I. INTRODUCTION

As everyday life becomes increasingly global, complex, and dynamic, creative thinking skills that facilitate adaptability and critical thinking abilities become an essential focus in all teaching and learning contexts. Because it is impossible for a person to acquire even a fraction of existing knowledge, students must not only learn content but must also develop thinking skills that can be applied to new knowledge and situations. Language learning contexts should support and require the development of creativity so that language students can succeed in whatever circumstances they find themselves.

Language learning is a process of “creative construction” (Pennington, 1996, p. 6), so in many ways language and creativity are closely related. According to Pennington (1996), language learners build language creatively during the language learning process. As they practice a language, learners gradually acquire knowledge and skills for ready comprehension and fluent production of the language. Creativity-enhanced language
learning environments may help prepare students to make adaptive responses to complex, novel, and dynamically evolving situations, as well as enhance their language acquisition by assisting them to try novel approaches and take risks in language learning. Outside of language classrooms, creative thinking skills can help students independently to assemble elements of knowledge acquired at different times and for different purposes into new solutions for new problems. Therefore, fostering language learners’ creativity is an important task that educators should consider as they teach language skills and content.

This paper presents literature that supports the use of creativity tasks in English language classrooms. It also discusses a project that explored ESL teachers’ roles and student responses in creativity tasks. The synthesis of literature and practice results in suggestions for incorporating creativity into language learning environments.

II. LITERATURE

The literature review addresses definitions of creativity and creative thinking skills and the importance of creativity training in education. Then potential links between creativity and the learning of English as a second language (ESL) are also discussed. The role of teachers in fostering creativity in language learning environments concludes this section.

1. Creativity

Researchers in the field of education have defined creativity in different ways. Some researchers define creativity as “imagination” (Craft, 2000; Elliott, 1975). According to Elliott, the processes of “problem-solving” and “making something of an idea” are involved in creativity. Craft (2000) defines creativity “as being to do with self-actualization, and involving choice, which is informed by levels of unconscious processes” (p. 9). Gruber and Wallace (1999) state: “The creative product must be new and must be given value according to some external criteria” (p. 94). Martindale (1999) argues: “A creative idea is one that is both original and appropriate for the situation in which it occurs” (p. 137). Boden (1999) claims: “Creativity is the generation of ideas that are both novel and valuable” (p. 351). Torrance (1979), who studied creativity in education for more than 40 years, vividly defined creativity as:

- digging deeper
- looking twice
- crossing out mistakes
- talking/listening to a cat
getting in deep water
- getting out from behind locked doors
- shaking hands with the future
- wanting to know
- having a ball
- building sand castles
- singing in your own key (p. 3)

Even though many studies have been conducted on creativity, only a few educators have specifically identified and defined creative-thinking skills (De Bono, 1970, 1975, 1983; Guilford, 1950, 1977, 1983; Torrance, 1970, 1987, 1995). Specifically, creative thinking skills include abilities such as: evaluation, especially the ability to sense problems, inconsistencies, and missing elements; divergent production, e.g., fluency, flexibility, originality, and elaboration; and redefinition. Generally, however, the foundation of creative thinking has been identified as divergent thinking, which is to create many ideas based on a central idea and to lead to imaginative or creative innovation (Guilford, 1950; Treffinger et al., 2002).

Out of the many skills characterized as creative thinking, researchers have agreed that there are some common skills that represent creative thinking: fluency, flexibility, originality, and elaboration. Treffinger’s (2002) explanations provide a summary of these conditions:

- **Fluency**: quantity or the ability to generate a large number of ideas
- **Flexibility**: the ability to shift the direction of one’s thinking or to change one’s point of view
- **Originality**: the ability to generate new and unusual ideas
- **Elaboration**: the ability to add details and to expand ideas

In addition, these researchers (Guilford, 1973; Stein, 1974; Torrance, 1963; Wallace, 1926) define creative thinking as an active process rather than a static set of skills, as do others (see, e.g., Csikszentmihalyi, 1996; Taylor, 1959).

