

# Activities for Portable, Extended and Embodied Cognitive Self-Sourcing (PEECSS)

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## Abstract

Portable Extended & Embodied Cognitive Self Sourcing (PEECSS) activities are personally meaningful emotional-cognitive acts based on sayings, poems, games, songs and stories that entail some EFL teaching focus. These are tied to body movements, gestures, artifacts, and treasured memories that allow easy out-of-class access. PEECSS activities help with language learning and at the same time can help learners gain more control (agency) over their emotions. Derived partially from extended and embodied cognition (Atkinson, 2010, 2011) and brief therapy ideas, we trialed examples of these activities in our own classes in this RILS project.

## Introduction

“What an astonishing thing a book is. It's a flat object made from a tree with flexible parts on which are imprinted lots of funny dark squiggles. But one glance at it and you're inside the mind of another person, maybe somebody dead for thousands of years. Across the millennia, an author is speaking clearly and silently inside your head, directly to you. Writing is perhaps the greatest of human inventions, binding together people who never knew each other, citizens of distant epochs. Books break the shackles of time. A book is proof that humans are capable of working magic.”

Carl Sagan (2012)

Inspired by the recent work of neurologists, psychologists and cognitive linguists as well as reading researchers, we take our guiding principles from disciplines outside of the narrow field of ELT. Language acquisition research encompasses not only second language teaching and learning, but also includes child language development and studies in L1 learning. The first point in recognising the basis of embodied cognition comes from the work on metaphor theory by Lakoff and Johnson. This provides a beginning framework and way of conceptualising embodied cognition and is used as a starting point in understanding the principles we are guided by.

“The mind is inherently embodied.

Thought is mostly unconscious.

Abstract concepts are largely metaphorical.”

Lakoff & Johnson, 1999, p.3.

From this starting point we look at classroom applications of embodied cognition which create links between language learning and the needs of our students. The times we live in seem to have drastically changed, and, as Caine, R.N. et al. (2005:7) point out, students have fewer and fewer chances to experience making decisions, using critical thinking and applying knowledge to personally relevant questions and projects due to the age of instant information, the trend possibly resulting in depression and emotional unbalance. Bucke, R.M. talks to the necessity of moral education in achieving happiness that comes with possessing “faith, courage, personal force, sympathy, and affection”. He states that “It is our moral nature that settles at last the significance of what exists about us” (2006:41). Education that

fosters learning through personal experience might provide the answer (Dewey, 1963).

Embodied cognition (Lakoff & Johnson, 1999) helps us to develop empathy and to understand how others might be feeling. While doing this, we align ourselves with others in a constant state of reacting to the environment and to other people. We are not entirely conscious of these actions, although in some cases these are learnable skills, such as the use of effective stance and posture when delivering a speech. At a non-linguistic level, embodied cognition is something that animals do to communicate using their bodies as tools. The special, defining feature of human communication is language, of course. Thus, it follows that “as the main form of communication in humans is language, it is unsurprising that embodied cognition is involved in understanding what people say to us and when we read” (Littlemore, 2011, p.127).

New trends in the science of embodied cognition (Atkinson, 2010, 2011, Caine, 2005, Gallagher, 2005, Shapiro, 2010) suggest that the human brain is not simply hardware for computation, but rather dynamically interdependent with the body and the outside world (Atkinson, 2010, p.611). Those familiar with multiple intelligences theory (Gardner, 1983) will be aware of the idea of kinesthetic learning, commonly thought of as being active while learning, and learning through doing. Although this term is now widely known and used in classrooms in many different contexts, there are some key differences between kinesthetic learning and embodied cognition. Gardner’s theories themselves, having predated the recent findings by Atkinson and others, do not fully conceive of learning with the

body in the same way. To some extent kinesthetic learning still upholds the dualism of the mind/body separation, while Atkinson and others seek to break down this division. We emphasise our commitment to embodied cognition by echoing Atkinson's beliefs, summarized as:

“(i) Mind, body, and world are in continuous processes of interactive alignment; (ii) These processes are partly public; and (iii) In being public, they are learnable.”

Atkinson, 2010, p.612

We interpret these assertions directly and literally, as well as metaphorically. Learning is not any more limited to classrooms and teachers or abstract purposes but is a continuous system constantly adapting to changing contexts. By being embodied, it shapes the mind. It also depends on our senses, perceptions, emotions and actions that a body performs to learn about the world.

