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How Can a Living Systems Perspective of Learners Contribute to How We Think About Education?

By Jean Gordon

Introduction: schools and living systems

No minister of education or policymaker would suggest that our education systems should aim to produce fragmented individuals. There is a general acceptance by educators, researchers and some policymakers of the importance of taking a holistic approach to education in order to support deep learning and nurture the well-being of learners. But how does that work in practice?

In a school if you want to talk to someone about 'living systems' you probably need to go to see a biology or life sciences teacher because the concept will be part of that curriculum. However, can we learn something valuable by looking at how this concept can enhance the way we think about schools, their missions and practices, and the members of the school community, the children and the adults?

What are we referring to by a 'living system'? Living systems theory was developed by James Grier Miller (Miller, 1978)¹ to formalize the concept of life as a general theory about the existence of all living systems, their structure, interaction, behaviour and development. Miller postulated that a 'living system' must contain a certain number of 'critical subsystems', which are defined by their functions and visible in numerous systems, from simple cells to organisms, countries, and societies. As such, this concept refers as much to individuals and social systems as to the natural world around us.²

¹ For a useful summary see: <https://www.panarchy.org/miller/livingsystems.html>

² For more information: https://en.wikipedia.org/wiki/Living_systems



Illustration: Learning for Well-being Foundation

While each one of us can be seen as a unique and whole living system, we are all part of different groups (through family, school, work, teams, etc.) that are directly or indirectly interacting. In schools, for example, individuals are grouped into classes most often made up of students and teachers. They take on a certain dynamic that is probably a bit different from the class next door. Such systems are generally more or less open, in that they relate at certain moments to each other and in that way exert some mutual influence. And these individuals in the class opt to be part of teams or clubs or other groups, all of which are interacting together within the school as a larger living system, in itself part of a neighbourhood, an education system, etc. In this article I want to look at the implications for education systems and institutions of engaging with children (as well as their teachers, families, etc.) as whole human beings. Understanding human functioning within a web of relationships or a 'living systems perspective', weaves together the various aspects of the person, the process and the environment, all in dynamic interaction with one another (Gordon and O'Toole, 2015). While it is beyond the scope of this article (and the capacity of the author) to elaborate on living systems theory, the purpose is to look at how such an approach can open more avenues for thinking differently about education. The relevant key aspects of living systems theory are the notion of wholeness (the individual, the class, the school, etc.), being open to other 'systems' (other individuals, schools, clubs, etc.), encouraging interactions and recognizing interrelatedness both within the individual and among different types of 'systems.'



Slide: Carlos A. Gonzalez-Carrasco, A New Culture for the XXI Century, presentation at Regent's University of London, Nov. 2015 <https://www.slideshare.net/CarlosAGonzalezCarra/a-new-culture-for-the-xxi-century-regents-university-nov2015-sec> (Equanime 2015, www.equanime.eu)

Engaging with the whole child through holistic processes

It is not uncommon for academic research, policy reports, strategic documents, etc. to use the terms 'holistic' and 'whole child' when talking about goals and intentions for and observed practices of education systems. Generally, the term holistic signifies a process or purpose, while the notion of the whole child tends to refer to engaging with the physical, emotional, social, spiritual, and mental aspects of each person. Waldorf educators express it as educating the 'head, heart and hands' of each child (Easton, 1997). The focus may be placed on certain aspects of the human experience or on addressing the needs of the 'whole child' through 'whole education,' the latter being defined by David Crossley as: 'a broad and inclusive one that helps children and young people to develop a range of skills, qualities and knowledge that they will need for life, learning and work. It [the Whole Education Network] also argues that it is the combination of these skills and qualities that is important' (Crossley, 2015).

In the same vein, Jacqueline McManus in her research on holistic learning³ in the context of organizational learning emphasizes the relational nature of learning and how holistic learning involves the recognition that all the variables are relevant and important in a model where there is interaction among the learner, the environment or situation and the learning outcomes (McManus, 2011). In her article, 'What Does It Mean to Educate the Whole Child?' Nel Noddings asks questions about the proper aims of education, how public schools serve a democratic society and what it means to educate the whole child, warning, furthermore, that needs cannot be rigidly compartmentalized and that the massive problems of society demand holistic (or integrated) treatment and processes (Noddings, 2005). She reminds us that 'students are whole persons not mere collections of attributes, some to be addressed in one place and others to be addressed elsewhere.' (Noddings, 2005)

So, for example, in early childhood education and care we would be referring to how the environment supports (or not) a 'whole child' approach through holistic processes involving all services and agencies, such as health, social services, education, day care, justice, etc. (Gordon et al., 2016) taking account of environmental factors. In the case of ECEC provision, in addition to the networking and integration of different types of services, it would also entail ensuring that these services are sensitive to young children's physical, mental, emotional, social and spiritual needs, as well as recognizing them as social agents and therefore ensuring that their voice is heard and is central to all processes.

