Creative teachers and creative teaching strategies

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Abstract

The purpose of this study is to explore the factors that influence creative teaching and to find out what effective strategies are used by three award-winning teachers in the learning area of Integrated Activities. As creative thinking is crucial for the knowledge economy, it is essential that education serves its purpose in improving this important aspect. The methods used for data collection include in-depth interview, focus group interview, classroom observation and content analysis. Three teachers with a GreaTeach Creative Instruction Award for creative teaching in the Integrated Activities field were selected as subjects. Results were acquired by analysing the interview content, the teaching plans, teachers’ reflection and the classroom observation videotapes. The study found that: the factors influencing creative teaching in Integrative Activities are (a) personality traits: persistence, willingness to develop, acceptance of new experiences, self-confidence, sense of humour, curiosity, depth of ideas, imagination, etc.; (b) family factors: open and tolerant ways of teaching children, creative performance of parents, etc.; (c) experiences of growth and education: self-created games and stories, brainstorming between classmates, etc.; (d) beliefs in teaching, hard work, motivation and (e) the administrative side of school organization. Among these factors, beliefs in teaching, hard work and motivation are the main aspects. The effective teaching strategies used by the awarded teachers are: student-centred activities, a connection between teaching contents and real life, management of skills in class, open-ended questions, an encouragement of creative thinking and use of technology and multimedia. Integrated Activities are closely connected to life experience and a basis for the development of creative thinking within education.

Keywords Creative instruction, creativity, creative teacher, instruction.

Introduction

The mantra of the ‘knowledge economy’ is now renowned worldwide, alongside the importance of innovation. Creative professionals are sought after. Sternberg and Lubart1 noted that if one wanted to select the best novelist, artist, entrepreneur, or chief executive officer, one would most likely want someone who is creative. Most chief executive officers are selected for their creative vision of their company’s future. As a result, every nation, in order to cement international competitiveness, is investing education resources into development of professionals and creativity. Students’ creativity as a key competency is shown in many countries’ education strategies.

In comparison with traditional cramming education, creative instruction encourages students to think independently, participate actively and express themselves freely. Under creative instruction, students are more likely to become creative professionals.

The purpose of this study was to explore the factors that influence creative teaching and to find out what effective strategies are used by three awarded teachers in the learning area of Integrated Activities.

Methods

In this research, focus group interviews, in-depth interviews, classroom observation and content analyses are used. The subjects were three female teachers (one primary and two junior high school teachers) with a
GreaTeach award of creative instruction in Integrated Activities. The Integrated Activities course includes the original subjects of home economics, counselling guidance, group activity and boy/girl scout, as well as the cross-field curriculum contents. The analyses of their interviews are anonymously presented.

Research started with the interviewing of 12 GreaTeach award-winning teachers. They were invited to a focus-group interview, sharing their experiences and possible elements of successful creative instructions. Based on this interview, a semi-structural outline for the three subjects is constructed and modified.

The three subjects were interviewed individually twice; each time lasting for one and half hours. The interviews were recorded with the subjects’ consent. Following analysis of the transcriptions of the first interviews, further specific questions were pinpointed for the second in-depth interviews. The transcriptions were compared and contrasted, leading to the final conclusions.

In addition to the interviews, the subjects were videotaped in class; and an attempt was made to analyse their teaching styles, strategies and interactions with students. Finally, they were assessed against several measures: Thinking Pattern Measure (Sternberg and Wagner, unpublished test), Creativity Development Measure\(^2\), Innovative Teaching Strategies Measure\(^3\) and Creativity Fostering Teacher Index.\(^4\) The results of these measurements confirmed that all subjects are highly creative.

This research is qualitative rather than quantitative. The analyses of the interviews and classroom observations formed the main body of the research. Documents such as designs of teaching activities, teachers’ reflection logs, students’ in-class assignments, homework and feedbacks, and the collection of references, syllabi, videos of teaching activities, are minutely analysed, in an attempt to reveal how teachers develop a grasp of creative instructions as well as the references, syllabi and strategies they adopt. Meanwhile, students are also highly valued; feedback, fresh ideas and the way they deal with creativity were analysed. The collected data were analysed qualitatively and the results of the interviews were triangulated with the results of interviews, observations, and the researchers’ field notes and reflection.

Combining an analysis of all the findings above led to the development of guidelines for effective creative instructions.

Results and discussion

What makes a creative instructor?

From the interviews of the three subjects, it is apparent that the successful creative instructions of Integrated Activity are subject to several factors: teachers’ personalities, family backgrounds, learning processes, life experiences, education beliefs, diligence and motivations. These factors may exercise different influences from person to person, but are closely related and mutually affected.