Many researchers in the area of creativity agree that all people are creative, not in the sense of creating great works, but, rather, creative in a universal sense that attributes a portion of creative talent to every person (De Bono, 1975, 1983; Torrance, 1986; Torrance & Safter, 1990). Torrance (2000) states that creative thinking comes naturally to most children and that creativity can be developed by environment and learning. Treffinger et al. (2002) proposed: “Through instruction and practice all people can develop and improve their fluency, flexibility, originality, elaboration, and metaphorical thinking abilities” (pp.
Researchers have stressed that improving students’ creative thinking and problem-solving abilities, cultivating an awareness of creativity, and molding creative attitudes are important and viable educational goals (Davis, 1992; Treffinger, 1986).

In summary, creativity and creative thinking skills involve the process of divergent thought. The essential components of divergent thought can be identified as fluency, flexibility, originality, and elaboration. Thus, creativity may be developed in an environment where divergent thought, as characterized by the essential components, is encouraged and stimulated.

2. Creativity and Second Language Learners

Many studies have reported positive relationships between bilingualism and creativity (Carringer, 1974; Corbett, 1990; Kessler & Quinn, 1987; Konaka, 1997; Ricciardelli, 1992; Stone, 1996; Torrance, 1979). In particular, researchers assert that bilingual people may have a more flexible approach to the same concept, tolerance for ambiguity, and diverse ways to encode and access knowledge when compared to monolingual people (Fleith, et al., 2002; Lubart, 1999). However, it has been noted that a significant difference in all four creative ability measures (fluency, flexibility, originality, and elaboration) was not identified from the studies.

Some researchers, such as Cummins (1996), have pointed out links between creativity and bilingualism. For example, studies by Hakuta (1986) and Hakuta and Diaz (1985) show that bilinguals are able to approach problems from more than one perspective. Although the evidence is not conclusive, one may assume this is because bilinguals can express the same ideas in different ways; they are able to view tasks and problems from more than one perspective (Cummins, 1996).

Therefore, one also may assume that language learners who learn a second language have the potential to think more flexibly and creatively as they become competent speakers, readers, and writers of two languages. The preliminary evidence in ESL creativity and the long history of research in creativity in general indicate that these skills are important to all learners’ lives. Because there are no skill prerequisites or right or wrong answers with creative thinking activities, all students can respond successfully, regardless of their academic skills. As a result, ESL students may be more willing to express their feelings and opinions.

However, the relationship between the learning of English as a second language (ESL) and creativity needs much additional study in order to ground these assumptions more firmly in evidence.
3. The Role of Teachers for Fostering Creativity in Language Classrooms

Preparing ESL students to think in creative ways imposes new and challenging demands on teachers and learners. Teaching thinking skills may be difficult to foster through traditional educational approaches, particularly as educational paradigms change to deal with increasingly large amounts of information and the need to communicate across languages and cultures. In addition, Torrance (2000) emphasized that teachers’ positive attitudes are requisite in developing the creative spirit in students; teachers kill the creative spirit in students through narrow and ethnocentric attitudes and expectations. Accordingly, students must be trained to respond and adapt to changes rather than being trained to approach a task in a single way. They must actively interpret and organize the information they are given, fitting it into prior knowledge or revising prior knowledge in the light of what they have learned (Dole, et al., 1991; Van Dijk & Kintsch, 1983).

To help students reach these goals, teachers have to become facilitators of learning; teachers must find, select, and offer information in a variety of ways based on what their students must learn in order to meet diverse needs. Teachers also must prepare tasks or activities that focus more on encouraging students to explore and be creators of language rather than passive recipients (Craft, et al., 2007). In addition, teachers need to have an open-minded attitude toward their students’ ideas and consider the students to be active participants in learning (Brown, 1991). Thus, as a facilitator, supporter, or “a co-inquirer in an intellectual enterprise” (Zamel, 1987, p. 710), the teacher must be aware of a variety of materials available for improving students’ language skills and creativity. They also must know how to teach learners to use the materials effectively. In other words, the teacher’s role is a key element to success in this more flexible classroom designed to support creative thinking development as well as language learning (Abdallah, 1996; OfSTED, 2003; Davies, 2004).

