in the division of Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D.

In this research, Miss Zhang Qing Ling needs to evaluate the suitability and feasibility of creative leadership strategy of a doctoral dissertation research from stakeholders who work in primary school of Guangxi, China.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for evaluating the suitability and feasibility of strategy as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management  
Tel. 0 2218-2565 - 97 Ext. 7062  
Fax 0 2218-256



No. 0512.6 (2747) / *efo*

Division of Educational Management  
Faculty of Education, Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

February 20, 2017

**Subject: Request for cooperation to evaluate the suitability and feasibility of strategy**

**Dear Ms. Huang Vice-Principal of primary school in Laibin City, Guangxi**

**Attachment: Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, a doctoral candidate in the division of Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "**Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China**". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D.

In this research, Miss Zhang Qing Ling needs to evaluate the suitability and feasibility of creative leadership strategy of a doctoral dissertation research from stakeholders who work in primary school of Guangxi, China.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for evaluating the suitability and feasibility of strategy as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-256



No. 0512.6 (2747) / ๐๗๗

Division of Educational Management  
Faculty of Education, Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

February 20, 2017

**Subject: Request for cooperation to evaluate the suitability and feasibility of strategy**

**Dear Ms. Jinli Li** one of the teachers in primary school of Laibin City, Guangxi

**Attachment: Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, a doctoral candidate in the division of Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "**Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China**". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D.

In this research, Miss Zhang Qing Ling needs to evaluate the suitability and feasibility of creative leadership strategy of a doctoral dissertation research from stakeholders who work in primary school of Guangxi, China.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for evaluating the suitability and feasibility of strategy as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management  
Tel. 0 2218-2565 - 97 Ext. 7062  
Fax 0 2218-256





No. 0512.6 (2747) / 092

Division of Educational Management  
Faculty of Education, Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

February 20, 2017

**Subject: Request for cooperation to evaluate the suitability and feasibility of strategy**

**Dear Ms. Shengjie Chen** one of the teachers in primary school of Nanning City, Guangxi

**Attachment: Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, a doctoral candidate in the division of Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "**Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China**". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D.

In this research, Miss Zhang Qing Ling needs to evaluate the suitability and feasibility of creative leadership strategy of a doctoral dissertation research from stakeholders who work in primary school of Guangxi, China.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for evaluating the suitability and feasibility of strategy as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-256



No. 0512.6 (2747) / ๐๗๓

Division of Educational Management  
Faculty of Education, Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

February 20, 2017

**Subject: Request for cooperation to evaluate the suitability and feasibility of strategy**

**Dear Ms. Juan Zhao Vice -Principal. of primary school in Nanning City, Guangxi**

**Attachment: Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, a doctoral candidate in the division of Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "**Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China**". This research is under the supervision of Professor Puet Siribanpitak, Ph.D.

In this research, Miss Zhang Qing Ling needs to evaluate the suitability and feasibility of creative leadership strategy of a doctoral dissertation research from stakeholders who work in primary school of Guangxi, China.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for evaluating the suitability and feasibility of strategy as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management  
Tel. 0 2218-2565 - 97 Ext. 7062  
Fax 0 2218-256



No. 0512.6 (2747) / 095

Division of Educational Management  
 Faculty of Education, Chulalongkorn University  
 Phayathai Road, Pathumwan  
 Bangkok 10330, Thailand

February 20, 2017

**Subject: Request for cooperation to evaluate the suitability and feasibility of strategy**

**Dear Ms. Guo** one of the teachers in primary school of Wuzhou City, Guangxi

**Attachment: Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, a doctoral candidate in the division of Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D.

In this research, Miss Zhang Qing Ling needs to evaluate the suitability and feasibility of creative leadership strategy of a doctoral dissertation research from stakeholders who work in primary school of Guangxi, China.

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Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management  
 Tel. 0 2218-2565 - 97 Ext. 7062  
 Fax 0 2218-256



No. 0512.6 (2747) / ๐๙๖

Division of Educational Management  
Faculty of Education, Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

February 20, 2017

**Subject: Request for cooperation to evaluate the suitability and feasibility of strategy**

**Dear Teacher of primary school in Yulin City, Guangxi**

**Attachment: Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, a doctoral candidate in the division of Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D.

In this research, Miss Zhang Qing Ling needs to evaluate the suitability and feasibility of creative leadership strategy of a doctoral dissertation research from stakeholders who work in primary school of Guangxi, China.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for evaluating the suitability and feasibility of strategy as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-256





No. 0512.6 (2747) / 097

Division of Educational Management  
Faculty of Education, Chulalongkorn University  
Phayathai Road, Pathumwan  
Bangkok 10330, Thailand

February 20, 2017

**Subject: Request for cooperation to evaluate the suitability and feasibility of strategy**

**Dear Vice-Principal of primary school in Yulin City, Guangxi**

**Attachment: Creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi, China**

On behalf of the Faculty of Education, Chulalongkorn University. I am writing to request a cooperation in a research project conducted by Miss Zhang Qing Ling, a doctoral candidate in the division of Educational Administration. Miss Zhang Qing Ling is currently conducting her doctoral dissertation research on "Creative Leadership Strategies for Primary School Principals to Promote Teachers' Creativity in Guangxi Province, China". This research is under the supervision of Professor Pruet Siribanpitak, Ph.D.

In this research, Miss Zhang Qing Ling needs to evaluate the suitability and feasibility of creative leadership strategy of a doctoral dissertation research from stakeholders who work in primary school of Guangxi, China.