**Personality traits**

Many studies have evidenced the influences of personalities and developments of creativity.\(^5-8\) The common personality traits of subjects are: self-confidence, openness to experience, fantasy oriented, imagination, emotional sensitive, drive and ambition, norm doubting (questioning established norms), nonconformity, attraction to complexity, aesthetic orientation, flexibility of thoughts and risk taking, consistent with the viewpoint of Feist,\(^9\) Sternberg and Lubart.\(^1\)

The three subjects in the interviews showed their perseverance in dealing with difficulties, desire to learn and absorb new experiences, self-confidence,\(^10\) and strong desires to acquire new knowledge. By participating in in-service educational workshops, these subjects constantly absorbed new information, reinforcing their professionalism and investing more creativity in their instructions.

The interviews suggest that the three subjects were also good at creating original ideas. They all possessed a sense of keen observation, perception and sensitivity. On discovering novel ideas, the subjects were easily able to infuse these skills into their instruction.

Another distinctive quality of the three subjects is the habit of thinking. Thinking is a process of combining information, lighting up the flame of creativity. In the analyses of the subjects’ lesson plans, implementations of creativity and novelty were found to be impressive.
Creative teachers and creative teaching strategies • J.-S. Horng et al.

Though humour was never mentioned by the subjects during interviewing, it was observed in class that videos with a humorous aspect were capable of easing students’ pressure and encouraging active responses. The subjects interacted with students in a humorous tone, catching every student’s attention and letting them know that learning can be enjoyable.

Humour is highly valued in Western societies. In the study of Getzels and Jackson, the high-creativity students ranked sense of humour 3rd out of 13 qualities, whereas high-IQ was ranked 9th; this study again evidenced the relation between humour and creativity. In another study by McGreevy (1990) students list the qualities of creative teachers, with humour ranked first. This indicated a teacher’s humour could not only be attention-grabbing, but can also significantly impress students.

All the qualities discussed above helped the subjects with creative instructions, encouraging them to learn and innovate. No matter what obstacles they faced, they were able to approach the challenges with humour, perseverance and confidence, creating a fun, easy learning environment.

Family factors
The three subjects all grew up with their parents’ support, and they were given the freedom to explore themselves. No punishments were imposed when they made mistakes. Under these circumstances, children are able to learn from their errors, fostering their creativity. When children’s strengths and interests emerged in the family context, they were supported and encouraged. The subjects indicated that their parents had inspired their creativity. Sternberg and Lubart believe parents can be a model of creative thinking and can demonstrate to their children the importance of fostering creativity and applying it to daily life. A family’s (a) social-economic status, structure and compositions, (b) parents’ education beliefs, relation and expectations with children and (c) relations among siblings are the factors that fashion a person’s creativity.

Growing up and learning experiences
When asked how creativity was developed, the subjects referred to their childhood as a critical period. During their childhood, they liked to explore nature, using their imagination to create stories and games. The subjects connected their experiences with nature and observation of all life forms to creative instructions. Without an exposure to nature and the freedom allowed by their parents, the subjects’ creativity would have failed to emerge.

However, it needs more than childhood inspiration for creativity to blossom. Unlike some geniuses who are able to self-develop their creativity in early childhood, most creative instructors consider their learning experiences and school education during adolescence to have nourished their creative power. One of the subjects said that as a pupil, she liked to have brainstorming sessions with her fellow classmates, but what brought about her devotion to education were the indirect influences of her teachers. The subjects all felt obliged to be a role model for their students and insisted on the best teaching and creative instructions. Feldman indicated that it is taken for granted that teachers, mentors, schools and other preparation for later creative work are critical to its success.

Peer interaction
The subjects’ creativity is supported by small group interaction with their colleagues. One subject plays an innovation brainstorming game with office mates during class break in order to refresh their minds. The other two subjects join a group study of curriculum development and contribute new ideas to inspire one another. Gardner’s research indicated that personal and professional relationships with peers are able to help peoples’ creativity and careers development.

Beliefs in education
The three subjects shared common beliefs about education: self-expression, sharing and communication. To communicate these values to students, the subjects adopted diverse approaches and real-life issues, listened carefully to every student’s opinions, and gave freedom to their imagination and creativity. Their instructions demonstrated their beliefs in humanistic education. The feedback from parents indicated that they felt their children had learned from our subjects to become independent thinking, be willing to share, be able communicate with others and be patient.
Devotion to creative instructions

The subjects shared their experiences of developing ideas, designing curricula, arranging activities, revising teaching plans, preparing materials and reflecting on their performance and the students’ feedback. Esquivel asked if a teacher can become a creative instructor without creativity Torrance indicated ‘A teacher’s attempts to create are more influential to students than his or her students.’ Only when teachers are willing to create, will students feel unrestrained and encouraged to be creative in class.