Researchers have tried to cultivate the creative potential of the individual. In particular, several researchers in education have developed materials, activities, and programs to promote students’ creativity (e.g., Mansfield, et al., 1978; Myers, 1998; Rose & Lin, 1984; Torrance, 1972; Torrance & Safter, 1990). Program evaluations found that content can be learned more economically and effectively if students are taught in creative ways that make use of creative thinking skills. For example, as a result of years of research, Torrance (1979, 1990, 1995, 2000, 2002) introduced effective teaching practices or frameworks that teachers can use in teaching creative thinking in classrooms. These frameworks emphasize the importance of encouraging and facilitating creative thinking. Torrance (2000) suggested that the most important activity for cultivating creative thinking is “questioning.” Millar (2002) also addressed the skill of questioning in education: Questions should make students think; the questions should be provocative, speculative,
and hypothetical because memorization does not promote creative thought.

Similarly, Torrance (2002) stated that educators or mentors are most helpful in achieving the creative potential of creative persons. Specifically, Torrance (2002) proposed that educators need to:

- be creatively motivated and committed to teaching creatively;
- help students strive for excellence, not perfection;
- present a curriculum that allows students to “learn something, not everything”;
- allow “creative space” for students, with reasonable boundaries and structure;
- encourage in students an attitude of “healthy skepticism”;
- instill adventure and fun in learning.

Torrance also proposed that mentors need to:

- celebrate the individuality of the child;
- pay attention to the questions children ask;
- provide a different, yet noncompetitive perspective from parents.

The goal of language teaching must focus more on balancing the ability of students to use both creative thinking and language skills. Accordingly, the challenge for teachers is in finding ways of fostering creativity for language learners. The creativity tasks described in the next section, for example, may offer possible ways of teaching both language, content, and creative thinking skills. Because it is important that all learners have access to balanced opportunities, investigating creativity tasks that support language learning may be worthwhile.

In short, in both language and creativity learning the teacher’s role is very important. The teacher can create an appropriate learning environment in which balance is central and attention is paid to both the principles of language learning and the skills involved in creative thinking.

### III. THE PROJECT

In order to explore the ideas presented in the literature on creativity, a 12-week project was developed that paired university-level pre-service teachers in the U.S. studying for their ESL teaching endorsements with middle school ESL students in another state. Fifteen ESL students who were enrolled in a language support program participated in the study, and they spoke their native language at home. The 15 teams each worked on three separate sets of creativity tasks through the medium of an electronic communication forum which is a web-based on-line teaching and learning environment. Teacher roles, the creativity tasks,
and some of the outcomes of the project are discussed in this section to underscore how language and creativity may be integrated into language learning environments.

1. Teacher Roles

The role of the pre-service teachers was to help their ESL students think in various and different ways and to give positive feedback as students expressed their ideas in an informal, interactive atmosphere. One of the most important roles of the pre-service teachers was asking systematic and provoking questions that would promote ESL students’ thinking. In addition, it was critical for the pre-service teachers to maximize the one-on-one interaction environment by providing positive feedback to their students’ messages and helping their self-expression process by supporting them in completing their tasks. In keeping with the literatures on creativity and language learning, the teachers were given the instructions presented in Figure 1.

**FIGURE 1**

Project Instructions for Pre-service Teachers

The main goal of this project is for you to help your ESL student develop as a creative thinker and language learner. You are expected to encourage your student to express their thoughts by looking at the world with new eyes.

- **How to do it**
  1. Ask questions that can help the ESL student think in various ways; Give them open-ended questions rather than questions that require simple and short answers. Ask questions that stimulate their imagination.
  2. Encourage your student to use their prior knowledge in addition to new knowledge to solve problems.
  3. Postpone grammar instruction and error correction until they write a final draft. Students must be allowed to express their ideas freely, without the constraints of grammar rules.
  4. Give value to the ESL student’s answers so that they can be motivated and encouraged to write more.
  5. Give prompt, positive and frequent feedback as much as you can.
  6. Try to be a friend, helper, and supporter of them rather than a strict teacher.

To achieve the educational goal, the pre-service teachers needed to consider the development of language ability in addition to the cultivation of creativity. Their classroom instructor provided support and feedback as needed.

2. The Tasks

The three tasks were chosen from the text *Curious and Creative: Critical Thinking and
Language Development (Green, 1993) based on principles from the creativity and language learning literatures. These included that: the students had some knowledge of the topics and the topics were relevant to their lives; the tasks provided flexibility and could support divergent thinking, and; language was central to the practice of creativity. The three general topics were food, weather, and shapes. Each task lasted for three weeks, and during each task the partners received and wrote about three related pictures at least once per week. The task schedule given to the teachers is presented in Figure 2, and a sample picture for the food task is shown in Appendix A.