In light of the belief that mind interacts with the environment and the body to create meaning, the following educational theories were chosen to support the idea. Rosenblatt's (1938/1995) theory involves an interaction between the text and the reader and assumes that the text has different impacts on different readers or listeners. Rosenblatt explains (1995: 30):

“The reader brings to work personality traits, memories of past events, present needs and preoccupations, a particular mood of the moment, and a particular physical condition. These and many other elements in a never-to-be-duplicated

combination determine his interfusion with the peculiar contribution of the text.”

Rosenblatt’s statement is congruent with the view that each individual forms his or her own meaning, and responds to the text in his or her own unique way. Literature has no objective meaning or truth, and therefore no one has the only possible correct interpretation of it. When readers transact with the author and the characters in literature, by which Rosenblatt means mutually influencing each other, individualized meaning is produced. Aesthetic reading is highly personal and it takes into consideration one’s own feelings and associations that the words in the text invoke in him or her. The reader lives through this experience and produces what Rosenblatt calls a “poem”, his or her own personal interpretation. The “poem” is no longer what the author meant it to be, and it no longer resembles the reader’s initial feelings before this new experience. The “poem” is created during the transaction with a piece of literature. It now represents new learning, a new stage in the reader’s development.

In line with child-initiated learning, child-centeredness and the uniqueness of each individual child, Gardner’s (1983) multiple intelligences theory made a valuable contribution to child-centered embodied learning. He states (1993/2006: 24):

“If we can mobilize the full range of human intelligences and ally them to an ethical sense, we can help increase the likelihood of our survival on this planet, and perhaps even contribute to our thriving,”

The intelligences Gardner proposed are of a kinesthetic nature, in that the activities are generated out of movement (even language, see Gallagher, 2005).

The intelligences are:

- a. Verbal/Linguistic (reading, writing, speaking and listening)
- b. Logical/Mathematical (working with numbers and abstract patterns)
- c. Visual/Spatial (working with images, mind mapping, visualizing, drawing)
- d. Musical/Rhythmic (using rhythm, melody, patterned sound, song, dance)
- e. Bodily/Kinesthetic (processing information through touch, movement, dramatics)
- f. Interpersonal (sharing, cooperating, interviewing, relating)
- g. Intrapersonal (working alone, self-paced instruction, individualized projects)
- h. Naturalist (spending time outdoors, sorting, classifying, noticing patterns)

Embodied cognition seeks to build on the work of Gardner, while synthesising his approach towards a more unified view of general cognition. With these theories in mind we discuss our approaches to teaching and materials here.

### **Story Telling (Nena)**

In my university class, students respond to stories in picture books presented by their fellow students. The procedures in my narrative practice are as follows:

1. Students pick a storybook of their own choice, one which makes a personal impact on them, a story that “begged” to be read.

2. They read it to the class.
3. While listening, other students are supposed to answer three (aesthetic) questions (Cox, C. 2008)
  - a. Making associations: What were you thinking about while listening to the story? (Has anything like this happened to you?) Tell about it.
  - b. Focusing on a part/ Noticing powerful emotional details: What was your favorite part of the story? Tell about it.
  - c. Hypothesizing/tasks for further research/discussion: Was there anything in the story you wondered about?
4. Students submit their answers. The teacher later summarizes the answers to the third question and has the students express their personal views in the following class. The presenter receives the answers to the first two questions asked about the book he or she chose and compares the answers.
5. Next, the presenter introduces the story's concepts (like family or friendship, for example) and selects one. In order to expand that concept, and accommodate different interpretations of it, he or she creates two activities employing two multiple intelligences. This activity is in line with Shapiro's (2010) conceptualization hypothesis: "Properties of the body determine the concepts one has of the world, differences in the meaning create different worlds for different kinds of organisms." By expanding the already existing concepts using kinesthetic activities, learners (especially children) increase their chances of better communication.
6. Post-reading creative tasks may be assigned, such as: writing a new ending, comparing self with the character (Venn diagram), creating a poem, drawing a picture mural, discussing a favorite part, writing a

response journal, dramatizing the story, writing a card to somebody about a story, illustrating the front page, or drawing a leaflet advertising the story, among many others.