We do hope that you will grant permission to Miss Zhang Qing Ling to ask for evaluating the suitability and feasibility of strategy as mentioned above. Your kind cooperation is greatly appreciated.

Sincerely Yours,

(Assistant Professor Chayapim Usaho, Ph.D.)

Chair of Division

Division of Education Management

Tel. 0 2218-2565 - 97 Ext. 7062

Fax 0 2218-256



**Appendix D**  
**Results of Data Analysis**



## **Examination of the validity of the questionnaire**

**Research Questionnaire:** Creative leadership of primary school principals to promote teachers' creativity in Guangxi province, China

### **Introduction**

This research is a part of a dissertation of doctoral student in Education Management, Faculty of Education, Chulalongkorn University.

The objective of this questionnaire is to study the current states of creative leadership of primary school principals to promote teachers' creativity in Guangxi province, China. The researcher would like to ask you for help in the examination of the validity of the questionnaire to achieve maximum benefit in the development of research tools and research objectives.

The results from the questionnaire will be used to develop creative leadership strategies for primary school principals to promote teachers' creativity in Guangxi province, China.

There are three sections in this examination of the validity of the questionnaire

Section 1 The variables must be measured in research

Section 2 Other suggestions to improve the questionnaire

Section 3 The basic information of the expert

There are no risks beyond normal day-to-day school attendance associated with your participation in this confirmation, including any effect on the position, function and responsibility in the performance of your duties. The information you answer maintained as confidential. And I will destroy at the end of research.

Miss Qingling Zhang

Ph.D. Student, Education Management

Faculty of Education, Chulalongkorn University

### **Section 1 The variables must be measured in research**

**Introduction:** Please consider the following practical measures which meet the definition or not. Please tick (√) in the box that is true for you. The criteria are as follows:

-1	Means	you think this is unsuitable
0	Mean	you are not sure
+1	Mean	you think this is suitable

### Results of the examination of the validity of the questionnaire

**Experts:** 1. Professor Dr. Yong Zhao 2. Professor Zengyou Fu 3. Associate Professor Dr. Weerawat Utairat  
4. Associate Professor Dr. Duangkamol Traiwichitkun 5. Mr. Pingying Zhang

Item	Experts					IOC	Suggestions
	1	2	3	4	5		
1. The principal engages every teacher using their creative potential in teaching to promote teachers' creativity in.....							
1) modeling creative working processes	+1	+1	+1	+1	+1	1.0	
2) encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
3) identifying students' creativity	+1	+1	+1	+1	+1	1.0	
4) developing students' creativity	+1	+1	+1	+1	+1	1.0	
2. Political and government policy supports the principal to engage every teacher using their creative potential in teaching to promote teachers' creativity in.....							
5) modeling creative working processes	+1	+1	+1	+1	+1	1.0	
6) encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
7) identifying students' creativity	+1	+1	+1	+1	+1	1.0	
8) developing students' creativity	+1	+1	+1	+1	+1	1.0	
3. Economy supports the principal to engage every teacher using their creative potential in teaching to promote teachers' creativity in.....							
9) modeling creative working processes	+1	+1	+1	+1	+1	1.0	
10) encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
11) identifying students' creativity	+1	+1	+1	+1	+1	1.0	
12) developing students' creativity	+1	+1	+1	+1	+1	1.0	
4. Socio-culture supports the principal to engage every teacher using their creative potential in teaching to promote teachers' creativity in.....							
13) modeling creative working processes	+1	+1	+1	+1	+1	1.0	
14) encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
15) identifying students' creativity	+1	+1	+1	+1	+1	1.0	
16) developing students' creativity	+1	+1	+1	+1	+1	1.0	
5. Technology supports the principal to engage every teacher using their creative potential in teaching to promote teachers' creativity in.....							
17) modeling creative working processes	+1	+1	+1	+1	+1	1.0	
18) encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
19) identifying students' creativity	+1	+1	+1	+1	+1	1.0	
20) developing students' creativity	+1	+1	+1	+1	+1	1.0	

	Item	Experts					IOC	Suggestions
		1	2	3	4	5		
6. The principal energizes every teacher's imagination for teaching to promote teachers' creativity in.....								
21)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
22)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
23)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
24)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
7. Political and government policy supports the principal to energize every teacher's imagination for teaching to promote teachers' creativity in.....								
25)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
26)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
27)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
28)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
8. Economy supports the principal to energize every teacher's imagination for teaching to promote teachers' creativity in.....								
29)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
30)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
31)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
32)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
9. Socio-culture supports the principal to energize every teacher's imagination for teaching to promote teachers' creativity in.....								
33)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
34)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
35)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
36)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
10. Technology supports the principal to energize every teacher's imagination for teaching to promote teachers' creativity in.....								
37)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
38)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
39)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
40)	developing students' creativity	+1	+1	+1	+1	+1	1.0	

	Item	Experts					IOC	Suggestions
		1	2	3	4	5		
11. The principal provides learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....								
41)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
42)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
43)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
44)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
12. Political and government policy supports the principal to provide learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....								
45)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
46)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
47)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
48)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
13. Economy supports the principal to provide learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....								
49)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
50)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
51)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
52)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
14. Socio-culture supports the principal to provide learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....								
53)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
54)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
55)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
56)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
15. Technology supports the principal to provide learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....								
57)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
58)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
59)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
60)	developing students' creativity	+1	+1	+1	+1	+1	1.0	