FIGURE 2
Weekly Project Schedule

Week 1: Initiation
- Ask initial questions.
- Help ESL students to think in various ways.
- Provide feedback for cultivating their thinking.

Week 2: Expansion
- Ask expansive questions (asking questions for them to think rather than yes/no questions).
- Promote your student to think in different ways.
- Provide sufficient and rich feedback.

Week 3: Elaboration
- Help your students synthesize and elaborate ideas.
- Give language (English) support (providing implicit feedback to increase their awareness about their language use).

The ESL students were given instructions to read and think carefully, correspond with their partners as much as they wanted/needed to (minimum of once per week), and to have fun. Their on-site ESL classroom teacher provided help and support.

3. Data Collection and Data Analysis

Data were collected systematically throughout the course of the project in order to cull suggestions for practice and future research. The asynchronous electronic forum in which participants interacted tracked the number and content of postings and replies and provided details of the student/teacher interactions. In addition, the teachers, their instructor, and the ESL teacher turned in journals, and the ESL students completed an end-of-course survey about their experiences.

Data were analyzed through content coding, categorizing, and thematizing. The coding scheme was open to emerging categories at any time till the final coding process. Member check techniques were used for data analysis processes in order to confirm the
interpretations that the researchers made. Patterns in the data are discussed below.

IV. OUTCOMES

The brief discussion in this section underscores the possibilities for language and creativity learning and practice that the tasks provided. The foci of this section include input, scaffolding, challenge, relevance, and the four divergent thinking skills.

1. Language Input

Input is important for language learning (e.g., Gass & Selinker, 2001; Krashen, 1982; Long, 1985, 1996; Pica, 1994). Researchers agree that the most obvious factor that affects input utilization is frequency (Gass & Selinker, 2001). This means that if something is very frequent in the input it would likely be noticed, and therefore, learned (Schmidt, 1992). During this project, the students received a lot of questions according to the objectives of each phase. The questions offered students the opportunity to notice question formation and word use. In addition, the students had constant and implicit feedback (modeling) on errors in some words or sentence structures and received explicit responses to their messages from their partners. For example, a student repeatedly misspelled the word “favorite” as “faboriti.” The partner of the student modeled the correct word six times until the student used it correctly:

S: My faboriti food is pizza…what is your faboriti TV show? (Week four)
T: What are your favorite sports?
T: What is your favorite food? (Week five)
T: What is your favorite food in the picture?
T: My favorite pizza is hawaiian. (Week six)
T: My favorite dessert is cheesecake!
T: What is your favorite season and why? (Week ten)
S: My favorite season is winter because I can make snowmen. What is your favorite season? (Week eleven)

Many other interactions showed a similar pattern. In other words, the ESL students in this project had opportunities to be exposed to a body of second language data while working on creative thinking with their pre-service teacher partners.
2. Scaffolding

During the project, the pre-service teachers also provided language scaffolding that supported the ESL students’ comprehension of the task. For example, the pre-service teachers carefully selected their words when they asked the students questions. In other words, they tried to make their question more understandable for their students. For instance, a pre-service teacher asked, “What type of weather is happening by the tree and drinking fountain?” and then clarified the question by describing what she sees in the picture ‘Unusual Weather’:

In the picture you see the drinking fountain and the tree is drawn with dotted lines. This means that you can see the outline or shape of the object, but not until you get really close to it, may you figure out what it is. This type of weather makes it hard to see. This type of weather is foggy. I am not sure if you have experienced fog where you live, but in Seattle, we had some of that a few days ago. It made it difficult to see and people drove really slowly to prevent any accidents or problems. I hope that this helps you a bit.

The pre-service teacher intended to increase her student’s comprehension of a certain concept and provided scaffolded input.