Another question raised by Esquivel is: ‘Can creativity be learned?’ Everyone bears the potential for creativity. One goal of creative instructions is to make an environment in which students’ imaginations are allowed to run free of unnecessary regulations. As a result, teachers should not forgo their potential creativity. Instead, they should learn to develop their creativity and facilitate their students.

Simplicio suggested creative instructions required significant preparation work. Garder founded that it takes a minimum of 10 years to move from novice to master in any of the domains so far studied. Those just starting their teaching career have to undergo a long period of time to prepare themselves for creative instructions. Meanwhile, teachers who are used to traditional methods should revamp their traditional instructions with creativity, beginning with being more sensitive to their real-life experiences, extracting and accumulating ideas, collecting teaching materials and media, and designing lesson plans. Creative instructions are not the privilege of a few; instead, guidance from experienced creative instructors can help others build up their creative curricula.

Motivations

The subjects revealed their dedication to their students, leading to the adoption of interesting lesson plans, in an effort to create an enjoyable learning environment. Teachers may help students to maximize their creative potential by allowing them to do something they enjoy, seek out questions that they are highly intrinsically motivated to pursue. Petrowski also suggests one’s passion and enjoyment in work continuously inspire their creativity. Creativity may not only require motivation, but generate it. Trunnell, Evans, Richards and Grosshans concluded that the passions, enjoyments in learning, eagerness to help people, satisfaction, and love for students motivated their interviewees to be teachers. As for the motivations for creative instructions, the subjects said they wanted to have positive influences on their pupils. The essence of education and nature of creative instructions can be taught through a series of training programs, but it also requires a devotion to teaching.

Those subjects are intrinsically motivated because they perceive the activity of teaching as interesting, involving, satisfying, enjoyable and a personal challenge. Torrance indicated that people doing what they enjoy were more creative in their pursuits. They are usually involved in creative pursuits and actively search for challenging problems. Collins and Amabile indicated the personality inventory taps the major components of intrinsic motivation are self-determination, competence, task involvement, curiosity, enjoyment and interest.

Despite their having won the GreaTeach Creative Instruction Award, the competition and award were not perceived as major goals. Csikszentmihalyi suggested that high levels of intrinsic motivation, accompanied by relatively low levels of extrinsic motivation, may help creative individuals to be more independent of their field because they are less susceptible to pressures to conform.

Organizational environment

Increasing communication in the cooperative climate may necessitate a restructuring of the organization, from a hierarchical structure to a flat structure where teamwork rather than rank is emphasized. Networking between colleagues’ increases and creative ideas are explored more in-depth once divisive barriers between organizational levels are eliminated. The removal of barriers means that all colleagues have an opportunity to contribute and experiment with new ideas. Open discussion must be encouraged and intrinsic rewards as mutual support between workers must be established. Creative instruction can be carried out effectively if given support from school. Williams and Yang indicated that traditional structures and hierarchies are elements of organizations that tend to hinder creativity. Some subjects still insist on creative instruc-
tion being given the case despite opposition from their school.

To conclude, what influences creative instructions are: personalities, family backgrounds, growth and learning experiences, beliefs in education, dedications to education, motivations and schools. Among these factors, beliefs in education, dedications to education and motivations account for the results of implementing creative instructions.

**Strategies for creative instructions**

The following strategies of creative instructions are concluded from the interview, observation and analysis of lesson plans of Integrated Activities.

**Student-centred learning**

The subjects used student-centred strategies in their creative instructions. The role of teachers is as facilitator rather than lecturer, helping students with self-reflection, group discussion, role play, drama presentation and group activities. Questions for group discussions and presentations are prepared. Students are given freedom to choose from what perspective they will study an issue. Throughout the class, teachers act as a learning partner, inspirer, navigator and sharer, while students transform from passive listeners to observers, performers and colearners. The subjects allow students to choose their own topics for individual or group projects. In the instruction, creativity is encouraged in order to explore ideas that students find interesting. Collins and Amabile\(^b\) believe children’s intrinsic motivation and creativity might be enhanced if their teachers engage them in discussions about the intrinsic excitement and joy of learning.

Many studies showed that cooperative learning effectively helps students develop independent thinking as well as imagination and creativity.\(^6,24\) Simplicio\(^6\) indicated that before acquiring decent knowledge of new instruction strategies, teachers will fail to meet students’ needs. Therefore, sufficient knowledge and careful design must be made before implementation. The subjects always informed their students of rules to be observed and the tasks to finish before the class took place. This guaranteed the efficiency and effectiveness of cooperative learning.