	Item	Experts					IOC	Suggestions
		1	2	3	4	5		
16. The principal facilitates diversity in teacher teams to promote teachers' creativity in.....								
61)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
62)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
63)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
64)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
17. Political and government policy supports the principal to facilitate diversity in teacher teams to promote teachers' creativity in.....								
65)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
66)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
67)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
68)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
18. Guangxi economy supports the principal to facilitate diversity in teacher teams to promote teachers' creativity in.....								
69)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
70)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
71)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
72)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
19. Guangxi socio-culture supports the principal to facilitate diversity in teacher teams to promote teachers' creativity in.....								
73)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
74)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
75)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
76)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
20. Guangxi technology supports the principal to facilitate diversity in teacher teams to promote teachers' creativity in.....								
77)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
78)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
79)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
80)	developing students' creativity	+1	+1	+1	+1	+1	1.0	

Item	Experts					IOC	Suggestions	
	1	2	3	4	5			
21. The principal facilitates collaboration in teacher teams to promote teachers' creativity in.....								
81)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	give a minute description about the "modeling creative working processes; encouraging students' creativity; identifying students' creativity; developing students' creativity" that would be better to understand.
82)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
83)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
84)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
22. Political and government policy supports the principal to facilitate collaboration in teacher teams to promote teachers' creativity in.....								
85)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
86)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
87)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
88)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
23. Guangxi economy supports the principal to facilitate collaboration in teacher teams to promote teachers' creativity in.....								
89)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	Add Guangxi to the word "economy"/ Guangxi economy
90)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
91)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
92)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
24. Guangxi socio-culture supports the principal to facilitate collaboration in teacher teams to promote teachers' creativity in.....								
93)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	Add Guangxi to the word "Socio-culture"/ Guangxi Socio-culture
94)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
95)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
96)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
25. Guangxi technology supports the principal to facilitate collaboration in teacher teams to promote teachers' creativity in.....								
97)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	Add Guangxi to the word "technology"/ Guangxi technology
98)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
99)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
100)	developing students' creativity	+1	+1	+1	+1	+1	1.0	



	Item	Experts					IOC	Suggestions
		1	2	3	4	5		
26. The principal offers time for teacher teams to work on their passion to promote teachers' creativity in.....								
101)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
102)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
103)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
104)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
27. Political and government policy supports the principal to offer time for teacher teams to work on their passion to promote teachers' creativity in.....								
105)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
106)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
107)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
108)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
28. Guangxi economy supports the principal to offer time for teacher teams to work on their passion to promote teachers' creativity in.....								
109)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
110)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
111)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
112)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
29. Guangxi socio-culture supports the principal to offer time for teacher teams to work on their passion to promote teachers' creativity in.....								
113)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
114)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
115)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
116)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
30. Guangxi technology supports the principal to offer time for teacher teams to work on their passion to promote teachers' creativity in.....								
117)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
118)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
119)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
120)	developing students' creativity	+1	+1	+1	+1	+1	1.0	



	Item	Experts					IOC	Suggestions
		1	2	3	4	5		
31. The principal promotes a flexible school culture to promote teachers' creativity in.....								
121)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
122)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
123)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
124)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
32. Political and government policy supports the principal to promote a flexible school culture to promote teachers' creativity in.....								
125)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
126)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
127)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
128)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
33. Guangxi economy supports the principal to promote a flexible school culture to promote teachers' creativity in.....								
129)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
130)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
131)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
132)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
34. Guangxi socio-culture supports the principal to promote a flexible school culture to promote teachers' creativity in.....								
133)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
134)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
135)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
136)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
35. Guangxi technology supports the principal to promote a flexible school culture to promote teachers' creativity in.....								
137)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
138)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
139)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
140)	developing students' creativity	+1	+1	+1	+1	+1	1.0	

	Item	Experts					IOC	Suggestions
		1	2	3	4	5		
36. The principal promotes an inquiring school culture to promote teachers' creativity in.....								
141)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
142)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
143)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
144)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
37. Political and government policy supports the principal to promote an inquiring school culture to promote teachers' creativity in.....								
145)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
146)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
147)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
148)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
38. Guangxi economy supports the principal to promote an inquiring school culture to promote teachers' creativity in.....								
149)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
150)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
151)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
152)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
39. Guangxi socio-culture supports the principal to promote an inquiring school culture to promote teachers' creativity in.....								
153)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	Add Guangxi to the word "socio- culture"/ Guangxi socio- culture
154)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
155)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
156)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
40. Guangxi technology supports the principal to promote an inquiring school culture to promote teachers' creativity in.....								
157)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	Add Guangxi to the word "technology"/ Guangxi technology
158)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
159)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
160)	developing students' creativity	+1	+1	+1	+1	+1	1.0	

	Item	Experts					IOC	Suggestions
		1	2	3	4	5		
41. The principal creates creative school workspaces to promote teachers' creativity in.....								
161)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
162)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
163)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
164)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
42. Political and government policy supports the principal to create creative school workspaces to promote teachers' creativity in.....								
165)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
166)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
167)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
168)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
43. Guangxi economy supports the principal to create creative school workspaces to promote teachers' creativity in.....								
169)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
170)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
171)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
172)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
44. Guangxi socio-culture supports the principal to create creative school workspaces to promote teachers' creativity in.....								
173)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
174)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
175)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
176)	developing students' creativity	+1	+1	+1	+1	+1	1.0	
45. Guangxi technology supports the principal to create creative school workspaces to promote teachers' creativity in.....								
177)	modeling creative working processes	+1	+1	+1	+1	+1	1.0	
178)	encouraging students' creativity	+1	+1	+1	+1	+1	1.0	
179)	identifying students' creativity	+1	+1	+1	+1	+1	1.0	
180)	developing students' creativity	+1	+1	+1	+1	+1	1.0	