Another pre-service teacher scaffolded by asked his student questions that made the discussion of the crazy shapes picture more relevant to his partner’s life: “Which shapes do you see the most?” “Are there any shapes missing from your classroom that you saw on that list of shapes?” and “Are there any differences that you think make Shape Town better than your town?” Other teacher/student pairs negotiated meaning in a variety of ways to come to understandings about their creative interpretations of the task materials, and project interactions showed that the students used the varied scaffolds in different ways in understanding and completing the task process.

3. Challenge

The individual feedback from their partners challenged the students to answer questions that were appropriate for both their language and creative abilities. For example, a pre-service teacher asked more challenging questions after giving her student praise on the previous questions:
Good job on the last questions. Here are some more…Which shapes can be cut into triangles? Describe how the square, rectangle and diamond are similar. This one may be a little hard…if you get the last question, try this one.

Another pre-service teacher also provided a harder question along with positive feedback:

Wow, good job on the last response. Now I would like you to answer this question: What would happen if things in the world around you were shaped differently?

As the project progressed, the teachers also adjusted their level of language input more precisely to fit their students’ level of language proficiency. For example, the teachers wrote in their course journals:

- He was able to decipher and complete both of these tasks which leads me to believe that his level of fluency and comprehension was underestimated…for the next task I have asked questions that are not either-or. Rather than starting with basic questions I am going to bump up the level of difficulty.
- I continue to notice that his written language is not very good… I can tell that he has the thinking skills just not the language to express himself properly yet.
- At first I thought that he spoke perfect English and I wondered how this project would help him. After talking to him for a while now, I can see that he makes many grammatical errors in his English. He can definitely carry on a normal conversation, but some of his sentences were difficult to discern what he was saying.

In addition, as they had more appropriate feedback from their partners, the ESL students gave feedback to the pre-service teachers. For example, some students commented about the pre-service teachers’ feedback:

- These questions are kind of hard but it is okay.
- I fell(felt) very good with this project…and I fell(felt) very well when someone help me and that’s why I like to do this project…because I can do things better now…

Through the creativity tasks the students were able to work at or beyond their language level and express themselves in different ways.
4. Relevance

During the project, the teachers and students used the task materials as a foundation to ask questions of each other. For example, a pre-service teacher created task questions relevant to shapes and soccer after she knew that her student liked soccer. She asked “I have some questions for you about soccer! What is the shape of a soccer field?” Other participants also created questions related to the students’ personal tastes in food, their favorite weather, and specific items in the task materials.

According to previous research, building a strong familiarity between interlocutors is important to interaction because in general it has a positive impact on comprehension (Gass & Varonis, 1994; Markee, 2000). The pre-service teachers were aware of this and a pre-service teacher’s note reflects their idea well: “I think that the more personal you make the questions for your student the better, because they will care more about what is being asked. In turn, when he or she responds the answer will be more in depth and meaningful.” A discussion excerpt shows personal questions created by the pre-service teacher around the task materials:

T: What is your favorite food? What is your favorite food in the picture?
S: My favorite food is pizza. My favorite food in the picture is a hamburger.
T: Ask three of your friends what kind of pizza they like best, pepperoni or cheese. Which kind one?
S: My three friends said pepperoni. What do you think?
T: My favorite pizza is Hawaiian. It has Canadian bacon and pineapple on it! Mmmmmmm!

Focusing on the tasks seemed to make it easy for the pairs to become familiar in ways that they might not otherwise.

5. Creativity Skills

The discussions show that students showed progressively more evidence of creative thinking as the questions and interaction focused more specifically on the elements of creativity. During week three of each task when the questions were more open-ended and asked for more elaboration, the students’ responses were not only more elaborate but also longer.

The discussion data imply that as the question allows more freedom, and as they become more comfortable with a non-judgmental audience, the students write more. This concurs with findings by Deitering and Huston (2004) and other researchers.
1) Fluency

When the ESL students were presented with questions that focused on stimulating fluency, for example, questions that asked the students to respond in quantity; students generated a number of ideas relevant to the topic area. In other words, they wrote many different words or ideas to answer the question. For example, when a teacher asked the question, “Can you describe what you see in the Food Hop worksheet? List the example of each shape.”, the partner student responded with several ideas about the picture material. As Torrance (1979) states that fluency implies understanding, not just remembering information that is learned, discussion data showed the students’ use of fluency-thinking skills through the task process.