**Use of multi-teaching aids assistance**

The three subjects analysed are good at using multi-teaching aids to assist their instructions. They ingeniously used creative teaching aids, such as paper crusher, toy block, hammer, student writing script, power-point, computer and multimedia to excite students thinking, broaden the viewpoints and encourage further discussion. After viewing videos, students are given open questions, such as ‘What will be your reaction if you were the character?’ Tan\(^b\) showed that videos are proved to effectively improve students’ creativity. According to Strom and Strom,\(^25\) lessons facilitated with videos are more attractive, interesting and easier for students to remember. Computers, videos, slide shows, transparencies and advance organizers are considered stimulating and attractive. In addition, the popular cartoon ‘Doraemon’ and movie ‘Harry Potter’ can trigger students’ interests in learning.

Modern students grow up with computers and high-tech devices. Simplicio\(^18\) emphasized education by means of modern technology. The Ministry of Education in Taiwan, is upgrading teachers’ computer literacy, schools’ internet access, as well as promoting info-tech applications to education and net-accessible lesson plans. Computer literacy is a prerequisite for creative instructors and an access to abundant education resources on the internet.

**Class management strategies**

The subjects showed sophisticated management, created friendly interactions and treated students with recognitions of their individualities and needs. They are more like friends to their students, speaking with gentle tones and body language. When students express ideas, they would not interrupt nor give judgements immediately. Instead, they gave guidance, more open questions, or conveyed their personal experiences as references. Throughout the class, humour bridges the gap between teachers and students, providing a relaxed learning environment.\(^24\)

In recent years, worldwide studies stress that learning environments as key to successful creative instructions.\(^6,7,18,21\) The ability to create friendly interactions with students is the most important quality for creative instructors, who usually adhere to the philosophy of humanism. They believe in students’ ability of
self-discipline, focus on communication and democratic spirits and help students fashion their individualities. Unlike creative instructors, traditional instructors observe students from a moral perspective, and highlight hierarchy and authority in the class.

Petrowski\(^7\) raised several guiding principles for constructing a creative learning environment: (a) provide every possible chance to choose and discover; (b) support any attempt to create; (c) implement sophisticated management strategies. The three subjects also followed these guiding principles.

When students are taught and their achievements are then assessed in a way that values their creative ability, their creative performance improves.\(^1\)

*Connection between teaching contents and real life*
Esquivel\(^6\) studied the research by McGreevy and concluded that students enjoy the lessons related to real life events. The three subjects adopted real life events and students’ concerns, such as gender issues, fashion of identity, or the feelings of bored students. These are issues students will encounter at some point. They can share experiences with classmates, triggering responses, discussion and high-level thinking.

Integrated Activities help students to develop the ability to express and realize them in daily life, find real life examples to evidence what they learn, and relate what they learn to life experiences. The subjects indicated creative ideas also come from real life; the key point is that teacher should be sensitive to feel, find, think and convert into instruction. Dewey believed ‘education as life’, claiming life and education are separable. Life injects meanings to education, and education refines our life. However, traditional education adheres to textbooks, ignoring the significance of life education. Without life education, one will never know how to interact with people of diverse personalities, how to properly handle interpersonal relationships and unexpected challenges. As a result, education should centre on the ability to solve problems in life by unreining their creativity.

Petrowsky\(^7\) quoted Margaret Wheatley: ‘Life is creative in all aspects: (a) everything is in the continuum of discovery and creation; (b) the purpose is to find a do-able solution, not a correct one; (c) opportunities lead to more chances.’ The three subjects showed their concern of life education in their beliefs in education and lesson plans.

*Open questions and encouragement of creative thinking*
In lesson plans and materials, the three subjects designed open questions for their students that stirred students’ creative thinking. Esquivel\(^6\) identified open questions as a characteristic of creative instructions. Besides, creative instructors always encourage students to create and imagine in group discussions. Related studies showed that teachers can have more positive influences on students by encouraging them to ‘be creative’.\(^27\)

*Conclusions and recommendation*
Factors of successful creative instruction include personality traits, family factors, learning and education experiences, belief in education, devotion to education, motivations, environment of organization, and so on. Among these factors, belief in education, devotion to education and motivations are most important. This study also confirms that creativity can be taught.

The strategies of creative instructions include student-centred activities, multimedia assistance, class management, connection of teaching contents and real life, open questions and encouragement to creative thinking. The intersection of creativity components (domain-relevant skills, creativity-relevant processes and intrinsic task motivation) should be emphasized towards enhancing students’ creativity.

There are two suggestions for the development of creative instructors. First, creative instructions should begin with teacher-training programs in colleges. Student teachers should be equipped with the knowledge and strategies of creative instructions, while stirring their motivations. Needless to say, teachers of training programs should also have profound knowledge of creative instructions, and the programs must provide an environment for the development of creativity.\(^18\) Second, schools and bureaus of education should hold workshops of creative instructions, inviting experienced creative instructors, professionals, etc., to share their experiences, ways of developing creativity, and improving their teaching strategies. By joining workshops of
creativity development teachers will be instilled with more creative thinking and will gain the momentum to accommodate the changed approach to education.

References