³ By 'learning' I'm referring to the processes taking place during formal and non-formal education and training.

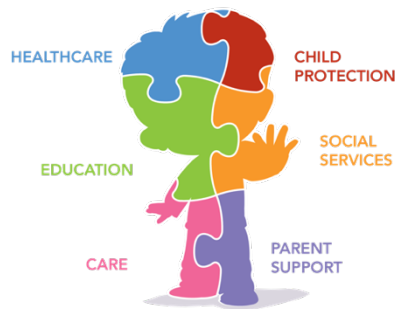


Illustration: Learning for Well-being/INTESYS ([Learning for Well-being Foundation](http://www.l4wb-magazine.org))

The whole child: referring to all aspects of a person/child

Developing approaches that take account of all aspects of children is what Loris Malaguzzi called the 'hundred languages' of childhood and the image of the child who is 'rich in potential, strong, powerful, competent and connected to adults' (Moss in Cameron and Moss, 2011). Malaguzzi was the founder of what has become known as the 'Reggio Emilia approach' to early childhood education and care in Italy. The notion of nurturing children and thus enabling them to develop certain attitudes, ethics and a sense of meaning, however expressed by different authors, always points towards an image such as the 'hundred languages' of childhood, notably in the field of early years' development.



Image: Exploring the One Hundred Languages of Children <http://blogs.ubc.ca/melissafalabella/>

This raises the issue of the policies and strategies necessary to enable such a vision to be a reality in everyday practice in schools or early years' centres as whole communities concerned with the total development of children and encouraging teachers and students to interact as whole persons (Noddings, 2005) because:

Most of us want to be treated as persons, not as the 'sinus case in treatment room 3' or the 'refund request on line 4.' But we live under the legacy of bureaucratic thought – the idea that every physical and social function should be assigned to its own institution. In the pursuit of efficiency, we have remade ourselves into a collection of discrete attributes and needs. This legacy is strong in medicine, law, social work, business, and education. (Noddings, 2005)

Even when educators recognize that students are whole persons, there is the challenge of ensuring that every aspect or attribute is in some way somehow present in the curriculum leading too often to overcrowded curricula (Noddings, 2005).

In terms of outcomes, there is still a tendency among those responsible for education systems to consider that the traditional methods (whole class teaching, little interaction among classes, discipline, learning by heart, etc.) will produce better academic results. Taking a different position from this, Adele Diamond argues that the best way to foster deep, meaningful learning and achievement is through the development of the human being overall.

Ultimately, the key is recognizing 'the fundamental interrelatedness of the different parts of the human being (the social, emotional, cognitive, and physical parts) and of all human beings to one another. Academic achievement, social – emotional competence, and physical and mental health are fundamentally and multiply interrelated. The best and most efficient way to foster any one of those (such as academic achievement) is to foster all of them. Each of the diverse disciplines specializing in any aspect of these has an important piece of the whole to contribute. We need to see the human being and human development as one whole, that those who care deeply about developing cognitive competence, social skills, emotional wellness, or physical health and fitness are not in competition, that one component is not more important than any another, and that we have much to learn from the insights and accumulated wisdom of our counterparts in other fields and specialties. (Diamond, 2010)

Moving outwards from a specific focus on education and into the complexity of social systems, cross-sector initiatives aim to address the different needs and life situations of individuals, such as children and their families. The 2013 Communication from the European Commission, *Investing in Children: breaking the cycle of disadvantage*, was a joint communication of several Directorates-General responsible for different sets of issues concerning children and childhood. The Communication focused on the need to strengthen synergies across sectors and develop integrated strategies that include education but as part of a larger social and economic whole including health, housing, poverty, justice, social sector, etc.



