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Teacher Creativity as Combinatory Play

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Introduction

More than 70 years ago, Jacques S. Hadamard conducted a psychological investigation aimed at understanding the mechanisms of thought employed by mathematicians in order to generate their ideas. As part of his research, Hadamard (1945) wrote to Albert Einstein enquiring about the mental processes he used in the course of his inventiveness. In his reply, Einstein (1954) explained that "combinatory play seems to be the essential feature in productive thought" (pp. 25-26). By means of this notion, he seems to imply that creativity includes the combination of different elements which are allowed to mingle and fuse into something new and unexpected. This kind of creativity has significant applications within the domain of teacher education (Xerri & Vassallo, 2016), but in order for this to be apparent it is first important to explore how different thinkers have conceptualized it.

Combinatory play

Einstein is by no means the first and only thinker to interpret creativity as combinatory play. His predecessor, the French mathematician and polymath Henri Poincaré (1913), believes that creativity involves making useful combinations of a limited minority of ideas. A creative individual possesses the necessary discernment to establish an unsuspected kinship between facts that despite being long known have wrongly been believed to be strangers to one another. Poincaré (1913) maintains that "Among chosen combinations the most fertile will often be those formed of elements drawn from domains which are far apart" (p. 386). This is also the conception of creativity espoused by Alan Tammadge (1979), who at the time of his presidency of the Mathematical Association claimed that creativity "consists of a leap which establishes new relationships, usually between areas of existing knowledge but sometimes from the known to a completely new area which will require developing or exploring" (p. 148). According to Tammadge (1979), this kind of creativity involves making connections between possibly unrelated ideas, and it is not the preserve of mathematicians only:

> Creativity in mathematics is not fundamentally different from creativity in English, drama or cookery. The common factors include the ability to see new relationships between techniques and areas of application, some existing but some still to be created. This ability to make associations is clearly a manifestation of the imagination. (p. 151)

The pathologist W. I. B. Beveridge (1957) seems to share this notion of creativity when she affirms that "originality often consists in linking up ideas whose connection was not previously

suspected" (p. 4). Similarly, Arthur Koestler (1964) affirmed that creativity in humour, science and the arts is comprised of what he termed 'bisociation', which is the combination of elements derived from previously unconnected matrices of thought in order to form a new matrix of meaning.

Despite the fact that the notion of creativity as combinatory play has been around for a long time, it seems to have endured well into the present. This is probably because it challenges the belief that creativity is a quality that one is either born with or not. Combinatory play seems different from the kind of Big-C creativity typically associated with creative geniuses. In fact, current research on animal and human creativity indicates that innovations are a product of learning from others and reconfiguring what is learnt. The evolutionary biologist Joe Henrich (as cited in Vernimmen, 2016) claims that

> the idea that innovation depends on individual geniuses is misguided. History shows that inventions invariably build on earlier findings that are recombined and improved upon. Most of the things we use every day are inventions that no single human being could ever design within her lifetime.

This is perhaps why Popova (2012) maintains that "There is a curious cultural disconnect between our mythology of spontaneous ideation – the Eureka! moment, the stroke of genius, the proverbial light bulb – and how 'new' ideas actually take shape, amalgamated into existence by the combinatorial nature of creativity." Kleon (2012) probably shares this sentiment when he says that "All creative work builds on what came before. Nothing is completely original" (p. 7). In addition, combinatory play seems to be alluded to in Steve Jobs's (as cited in Wolf, 1996) declaration that

> Creativity is just connecting things. When you ask creative people how they did something, they feel a little guilty because they didn't really do it, they just saw something. It seemed obvious to them after a while. That's because they were able to connect experiences they've had and synthesize new things.

Combinatory play involves blending, rearranging and remixing what we know and experience into new patterns of meaning. It is a democratic form of creativity that most people already practise on a regular basis or can be taught how to do better. In fact, the individualist definition of creativity (as distinct from the sociocultural) conceives of it as "a new mental combination that is expressed in the world" (Sawyer, 2012, p. 7). This means that creativity involves the novel combination of thoughts or concepts that have never been combined before by the individual, and which are communicated to others in some way or other rather than kept hidden in one's head. These traits are deemed to constitute little-c creativity, which is widely distributed and can be nurtured (Kaufman & Beghetto, 2009).

Conclusion

At the Nile@21 Conference in Norwich in August 2016, I gave a talk on teacher creativity as part of the C Group strand. Some of the above ideas served as the theoretical underpinnings for my exploration of how teacher education can help to promote creativity. Combinatory play is a beneficial thing for prospective teachers to learn how to engage in since it enables them to position themselves as creative practitioners who nurture learners' creativity (Xerri, 2013). If we believe in the absolute importance of the latter, then it is essential that creativity training should become an integral part of teacher education. Such training would, among other things, facilitate teachers' ability to use a multimodal approach, improvise, and write creatively with their learners (Xerri, 2016a, 2016b, 2016c). It would also help to dispel the myths that some pre-service teachers harbour with respect to creativity. For instance, they would come to realize that creativity is not just reserved for geniuses, nor does it entail a free-for-all. As Chomsky (2013) points out, "Creativity presupposes a set of rules, forms and rules. You can challenge the rules; one form of creativity is challenging the rules… There's got to be some structure that provides you with capacities." Creativity training is a valid way of enabling prospective teachers to broaden their conceptions of creativity by perceiving it as combinatory play, which is capable of being developed and practised in a systematic manner.

References

Beveridge, W. I. B. (1957). The art of scientific investigation. New York: W. W. Norton & Company.

Chomsky, N. (2013). Chomsky on education and creativity. Retrieved from https://goo.gl/adu2gX

Einstein, A. (1954). Ideas and opinions. New York: Crown Publishers.

Hadamard, J. S. (1945). An essay on the psychology of invention in the mathematical field. New York: Dover Publications.

Kaufman, J. C., & Beghetto, R. A. (2009). Beyond big and little: The four c model of creativity. Review of General Psychology, 13(1), 1-12.

Kleon, A. (2012). Steal like an artist: 10 things nobody told you about being creative. New York: Workman Publishing Company.

Koestler, A. (1964). The act of creation. London: Hutchinson.

Poincaré, H. (1913). The foundations of science. (G. B. Halsted, Trans.). New York: The Science Press.

Popova, M. (2012, June 6). Combinatorial creativity and the myth of originality. Smithsonian. Retrieved from https://goo.gl/YkrySa

Sawyer, R. K. (2012). Explaining creativity: The science of human innovation (2nd ed.). Oxford: Oxford University Press.

Tammadge, A. (1979). Creativity: Presidential address to the Mathematical Association. The Mathematical Gazette, 63, 145-163.

Vernimmen, T. (2016, September 16). Where creativity comes from. Scientific American. Retrieved from https://goo.gl/RnTJLr

Wolf, G. (1996, February 1). Steve Jobs: The next insanely great thing. Wired. Retrieved from https://goo.gl/6lAJOL

Xerri, D. (2013, Autumn). The value of creativity: Language teachers as creative practitioners. Teaching English, 3, 23-25.

Xerri, D. (2016, April). The case for multimodal learning and teaching. Modern English Teacher, 25(2), 13-14.

Xerri, D. (2016, Summer). Embedding improvisation in teacher education. The Teacher Trainer, 30(2), 13-15.

Xerri, D. (2016, Summer). The significance of creative writing workshops for teachers. Writing in Education, 69, 60-63.

Xerri, D., & Vassallo, O. (Eds.). (2016). Creativity in English language teaching. Floriana: ELT Council. Retrieved from https://goo.gl/29AcJN

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