7. In the end of the term, students write a term paper for which they read their story to larger audience, and report how the story influenced both themselves and the people he/she interviewed.

In the course of three months, learners encounter about 40 stories. Here are some story titles which can bring out a lot of students' personal treasures.

1. The important book (celebrating "you")
2. Let's go home little bear (children and adults relationships, noticing "little" things in life)
3. The little engine that could (If you only try hard...)
4. Swimmy (cooperation)
5. Naomi's special gift (family love)
6. Yo! Yes! (making friends)
7. Harry the dirty dog (What is it that makes you "you"?)
8. I'm the best (We are all good at something)
9. Beegu (an alien visits the Earth and gets disappointed by the adults' behavior)
10. The tiger who came to tea (manners)

Whereas the focus is on the well being of the learners, the stories and the activities, as well as the final term paper all contribute to language practice and learning. PEECSS ways thus are of great value to the students emotionally and academically.



## **Reading and writing activities (Tara)**

“A book is a machine to think with” (Richards, 1924: 1)

A perfect example of embodied cognition exists within the puzzle of reading and writing. As the written word speaks to us over time and across cultures, the process of reading becomes more cognitively demanding than ever. In this project, materials for language learning and development of the thinking “machine” go together perfectly.

In writing classes the desire to become more fluent and more successful in writing is coupled with the need to internalize and process content. One way of making this more of an embodied, cognitive activity is to use creative writing tasks to assist with engagement in a structured way. Sometimes called the “Cut up Method” (William Burroughs) or found poetry, this creative writing technique is simple and very effective. By taking an original text, poem, story, song, news article, a student can erase or rearrange words from the original text to make something new. The original piece of writing becomes personalized and therefore portable, is taken beyond its original source and thus becomes extended and allows for embodied cognition through its connection with the action of creating, a physical process. The process is discussed in more detail on the website (<<https://sites.google.com/site/materialsforpeecss/poems>>). Results brought into sharp focus the importance of individual expression, and for activities which engage students in action and personal response.

In reading classes, as well as our daily lives, independent reading can give freedom

and is a tool for empowering independent thought. Becoming a confident, independent reader is the goal of many language learners and reading teachers share this aspiration for their students. In a pilot project using embodied cognition as a goal for a classroom and out-of-classroom activity I developed materials over one semester linked with the ideas of embodied cognition and alignment. The over-arching aim of these activities was to develop a sense of alignment with the idea of being a reader. Since my students are university-level language learners, one of their concerns is the idea that they are reading authentically, and experiencing reading in a way that helps learners feel and act like they are having a real reading experience when they engage with texts.

In order to engage students with the activity of reading and to raise awareness of the power of reading through an activity using embodied cognition, an activity called “Awesome People Reading” was created. Next I used a crowdsourcing website (Pinterest) which allows users to pin interesting pages linked with a theme and share them publicly. I created a Pinterest board ([www.pinterest.com/taramcendo/awesome-people-reading/](http://www.pinterest.com/taramcendo/awesome-people-reading/)). The Pinterest board was shared with students and a written activity created in which students were invited to choose their favourite picture and write about it. A model response included the following details:

1. The main details of the photo
2. Some reasons why it was chosen
3. Some aspect of the photo that stands out
4. A reading or interpretation of the situation

5. A comment about the choice of book in the photo
6. A statement about the importance of reading in society

Additional, follow-up activities built on the model of encouraging alignment with the model reader allowed repeated engagement with the key goal of creating a portable, extended and embodied cognitive experience that came more and more from the learners themselves. As an end-of-term project they chose to read longer books over the summer, and sent photographs of themselves reading to me over the holidays as proof of their alignment with this goal.