The next level of questioning could then be whether the current political context actually enables integrated approaches nurturing wholeness. Many authors consider that what is generally called the neo-liberal approach has strongly influenced major trends in education policies since approximately the mid-1980s (Fielding and Moss, 2012; Desjardins, 2015). Richard Desjardins argues that one of the effects on schools is on choices they make about what to prioritize, given the perceived impact of education on economic outcomes, and also what education systems are expected to achieve, including the types of learning outcomes. He argues that this is increasingly seen to be in competition with the socialization function of education and its role in identity and value formation (Desjardins, 2015). For Fielding and Moss, in the neo-liberal approach, 'The dominant values are cognition (above all other facets of human being), competition (between children, between teachers, between schools), calculation (of best returns on investment), commodification (in which everything can be costed, calculated and contracted), choice (of the individual consumer variety), and inequality (fuelling and fuelled by competition).' This clearly sits uncomfortably in a scenario in which a holistic process focusing on the whole child is valued and in which democracy is a fundamental underpinning concept (Fielding and Moss, 2012).

Implications for education systems: wholeness, openness, interacting and interrelated

A broad encompassing view of learning should aim to enable each individual to discover, unearth and enrich his or her creative potential, to reveal the treasure within each of us. This means going beyond an instrumental view of education as a process one submits to in order to achieve specific aims (in terms of skills, capacities or economic potential), to one that emphasises the development of the complete person... (Delors, 1996)

One of the well-discussed tensions in education systems is between the more child/person-centred approaches to the development of the 'complete person' illustrated in this quote from *Learning: the treasure within*, and approaches focused on competition, best returns, inequality, etc. (see above Fielding and Moss) that compartmentalize the individual through the fragmentation of processes, learning content and places. In practice, in many countries and settings, needs (though not necessarily those that would be identified by the children or their families), are addressed through fragmented services from birth on. On the other hand, research and practices demonstrate the substantial advantages of recognizing interrelatedness and working towards integrated approaches (Gordon, 2016). Echoing Desjardins on the value formation function of education, Mamphela Ramphele expressed a fundamental challenge of learning in today's world as 'learning how to be human in a world that's changing' (Ramphele, 2015). Moreover, the notion of wholeness is at the heart of human competence in that it embodies many facets of each person and recognizes complexity:

A competence refers to a complex combination of knowledge, skills, understanding, values, attitudes and desire which lead to effective, embodied human action in the

world in a particular domain. One's achievement at work, in personal relationships or in civil society is not based simply on the accumulation of second hand knowledge stored as data, but as a combination of this knowledge with skills, values, attitudes, desires and motivation and its application in a particular human setting at a particular point in a trajectory in time. Competence implies a sense of agency, action and value. (Hoskins and Deakin Crick, 2010)

Thinkers and educationalists have long criticized standard approaches to education, putting forward (and frequently into practice) their ideas and the results of their observations. Whatever country they came from and their specific background, they were emphasizing the importance of educating and empowering the whole child (or adult) for life. But despite the daily work of educators in schools across the globe based on those ideas, old paradigms in education remain deeply embedded and have been further reinforced by neo-liberal agendas. Geoffrey Caine in his 2004 paper to the AERA conference refers to a common feeling that education is notoriously resistant to change, and progress is slow mainly because of a deeply held belief that learning is a 'largely mechanistic process' (Caine, 2004). He argues for change based on an understanding 'more in tune with the nature of life itself.'

This suggests that emotions may have a role to play in how we learn. Daniel Goleman considers they are one of the key skills to being an effective learner. In his work on emotional intelligence he explored the importance of emotions in processes such as the ability to focus, solve problems, etc. (Goleman, 1996) Ten years later, writing about social intelligence, he also highlighted that we are ' "wired" to connect with others and that this social circuitry appears crucial for our life happiness, health and success with definite consequences for how we do at work or at school.' (Goleman, 2006)



Image: Middle Web <https://www.middleweb.com/2847/how-to-build-happy-brains/>

Brain-imaging technologies have made it increasingly possible to observe the working brain and the resulting research provides helpful insights into perceptual, cognitive and emotional functions that contribute to our understanding of the processes of learning (OECD, 2007; Hinton et al., 2008) bringing greater understanding of the 'inherent interconnectedness of body, brain and mind' (Caine, 2004). Learning is a relational process: to 'engage in reciprocal activity, an individual mentally creates self and other's feeling' (Tayler, 2015). Immordino-Yang and Damasio explore the connections between emotion, social functioning and decision-making and emphasize the critical role of emotion

in bringing previously acquired knowledge to inform real-world decision-making in social contexts. They suggest that emotional processes are required for the skills and knowledge acquired in school to transfer to novel situations and real life (Immordino-Yang and Damasio, 2007). Moreover, it has been noted that during the early years developmental tasks are full of emotional issues which can be difficult for young children, thus requiring emotional competence (Denham et al., 2016).