### Results Analysis of Each Aspect

#### The components of the internal environment

$$(0.472- 0.396) \div 2 = 0.038$$

The mid interval value is used to organize the two PNI Modified groups as follows:

The high PNI Modified values are 0.472- 0.434

The low PNI Modified values are 0.396- 0.433

#### The components of the external environment

$$(0.484- 0.409) \div 2 = 0.037$$

The mid interval value is used to organize the two PNI Modified groups as follows:

The high PNI Modified values are 0.484- 0.446

The low PNI Modified values are 0.409- 0.445

### The PNI Modified of creative leadership of primary school principals to promote teachers' creativity in Guangxi, China obtained from the analysis of the internal environment and external environment on each aspect

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	Current State		Desirable State		PNI Modified	S/W O/T
	$\bar{X}$	S.D	$\bar{X}$	S.D		
<b>Personal:</b> 1. The principal engages every teacher using their creative potential in teaching to promote teachers' creativity in.....	3.46	0.94	4.83	0.38	0.396	S
1.1 modeling creative working processes	3.51	1.05	4.81	0.47	0.370	S
1.2 encouraging students' creativity	3.45	1.04	4.83	0.45	0.400	S
1.3 identifying students' creativity	3.45	1.03	4.82	0.43	0.397	S
1.4 developing students' creativity	3.41	1.05	4.86	0.39	0.425	S
1.1 Political and government policy supports the principal to engage every teacher using their creative potential in teaching to promote teachers' creativity in.....	3.38	0.90	4.81	0.40	0.423	O
1.1.1 modeling creative working processes	3.41	1.05	4.80	0.45	0.408	O
1.1.2 encouraging students' creativity	3.42	0.97	4.81	0.44	0.406	O
1.1.3 identifying students' creativity	3.35	1.00	4.80	0.48	0.433	O
1.1.4 developing students' creativity	3.33	1.00	4.81	0.43	0.444	O
1.2 Guangxi economy supports the principal to engage every teacher using their creative potential in teaching to promote teachers' creativity in.....	3.25	0.96	4.78	0.46	0.471	T
1.2.1 modeling creative working processes	3.27	1.10	4.77	0.52	0.459	T
1.2.2 encouraging students' creativity	3.22	1.08	4.79	0.48	0.488	T
1.2.3 identifying students' creativity	3.28	1.02	4.79	0.52	0.460	T
1.2.4 developing students' creativity	3.24	1.04	4.78	0.54	0.475	T

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	Current State		Desirable State		PNI Modified	S/W O/T
	$\bar{X}$	S.D	$\bar{X}$	S.D		
1.3 Guangxi socio-culture supports the principal to engage every teacher using their creative potential in teaching to promote teachers' creativity in.....	3.33	0.96	4.81	0.41	0.444	O
1.3.1 modeling creative working processes	3.39	1.11	4.82	0.43	0.422	O
1.3.2 encouraging students' creativity	3.30	1.03	4.79	0.47	0.452	T
1.3.3 identifying students' creativity	3.34	1.05	4.81	0.48	0.440	O
1.3.4 developing students' creativity	3.31	1.05	4.81	0.45	0.453	T
1.4 Guangxi technology supports the principal to engage every teacher using their creative potential in teaching to promote teachers' creativity in.....	3.29	1.00	4.82	0.40	0.465	T
1.4.1 modeling creative working processes	3.33	1.09	4.82	0.44	0.447	T
1.4.2 encouraging students' creativity	3.30	1.06	4.8	0.48	0.455	T
1.4.3 identifying students' creativity	3.26	1.10	4.81	0.46	0.475	T
1.4.4 developing students' creativity	3.29	1.10	4.84	0.41	0.471	T
<b>Personal: 2. The principal energizes every teacher's imagination for teaching to promote teachers' creativity in.....</b>	<b>3.38</b>	<b>0.96</b>	<b>4.80</b>	<b>0.40</b>	<b>0.420</b>	<b>S</b>
2.1 modeling creative working processes	3.44	1.05	4.80	0.46	0.395	S
2.2 encouraging students' creativity	3.34	1.04	4.81	0.44	0.440	W
2.3 identifying students' creativity	3.36	1.07	4.79	0.47	0.426	S
2.4 developing students' creativity	3.37	1.06	4.79	0.46	0.421	S
2.1 Political and government policy supports the principal to energize every teacher's imagination for teaching to promote teachers' creativity in.....	3.32	0.94	4.79	0.47	0.443	O
2.1.1 modeling creative working processes	3.40	1.06	4.81	0.47	0.415	O
2.1.2 encouraging students' creativity	3.27	1.07	4.8	0.49	0.468	T
2.1.3 identifying students' creativity	3.36	1.02	4.78	0.54	0.423	O
2.1.4 developing students' creativity	3.27	1.07	4.77	0.54	0.459	T
2.2 Guangxi economy supports the principal to energize every teacher's imagination for teaching to promote teachers' creativity in.....	3.26	0.99	4.78	0.44	0.466	T
2.2.1 modeling creative working processes	3.26	1.08	4.79	0.47	0.470	T
2.2.2 encouraging students' creativity	3.21	1.06	4.78	0.49	0.489	T
2.2.3 identifying students' creativity	3.29	1.08	4.77	0.51	0.450	T
2.2.4 developing students' creativity	3.27	1.08	4.79	0.47	0.465	T
2.3 Guangxi socio-culture supports the principal energize every teacher's imagination for teaching to promote teachers' creativity in.....	3.24	0.97	4.77	0.45	0.472	T
2.3.1 modeling creative working processes	3.26	1.07	4.79	0.48	0.470	T
2.3.2 encouraging students' creativity	3.22	1.03	4.76	0.49	0.478	T
2.3.3 identifying students' creativity	3.24	1.08	4.77	0.50	0.472	T
2.3.4 developing students' creativity	3.25	1.07	4.76	0.51	0.465	T
2.4 Guangxi technology supports the principal to energize every teacher's imagination for teaching to promote teachers' creativity in.....	3.28	0.98	4.79	0.43	0.460	T
2.4.1 modeling creative working processes	3.31	1.09	4.8	0.45	0.450	T
2.4.2 encouraging students' creativity	3.22	1.10	4.78	0.49	0.484	T
2.4.3 identifying students' creativity	3.29	1.01	4.78	0.50	0.453	T
2.4.4 developing students' creativity	3.30	1.09	4.8	0.47	0.455	T

