

Mother Nature's Pedagogy: How Children Educate Themselves Through Free Play and Exploration -- *Natural Start Alliance Conference, Manchester, NH, July 31, 2019*

A. The Educative Instincts, Which Underlie Self-Directed Education

1. Curiosity—the drive to understand.
2. Playfulness—the drive to practice and create.
3. Sociability—the drive to know what others know and share what you know.
4. Willfulness—the drive to be in charge of one's own life.
5. Planfulness—the drive to make plans for the future.

B. Research Evidence that Self-Directed Education Works (and not just for little kids)

1. Self-Directed Education among hunter-gatherers.
2. Self-Directed Education at democratic schools.
3. Self-Directed Education by unschoolers.

C. The Optimal Context for Self-Directed Education

1. The social expectation (and reality) that education is children's responsibility.
2. Unlimited freedom to play, explore, and pursue own interests.
3. Opportunity to play with the tools of the culture.
4. Access to a variety of caring adults, who are helpers, not judges.
5. Free age mixing among children and adolescents.
6. Immersion in a stable, moral, caring community.

D. Defining characteristics of play

1. Play is self-chosen and self-directed.

- Play is how children learn to direct their own activities and solve their own problems.
- Why social play is the most democratic of all activities.

2. Play is intrinsically motivated (motivated by means more than ends)

- Play may have goals, but the goals are subordinate to the means.
- Play is how children discover & pursue their passions.
- Lepper & Greene experiment: How rewards can undermine play.

3. Play is guided by mental rules.

- Examples of rules in rough & tumble, constructive play, & sociodramatic play.
- Play is nature's way of teaching children to control their impulses and behave in accordance with shared conceptions of how to behave.

4. Play is creative and imaginative.

- Play is in some way mentally removed from the real world.
- Most obvious in sociodramatic play; but also true for all other forms of play.
- Imagination is crucial for human thinking: Designing, hypothesizing, planning.

5. Play is conducted in an alert, active, but relatively unstressed frame of mind. (some call this *flow*)

- This is the ideal state of mind for learning, creativity, insight.

E. The power of play lies in its triviality.

- How triviality is the foundation for play's educative power: Freedom to fail; a mind open to new possibilities. The play world as a simulation world, to practice for the real world.
- Play is trivial, but not easy. Much of the joy of play lies in the challenges.

(References on other side)

Some References

General. Peter Gray. *Free to Learn: Why Unleashing the Instinct to Play Will Make Our Children Happier, More Self-Reliant, and Better Students for Life.* Basic Books.

Hunter-Gatherer Education

Gosso, Y., et al. (2005). Play in hunter-gatherer societies. In A. D. Pellegrini & P. K. Smith (Eds.), The nature of play: great apes and humans, pp. 213-253. New York: Guilford.

Gray, P. (2009). Play as a foundation for hunter-gatherer social existence. American Journal of Play, 1, 476-522.

Gray, P. (2011). The evolutionary biology of education: How our hunter-gatherer educative instincts could form the basis for education today. Evolution, Education, and Outreach, 4, 428-440.

Gray, P. (2012). The value of a play-filled childhood in development of the hunter-gatherer individual. In D. Narvaez, J. Panksepp, A. Shore, and T. Gleason (Eds.), Human Nature, Early Experience and the Environment of Evolutionary Adaptedness. New York: Oxford University Press.

Education at Democratic/Free Schools

Gray, P., & Chanoff, D. (1986). Democratic schooling: What happens to young people who have charge of their own education? American Journal of Education, 94, 182-213.

Gray, P., & Feldman, J. (2004). Playing in the Zone of Proximal Development: Qualities of Self-Directed Age Mixing Between Adolescents and Young Children at a Democratic School. American Journal of Education, 110, 108-145.

Greenberg, D., Sadofsky, M., & Lempka, J. (2005). The pursuit of happiness: The lives of Sudbury Valley alumni. Framingham, Massachusetts: Sudbury Valley School Press.

Surveys of Unschooling Families and Grown Unschoolers

Gray, P. & Riley, G. (2013). The challenges and benefits of unschooling according to 232 families who have chosen that route. Journal of Unschooling and Alternative Learning, 7, 1-27.

Gray, P., & Riley, G. (2015). Grown unschoolers' evaluations of their unschooling experiences: Report I on a survey of 75 unschooled adults. Other Education, 4(#2), 8-32.

Riley, G., & Gray, P. (2015). Grown unschoolers' experiences with higher education and employment: Report II on a survey of 75 unschooled adults. Other Education, 4(#2), 33-53, 2015.

How Self-Directed Education Works & The Value of Play

Barker, J. et al (2014). Less-structured time in children's lives predicts self-directed executive functioning. Frontiers in Psychology, 5, 1-16.

Gray, P. (2017). Self-directed education—unschooling and democratic schooling. In G. Noblit (Ed.), Oxford research encyclopedia of education. New York: Oxford University Press. 2017

Gray, P. (2016). Children's natural ways of learning still work—even for the three Rs. In D. C. Geary & D. B. Berch (eds), Evolutionary perspectives on child development and education (pp 63-93). Springer.

Gray, P. (2016). Mother Nature's pedagogy: How children educate themselves. In H. Lees & N. Noddings (eds), Palgrave international handbook of alternative education (pp 49-62). Palgrave.

Gray, P. (2011). The special value of age-mixed play. American Journal of Play, 3, 500-522.

Gray, P. (2017). What exactly is play and why is it such a powerful vehicle for learning? Topics in Language Disorders, 37, 217-228.

Gray, P. (2019). Evolutionary functions of play: Practice, resilience, innovation, and cooperation. In P. K. Smith & J. Roopnarine (Eds.), The Cambridge Handbook of Play: Developmental and Disciplinary Perspectives (pp 84-102). Cambridge University Press.

Gray, P. (in press for 2019). Risky play: Why children love and need it. In Loebach, S. Little, A. Cox, & P. E. Owens (Eds.), Fostering the inclusion of youth in the public realm: Design processes, practices, and policies for the creation of youth-inclusive public outdoor environments. Routledge. In press for 2019 publication.

Pathological Consequences of Forced Schooling and Restricted Play

Gray, P. (2011). The decline of play and the rise of psychopathology in childhood and adolescence. American Journal of Play, 3, 443-463.

Olson, K. (2009). Wounded by school. NY: Teachers College Press.

See also Psychology Today blog, Freedom to Learn: <http://www.psychologytoday.com/blog/freedom-learn> and follow me on Facebook: <https://www.facebook.com/peter.gray.3572>.

To join the **Alliance for Self-Directed Education**, go to <http://self-directed.org>