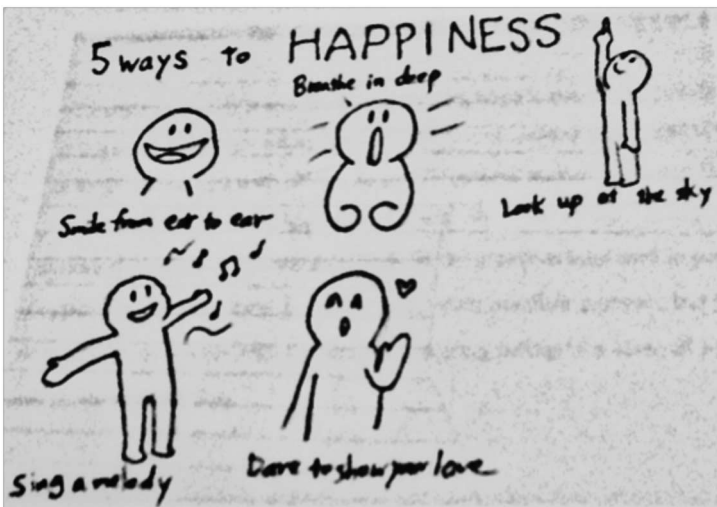
### **Common Questions and Affirmation Songs (Tim)**

In our everyday lives, people are constantly asking us “How are you?” and “What time is it?” as well as a host of other common questions that we could use as cues to excite our learning and emotions more. I teach my students to respond to “How are you?” in class with “super happy optimistic joyful and prodigious.” I tell them to really make it fluent they need to respond with those words to anyone asking, “How are you?” in any language, in and out of class. First it seems to excite them because they are gaining control (agency) over a long fluent chunk of words. And the more they do gain control over them, the better they feel about themselves and their learning. The words can also trigger positive images and good feelings and direct the mind towards feeling better.

We do a similar thing with short affirmation songs that they can sing by themselves (5 ways to Happiness, Young & Strong & Beautiful, A Happy Person, etc.) which at first I require they memorize supposedly only for our “English” learning.

However, many students tell me later that through singing the songs they become happier and more resourceful. Several of the songs also have gestures that help embed the language and the feelings and make them forever retrievable, much like a TPR (total physical response) routine (e.g. “Head, shoulders, knees and toes” is probably the most familiar TPR song, albeit with little philosophical depth.) The gestures sung with the five ways to happiness are depicted below through a student drawing, which commonly occurs and can be teacher encouraged to enhance multimodal learning (Nelson, 2011).

Figure 1 Student Drawing of the song “5 Ways to Happiness”



## **Power Posing -- The Cognitized Body and Love**

It is clear at this juncture of our studies that indeed our thinking and our emotions are embodied such that they perform in close synchrony. Amy Cuddy et al. (2012) studies of the stress hormone cortisol and the confidence hormone testosterone show that changing the body posture first can change our hormonal levels and our body postures can influence how we then think and feel (i.e. power posing makes your confidence (testosterone) go up and stress (cortisol) go down). Thus to some degree, our elementary school teachers were correct in asking us to sit up or stand up straight, rather than slouching shyly in front of the class when talking. Cuddy calls this not “fake it until you make it” but “fake it until you become it.” Our body postures can literally create our identities and influence how we think.

Combining Cuddy’s research and Fredrickson’s research (2013) on positivity resonance, I have been daring my students to do power poses and to shout out “I’m in love!” alone and with others in public places, stemming from the song Young Strong and Beautiful (Appendix 1, and on You Tube). Many have reported liberated feelings of joy and gratitude in their action logs and in person. Note that I explain you do not have to be “in love” with another person, but in love with life, or learning, or soccer, etc. Or simply enjoying being in a state of love for the world and those around you.

## **Conclusion**

The use of PEECSS activities is grounded in cognitive studies, neuroscience, positive psychology, EFL teaching techniques, and critical thinking. Through using activities that make use of embodied cognition and allow for additional

learning outside the classroom after the lesson has finished, students can benefit more continuously. This well-being focus becomes a content of the course that adds value to the language learned in a class. Ultimately, the learning itself becomes more useful to the student after the class has ended, and these benefits may continue having an impact long after the 90-minute lesson has ended. Indeed, even years later, students have met us and told us that they have continued to tell our class stories, recite our class poems, and sing our class songs that they had learned. They do so not usually because they love English, although surely some do, but in order to find meaning, comfort, and hope in their everyday lives: a portable extended and embodied cognitive self sourcing.

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Appendix 1

**I'm Young Strong and Beautiful**

Tim Murphey (lyrics and music)

I'm young and strong and beautiful  
I'm living an adventure,  
The world's so fascinating, it makes me wanna cry!  
I wanna cry to the world! I wanna fly all around  
I wanna tell everybody I'm in love I'm in love  
I'm in love I'm in love  
I'm in love I'm in love  
I wanna tell everybody I'm in love