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	Current State		Desirable State		PNI Modified	S/W O/T
	$\bar{X}$	S.D	$\bar{X}$	S.D		
<b>Personal:</b> 3. The principal provides learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....	3.43	0.95	4.82	0.39	0.405	S
3.1 modeling creative working processes	3.47	1.04	4.82	0.43	0.390	S
3.2 encouraging students' creativity	3.39	1.04	4.81	0.46	0.419	S
3.3 identifying students' creativity	3.43	1.05	4.82	0.45	0.405	S
3.4 developing students' creativity	3.45	1.02	4.83	0.44	0.400	S
3.1 Political and government policy supports the principal to provide learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....	3.40	0.93	4.79	0.433	0.409	O
3.1.1 modeling creative working processes	3.41	1.04	4.78	0.47	0.402	O
3.1.2 encouraging students' creativity	3.39	1.00	4.80	0.47	0.416	O
3.1.3 identifying students' creativity	3.43	1.01	4.80	0.47	0.399	O
3.1.4 developing students' creativity	3.38	1.05	4.78	0.50	0.414	O
3.2 Guangxi economy supports the principal to provide learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....	3.31	0.92	4.79	0.43	0.447	T
3.2.1 modeling creative working processes	3.32	1.06	4.79	0.47	0.443	O
3.2.2 encouraging students' creativity	3.29	0.99	4.79	0.47	0.456	T
3.2.3 identifying students' creativity	3.32	0.98	4.78	0.49	0.440	O
3.2.4 developing students' creativity	3.3	1.03	4.81	0.46	0.458	T
3.3 Guangxi socio-culture supports the principal to provide learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....	3.31	0.97	4.79	0.43	0.447	T
3.3.1 modeling creative working processes	3.35	1.08	4.79	0.46	0.430	O
3.3.2 encouraging students' creativity	3.28	1.06	4.78	0.50	0.457	T
3.3.3 identifying students' creativity	3.31	1.04	4.80	0.44	0.450	T
3.3.4 developing students' creativity	3.32	1.05	4.80	0.46	0.446	T
3.4 Guangxi technology supports the principal to provide learning opportunities to enhance creativity in teaching to promote teachers' creativity in.....	3.32	0.95	4.75	0.47	0.431	O
3.4.1 modeling creative working processes	3.39	1.05	4.77	0.49	0.407	O
3.4.2 encouraging students' creativity	3.32	1.01	4.75	0.51	0.431	O
3.4.3 identifying students' creativity	3.26	1.07	4.73	0.55	0.451	T
3.4.4 developing students' creativity	3.31	1.03	4.75	0.50	0.435	O
<b>Group:</b> 4. The principal facilitates diversity in teacher teams to promote teachers' creativity in.....	3.36	0.97	4.80	0.44	0.429	S
4.1 modeling creative working processes	3.41	1.07	4.80	0.48	0.408	S
4.2 encouraging students' creativity	3.35	1.09	4.80	0.46	0.433	S
4.3 identifying students' creativity	3.33	1.02	4.80	0.47	0.441	W
4.4 developing students' creativity	3.36	1.06	4.80	0.48	0.429	S
4.1 Political and government policy supports the principal to facilitate diversity in teacher teams to promote teachers' creativity in.....	3.33	0.93	4.77	0.47	0.432	O
4.1.1 modeling creative working processes	3.33	1.07	4.76	0.51	0.429	O
4.1.2 encouraging students' creativity	3.34	1.00	4.79	0.49	0.434	O
4.1.3 identifying students' creativity	3.29	1.01	4.76	0.54	0.447	T
4.1.4 developing students' creativity	3.35	1.00	4.78	0.49	0.427	O



Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	Current State		Desirable State		PNI Modified	S/W O/T
	$\bar{X}$	S.D	$\bar{X}$	S.D		
4.2 Guangxi economy supports the principal to facilitate diversity in teacher teams to promote teachers' creativity in.....	3.27	0.93	4.78	0.44	0.462	T
4.2.1 modeling creative working processes	3.28	1.01	4.78	0.48	0.457	T
4.2.2 encouraging students' creativity	3.25	1.00	4.76	0.50	0.465	T
4.2.3 identifying students' creativity	3.27	1.02	4.76	0.51	0.456	T
4.2.4 developing students' creativity	3.29	1.03	4.8	0.46	0.459	T
4.3 Guangxi socio-culture supports the principal to facilitate diversity in teacher teams to promote teachers' creativity in.....	3.30	0.94	4.77	0.44	0.445	O
4.3.1 modeling creative working processes	3.33	1.05	4.77	0.50	0.432	O
4.3.2 encouraging students' creativity	3.26	1.04	4.77	0.46	0.463	T
4.3.3 identifying students' creativity	3.31	1.03	4.77	0.50	0.441	O
4.3.4 developing students' creativity	3.30	1.01	4.79	0.49	0.452	T
4.4 Guangxi technology supports the principal to facilitate diversity in teacher teams to promote teachers' creativity in.....	3.30	0.95	4.78	0.45	0.448	T
4.4.1 modeling creative working processes	3.34	1.05	4.77	0.51	0.428	O
4.4.2 encouraging students' creativity	3.24	1.00	4.79	0.48	0.478	T
4.4.3 identifying students' creativity	3.33	1.02	4.78	0.51	0.435	O
4.4.4 developing students' creativity	3.31	1.05	4.80	0.49	0.450	T
<b>Group: 5. The principal facilitates collaboration in teacher teams to promote teachers' creativity in.....</b>	<b>3.41</b>	<b>0.97</b>	<b>4.82</b>	<b>0.39</b>	<b>0.413</b>	<b>S</b>
5.1 modeling creative working processes	3.50	1.05	4.80	0.45	0.371	S
5.2 encouraging students' creativity	3.34	1.06	4.83	0.42	0.446	W
5.3 identifying students' creativity	3.40	1.05	4.82	0.44	0.418	S
5.4 developing students' creativity	3.39	1.06	4.83	0.43	0.425	S
5.1 Political and government policy supports the principal to facilitate collaboration in teacher teams to promote teachers' creativity in.....	3.36	0.94	4.78	0.46	0.423	O
5.1.1 modeling creative working processes	3.40	1.08	4.79	0.50	0.409	O
5.1.2 encouraging students' creativity	3.36	1.02	4.8	0.48	0.429	O
5.1.3 identifying students' creativity	3.34	1.01	4.75	0.54	0.422	O
5.1.4 developing students' creativity	3.36	1.02	4.8	0.49	0.429	O
5.2 Guangxi economy supports the principal to facilitate collaboration in teacher teams to promote teachers' creativity in.....	3.28	0.95	4.79	0.43	0.460	T
5.2.1 modeling creative working processes	3.37	1.06	4.78	0.47	0.418	O
5.2.2 encouraging students' creativity	3.25	1.05	4.78	0.49	0.471	T
5.2.3 identifying students' creativity	3.26	1.02	4.79	0.48	0.469	T
5.2.4 developing students' creativity	3.24	1.09	4.81	0.46	0.485	T
5.3 Guangxi socio-culture supports the principal to facilitate collaboration in teacher teams to promote teachers' creativity in.....	3.30	0.94	4.81	0.42	0.458	T
5.3.1 modeling creative working processes	3.36	1.08	4.82	0.44	0.435	O
5.3.2 encouraging students' creativity	3.26	1.02	4.81	0.47	0.475	T
5.3.3 identifying students' creativity	3.30	1.03	4.81	0.46	0.458	T
5.3.4 developing students' creativity	3.27	1.03	4.82	0.46	0.474	T