2) Flexibility

Likewise, when pre-service teachers asked questions that could help the students think flexibly, the students generated responses that show they were using their flexibility. The students were asked questions such as, “What ideas come up in your mind related to some of the shapes we have talked about?” or “Besides the sun, where else can you get warmth from?”

One student described his favorite book written about storms and added his various feelings and ideas related to the story:

The book was called thunderstorm it looked like a good book cause[cause] it showed deferent[different] storms. I like storms. It had a few pictures in it. They were color pictures. Once, there was this thunderstorm, I was running home and then when I was close to the house, I was floating in the air. Well, probably the air or the wind picked me up. I was impressed about how the wind could pick me up. I felt like I could fly.

The message includes the student’s creative wonderings that reflect his flexible thinking. Overall, the ESL students’ discussion messages showed that they had the opportunity to develop their flexibility through the task process.

3) Originality

The task pictures themselves were unusual and original and these materials provided models of originality. In fact, originality is the most salient creative thinking skill shown in the discussion out of the four essential creative thinking skills. Students were asked
questions that included, “Imagine…” “Suppose…” “What if…” or “Create your own story about …” to stimulate their imaginations. The students’ messages that responded to those questions contain their imaginative and unique ideas. One student created a story to tell what is going on in the picture “Food Hop”:

There’s a picture I got and it’s called the food hop. And there’s like a corn dancing in a dress and that’s pretty weird that’s what I think. And, a pizza wearing a shoe dancing with a broccoli that has bows on its head. And like a[n] apple and a piece of cheeses and a hamburger. Why do you think that these vegetables are dancing? Is it maybe because they are happy that they are not going to get eaten? It could be a lot of reasons why you can tell me later why you think these non-living thing that can’t even talk or nothing like that? If you really think about it you will be like what that crazy. But that would be weird if they could really talk to you while your[you’re] eating them and there like a live. But in a way I’m glad that they don’t talk to us.

When the pre-service teachers asked very creative questions to stimulate the students’ imaginations, the students generated very uncommon and unique ideas in response to the questions: Some students were even curious about something related to a topic and asked their own questions that represented their original ideas:

- Where do you think shape come from?
- What will you do if your house were a triangle? …what if your shoes were rectangles?
- Why do you think the hamburger is wearing glasses? Where are they? Why do[does] the carrot have just one shoe?

From the discussion, therefore, it appeared that the students had the opportunity to develop their originality as they showed their potential for original thinking in English in their messages through creative stories or questions.

4) Elaboration

Many of the excerpts noted previously reveal that the students wrote with more detailed ideas and information in the message when they received the questions that encouraged them to use elaborate.

In general, students received questions that seemed to stimulate or spark their creative potential. This implies that, as indicated in the literature, questioning was an important strategy to provoke creative thought and to develop creative thinking.
V. RECOMMENDATIONS

The ESL teacher in this project mentioned that the students had not been taught previously in a way that encouraged them to think differently and therefore they had a hard time dealing with some of the challenges of the project. Although these students in this project were in a special context, each having individual interaction and being relatively anonymous through the use of the electronic forum, the outcomes of this project lead to several recommendations supported by the literature. Most important is that individual teachers understand that they can awaken, sustain, or direct a learner’s interest as they:

- believe in all language learners’ creative potential and help them develop their skills.
- provide level-appropriate tasks that can challenge students in terms of language and creativity.
- offer frequent, positive, and scaffolded feedback for individual learners.
- create supportive, flexible, and balanced learning environments that enhance learners’ language learning and creative thinking.
- provide learners enough time to think creatively and enough input in the target language.
- make learning relevant and autonomous.
- ask questions that require learners to respond in specific, creative ways.

Researchers vary on whether creative thinking can be taught, but clearly from the findings of this project it can be encouraged and supported while teaching language. Research needs to be done to illuminate further the advantages to teaching creativity in language classrooms. However, the need for language learners to think creatively in many aspects of their lives is clear, and developing learning environments that foster creativity should be a specific purpose for all language teachers.

REFERENCES


Fostering Classroom Environments for Language and Creativity: A Specific Purpose in Language Teaching


APPENDIX A
The Food Hop, from Green (1993), Curious and Creative
Applicable levels: primary, secondary
Key words: learning environment, language learning, creativity, teacher role

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