Observation suggests that young children who enjoy warm attachments and whose families and educators are aware of their emotional state are well placed to develop as competent human beings (Tayler, 2015). However, one issue is that though respecting the wholeness of learners is central, it leaves educators grappling with a paradox: while there are some specific skills, processes, etc. to master, each of these specifics nevertheless engages the whole person: 'Learners are not just systems. They are living systems, and they are human.' (Caine, 2004)

All of this suggests that we need to think of schools as more than the juxtaposition of distinct subjects or disciplines. Fundamentally they are living organisms interacting with their subsystems (pupils, staff, etc.) and with the community around. Each subsystem is complex, adaptive, self-organizing.

Final thoughts

Why does any of this matter anyway? Is it just of academic interest? Well, children and young people spend a lot of time in school and 'Schools are powerful institutions in the lives of young people, and they impact on their present and future development' (McLaughlin and Gray, 2015). It would be difficult to deny the critical role they play, successfully or unsuccessfully, in the nurturing and well-being of students. But 'studies of young people's lives today suggest that the old frameworks for schooling do not engage with the complexity of young people's lives, poverty and complexity itself. A new approach, one that emphasizes relationships, connection, control and meaning is a better model for the social and educational world young people are in.' (McLaughlin and Gray, 2015).

Though specific skills are clearly of value and needed, research and experience suggest that meaningful learning engages the student as a whole person, based on an understanding that knowledge and competence development are complex processes involving emotions, values, skills, etc. in an interrelated way. McLaughlin and Gray refer to 'relational' to highlight, firstly, the importance of relationships among pupils, between children and adults in schools and between the school and its surrounding community and, secondly, the interactions among all the different elements of what a school does (McLaughlin and Gray, 2015). The focus is the interplay of the individual in his/her complexity within the wider web of interactions in and beyond the school, a 'whole' system in its own right. Noddings sees this as fundamental to democracy: '... we must allow teachers and students to interact as whole persons, and we must develop policies that treat the school as a whole community. The future of both our children and our democracy depend on our moving in this direction' (Noddings, 2005). If, as Michael Fielding writes 'The challenges facing education

today are ill-served by the insistent drum beat of delivery, education, in both its principled and pragmatic senses, requires a subtler mutuality and a more holistic, more humanly fulfilling orientation. Its rigour is relational rather than directive, its urgency collaborative rather than commanding' then democracy is fundamentally a way of living and learning together. (Fielding, 2015).

The challenges facing education are many, made more difficult by the pace of technological change – what do you teach 5-year olds today for an unknown future? The biggest challenge could be designing education systems and practices relevant for all learners that will enable people to work together democratically and creatively, with each individual able to make their unique contribution, towards novel solutions to the very major environmental, social, economic and human problems facing us. Learning to be open to other people and societies, encouraging interactions and recognizing interrelationships contributes a promising way forward.

Author

Bringing change and improvements to education and training and all situations where children, young people and adults are learning so that everyone can flourish and lead happy, healthy and meaningful lives is the core of Jean Gordon's work. She worked for many years for the EIESP, a European institute based in Paris (where she was director from 2003 to 2013), working mainly with the European Union, countries across Europe, and the Mediterranean region. Her work aims to contribute to lifelong learning opportunities and personal development through improving access to learning and its recognition, individualizing pathways, developing key competences and increasing transparency of learning and qualifications. Jean is now a consultant, was Joint Editor of the European Journal of Education from 2004 to 2015 and is currently Co-editor of the Learning for Well-being Magazine. She is a member of the CATS (Children as Actors for Transforming Society) core team for design, planning and organisation.

References

Caine, G. (2004). *Living Systems Theory and the Systemic Transformation of Education*, Paper presented at the symposium on Theoretical Foundations for Systemic Transformation of K-12 Education. AERA Annual Meeting, April 13, 2004.