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	Current State		Desirable State		PNI Modified	S/W O/T
	$\bar{X}$	S.D	$\bar{X}$	S.D		
5.4 Guangxi technology supports the principal to facilitate collaboration in teacher teams to promote teachers' creativity in.....	3.29	0.93	4.79	0.43	0.456	T
5.4.1 modeling creative working processes	3.37	1.03	4.79	0.47	0.421	O
5.4.2 encouraging students' creativity	3.24	1.00	4.79	0.48	0.478	T
5.4.3 identifying students' creativity	3.30	1.00	4.78	0.48	0.448	T
5.4.4 developing students' creativity	3.25	1.04	4.79	0.47	0.474	T
<b>Group: 6. The principal offers time for teacher teams to work on their passion to promote teachers' creativity in.....</b>	<b>3.26</b>	<b>1.08</b>	<b>4.80</b>	<b>0.43</b>	<b>0.472</b>	<b>W</b>
6.1 modeling creative working processes	3.28	1.16	4.80	0.47	0.463	W
6.2 encouraging students' creativity	3.27	1.11	4.80	0.48	0.468	W
6.3 identifying students' creativity	3.23	1.14	4.80	0.48	0.486	W
6.4 developing students' creativity	3.27	1.15	4.81	0.44	0.471	W
6.1 Political and government policy supports the principal to offer time for teacher teams to work on their passion to promote teachers' creativity in.....	3.27	1.03	4.77	0.48	0.459	T
6.1.1 modeling creative working processes	3.32	1.13	4.76	0.53	0.434	O
6.1.2 encouraging students' creativity	3.23	1.07	4.79	0.50	0.483	T
6.1.3 identifying students' creativity	3.29	1.09	4.79	0.49	0.456	T
6.1.4 developing students' creativity	3.23	1.12	4.75	0.54	0.471	T
6.2 Guangxi economy supports the principal to offer time for teacher teams to work on their passion to promote teachers' creativity in.....	3.22	1.02	4.78	0.45	0.484	T
6.2.1 modeling creative working processes	3.25	1.10	4.77	0.49	0.468	T
6.2.2 encouraging students' creativity	3.21	1.07	4.78	0.48	0.489	T
6.2.3 identifying students' creativity	3.22	1.11	4.77	0.52	0.481	T
6.2.4 developing students' creativity	3.19	1.10	4.79	0.47	0.502	T
6.3 Guangxi socio-culture supports the principal to offer time for teacher teams to work on their passion to promote teachers' creativity in.....	3.26	1.00	4.79	0.427	0.469	T
6.3.1 modeling creative working processes	3.31	1.07	4.78	0.479	0.444	T
6.3.2 encouraging students' creativity	3.21	1.06	4.8	0.454	0.495	T
6.3.3 identifying students' creativity	3.29	1.09	4.79	0.487	0.456	T
6.3.4 developing students' creativity	3.24	1.08	4.79	0.47	0.478	T
6.4 Guangxi technology supports the principal to offer time for teacher teams to work on their passion to promote teachers' creativity in.....	3.25	1.00	4.76	0.49	0.465	T
6.4.1 modeling creative working processes	3.27	1.13	4.77	0.51	0.459	T
6.4.2 encouraging students' creativity	3.24	1.06	4.76	0.53	0.469	T
6.4.3 identifying students' creativity	3.24	1.06	4.75	0.55	0.466	T
6.4.4 developing students' creativity	3.25	1.06	4.75	0.54	0.462	T
<b>Culture: 7. The principal promote a flexible school culture to enhance teachers' creativity in.....</b>	<b>3.39</b>	<b>0.98</b>	<b>4.82</b>	<b>0.41</b>	<b>0.422</b>	<b>S</b>
7.1 modeling creative working processes	3.45	1.08	4.82	0.44	0.397	S
7.2 encouraging students' creativity	3.37	1.06	4.82	0.45	0.430	S
7.3 identifying students' creativity	3.36	1.05	4.82	0.45	0.435	W
7.4 developing students' creativity	3.38	1.07	4.81	0.47	0.423	S
7.1 Political and government policy supports the principal to promote a flexible school culture to enhance teachers' creativity in.....	3.33	0.91	4.80	0.42	0.441	O



Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	Current State		Desirable State		PNI Modified	S/W O/T
	$\bar{X}$	S.D	$\bar{X}$	S.D		
7.1.1 modeling creative working processes	3.36	1.05	4.80	0.46	0.429	O
7.1.2 encouraging students' creativity	3.33	1.00	4.80	0.48	0.441	O
7.1.3 identifying students' creativity	3.30	1.00	4.81	0.44	0.458	T
7.1.4 developing students' creativity	3.31	1.02	4.80	0.47	0.450	T
7.2 Guangxi economy supports the principal to promote a flexible school culture to enhance teachers' creativity in.....	3.28	0.95	4.79	0.46	0.460	T
7.2.1 modeling creative working processes	3.32	1.08	4.78	0.50	0.440	O
7.2.2 encouraging students' creativity	3.27	1.04	4.77	0.51	0.459	T
7.2.3 identifying students' creativity	3.25	1.03	4.79	0.49	0.474	T
7.2.4 developing students' creativity	3.29	1.03	4.80	0.48	0.459	T
7.3 Guangxi socio-culture supports the principal to promote a flexible school culture to enhance teachers' creativity in.....	3.28	0.94	4.78	0.48	0.457	T
7.3.1 modeling creative working processes	3.39	1.05	4.78	0.50	0.410	O
7.3.2 encouraging students' creativity	3.24	1.02	4.76	0.54	0.469	T
7.3.3 identifying students' creativity	3.27	1.05	4.78	0.52	0.462	T
7.3.4 developing students' creativity	3.23	1.07	4.78	0.51	0.480	T
7.4 Guangxi technology facilitates the principal to promote a flexible school culture to enhance teachers' creativity in.....	3.29	0.96	4.77	0.49	0.450	T
7.4.1 modeling creative working processes	3.37	1.06	4.78	0.51	0.418	O
7.4.2 encouraging students' creativity	3.28	1.03	4.77	0.51	0.454	T
7.4.3 identifying students' creativity	3.28	1.08	4.75	0.57	0.448	T
7.4.4 developing students' creativity	3.25	1.08	4.77	0.54	0.468	T
<b>Culture: 8. The principal promote an inquiring school culture to enhance teachers' creativity in.....</b>	<b>3.36</b>	<b>0.98</b>	<b>4.79</b>	<b>0.46</b>	<b>0.426</b>	<b>S</b>
8.1 modeling creative working processes	3.42	1.06	4.79	0.51	0.400	S
8.2 encouraging students' creativity	3.31	1.08	4.80	0.49	0.450	W
8.3 identifying students' creativity	3.37	1.04	4.79	0.51	0.421	S
8.4 developing students' creativity	3.36	1.08	4.80	0.47	0.429	S
8.1 Political and government policy supports the principal to promote an inquiring school culture to enhance teachers' creativity in.....	3.36	0.90	4.8	0.44	0.429	O
8.1.1 modeling creative working processes	3.41	1.01	4.79	0.49	0.405	O
8.1.2 encouraging students' creativity	3.37	0.97	4.78	0.49	0.418	O
8.1.3 identifying students' creativity	3.33	0.98	4.81	0.48	0.444	O
8.1.4 developing students' creativity	3.33	0.99	4.81	0.46	0.444	O
8.2 Guangxi economy supports the principal to promote an inquiring school culture to enhance teachers' creativity in.....	3.26	0.92	4.78	0.46	0.466	T
8.2.1 modeling creative working processes	3.28	1.07	4.79	0.47	0.460	T
8.2.2 encouraging students' creativity	3.24	0.97	4.78	0.49	0.475	T
8.2.3 identifying students' creativity	3.27	1.01	4.79	0.50	0.465	T
8.2.4 developing students' creativity	3.24	0.99	4.77	0.51	0.472	T
8.3 Guangxi socio-culture supports the principal to promote an inquiring school culture to enhance teachers' creativity in.....	3.29	0.92	4.78	0.45	0.453	T
8.3.1 modeling creative working processes	3.30	1.01	4.79	0.48	0.452	T

Creative leadership of primary school principals to promote teachers' creativity in Guangxi, China	Current State		Desirable State		PNI Modified	S/W O/T
	$\bar{X}$	S.D	$\bar{X}$	S.D		
8.3.2 encouraging students' creativity	3.29	0.98	4.78	0.49	0.453	T
8.3.3 identifying students' creativity	3.29	1.05	4.79	0.47	0.456	T
8.3.4 developing students' creativity	3.29	1.03	4.78	0.51	0.453	T
8.4 Guangxi technology facilitates the principal to promote an inquiring school culture to enhance teachers' creativity in.....	3.30	0.94	4.81	0.43	0.458	T
8.4.1 modeling creative working processes	3.33	1.07	4.79	0.49	0.438	O
8.4.2 encouraging students' creativity	3.30	0.99	4.81	0.45	0.458	T
8.4.3 identifying students' creativity	3.30	1.04	4.82	0.45	0.461	T
8.4.4 developing students' creativity	3.29	1.04	4.81	0.46	0.462	T
<b>Culture: 9. The principal creates creative school workspaces to promote teachers' creativity in.....</b>	<b>3.30</b>	<b>0.96</b>	<b>4.81</b>	<b>0.41</b>	<b>0.458</b>	<b>W</b>
9.1 modeling creative working processes	3.34	1.04	4.81	0.46	0.440	W
9.2 encouraging students' creativity	3.28	1.04	4.80	0.49	0.463	W
9.3 identifying students' creativity	3.29	1.06	4.81	0.44	0.462	W
9.4 developing students' creativity	3.30	1.06	4.83	0.41	0.463	W
9.1 Political and government policy supports the principal to create creative school workspaces to promote teachers' creativity in.....	3.35	0.91	4.79	0.45	0.430	O
9.1.1 modeling creative working processes	3.37	1.03	4.77	0.51	0.415	O
9.1.2 encouraging students' creativity	3.33	0.98	4.8	0.47	0.441	O
9.1.3 identifying students' creativity	3.34	1.02	4.79	0.48	0.434	O
9.1.4 developing students' creativity	3.35	0.99	4.81	0.46	0.436	O
9.2 Guangxi economy supports the principal to create creative school workspaces to promote teachers' creativity in.....	3.26	0.96	4.79	0.43	0.469	T
9.2.1 modeling creative working processes	3.30	1.07	4.80	0.48	0.455	T
9.2.2 encouraging students' creativity	3.25	1.03	4.80	0.46	0.477	T
9.2.3 identifying students' creativity	3.23	1.05	4.79	0.49	0.483	T
9.2.4 developing students' creativity	3.26	1.06	4.80	0.46	0.472	T
9.3 Guangxi socio-culture supports the principal to create creative school workspaces to promote teachers' creativity in.....	3.29	0.98	4.80	0.43	0.459	T
9.3.1 modeling creative working processes	3.26	1.10	4.78	0.50	0.466	T
9.3.2 encouraging students' creativity	3.28	1.06	4.8	0.46	0.463	T
9.3.3 identifying students' creativity	3.27	1.07	4.79	0.46	0.465	T
9.3.4 developing students' creativity	3.35	1.05	4.81	0.47	0.436	O
9.4 Guangxi technology facilitates the principal to create creative school workspaces to promote teachers' creativity in.....	3.26	0.95	4.79	0.43	0.469	T
9.4.1 modeling creative working processes	3.30	1.05	4.79	0.48	0.452	T
9.4.2 encouraging students' creativity	3.21	1.03	4.78	0.49	0.489	T
9.4.3 identifying students' creativity	3.28	1.06	4.79	0.47	0.460	T
9.4.4 developing students' creativity	3.24	1.08	4.78	0.50	0.475	T
<b>Total Mean Scores</b>	<b>3.37</b>	<b>0.87</b>	<b>4.81</b>	<b>0.36</b>	<b>0.427</b>	

## Appendix E

### Vita



## VITA

Miss Qingling Zhang

### Education

Ph.D. Candidate, Educational Administration, Chulalongkorn University, 2016

M.Ed., Educational Administration, Burapha University, 2013

B.A., Tourism Management, Yunnan Normal University, 2011

### Work Experiences

2015-2017.7	Teacher, ECC Language Centre, Bangkok
2014-2015	Teacher, Rajamangala University of Technology Krungthep
2012-2013	Teacher, Watnongkor Community School, Chonburi
2011-2012	Teacher, Burapha Witthaya Chon Buri School
2010.11-2011.3	Teacher, A volunteer Chinese language teacher, Chonburi
2010.5-2010.10	Teacher, Guide and Translator, Shanghai World Expo 2010