Crossley, D. (2015). 'An Education Worth Having: The Aspirations and the Development of the Whole Education Network in England', in *Learning to be – Idealism or core business? European Journal of Education*, Vol. 50, Number 2. (pp. 184–195). Doi:10.1111/ejed.12121.

Delors, J., (1996). *Learning: the Treasure Within*, Report to UNESCO of the International Commission on Education for the Twenty-first Century, UNESCO.

Denham, S.A., Ferrier, D.E., Howarth, G.Z., Herndon K.J. & Bassett H.H. (2016). 'Key considerations in assessing young children's emotional competence', *Cambridge Journal of Education*. <http://dx.doi.org/10.1080/0305764X.2016.1146659>.

Desjardins, R. (2015). 'The Precarious Role of Education in Identity and Value Formation Processes: the shift from state to market forces, in Learning to Be – Idealism or Core Business?', *European Journal of Education*, Vol. 50, No. 3. DOI: 10.1111/ejed.12114.

Diamond, A. (2010). The Evidence Base for Improving School Outcomes by Addressing the Whole Child and by Addressing Skills and Attitudes, Not Just Content., in *Early Education and Development*, September 1; 21(5). DOI: 780–793. doi: 10.1080/10409289.2010.514522.

Easton, F. (1997). *Educating the whole child, "head, heart, and hands": Learning from the Waldorf experience. Theory Into Practice*. Doi:10.1080/00405849709543751.

Fielding, M. and Moss, P. (2012). 'Radical Democratic Education', Submitted 4th April 2012 to American Sociological Association for 2012 Annual Meeting Theme: 107th ASA Annual Meeting.

Fielding, M. (2015). *Student Voice as Deep Democracy, in The Connected School, A Design For Well-Being. Supporting children and young people in schools to flourish, thrive and achieve*, Ed. Colleen McLaughlin, Pearson & National Children's Bureau (NCB), UK.

Goleman, D. (1996). *Emotional Intelligence. Why it can matter more than IQ*, London: Bloomsbury.

Goleman, D. (2006). *Social Intelligence: The New Science of Social Relationships*, New York: Bantam Books.

Gordon, J., Peeters, J., & Vandekerckhove, A. (2016). *Integrated Early Childhood Education and Care; Results of a European Survey and Literature Review*. The report has been drafted for the INTESYS project and developed with financial support from the European Commission, under the Erasmus+ Programme, Key Action 3, the Forward Looking Cooperation projects. <http://www.europe-kbf.eu/en/projects/early-childhood/intesys/european-review-report>

Gordon, J. & O'Toole, L. (2015). 'Learning for well-being: creativity and inner diversity', *Cambridge Journal of Education*, 45:3, 333-346, DOI: 10.1080/0305764X.2014.90427.

Hinton, C., Miyamoto, K & Della-Chiesa, B. (2008). 'Brain Research, Learning and Emotions: implications for education research, policy and practice', *European Journal of Education*, 43, No.1, pp. 87–103. DOI: 10.1111/j.1465-3435.2007.00336.x

Hoskins, B & Deakin Crick R., (2010). Competences for Learning to Learn and Active Citizenship: different currencies or two sides of the same coin? *European Journal of Education*, Vol. 45, Number 1, March. DOI: 10.1111/j.1465-3435.2009.01419.x

Immordino-Yang, M.H., Damasio, A. (2007). "We Feel Therefore We Learn: The Relevance of Affective and Social Neuroscience to Education, *Mind Brain and Education*. Doi/10.1111/j.1751-228X.2007.00004.x/pdf

McManus, J., (2011). *An holistic approach to organisational learning: drawing the many senses together*, University of New South Wales, Australia.

McLaughlin C. & Gray, J. (2015). Adolescent Well-Being and the Relational School. In *The Connected School, A Design For Well-Being. Supporting children and young people in schools to flourish, thrive and achieve*, Ed. Colleen McLaughlin, Pearson & National Children's Bureau (NCB), UK.

Miller, J.G. (1978). *Living Systems*, New York: McGraw-Hill.

Moss, P. (2011). Early Childhood Education in Reggio Emilia and Social Pedagogy: Are They Related? In Cameron, C. and Moss, P. (eds.) (2011), *Social Pedagogy and Working with Children and Young People. Where Care and Education Meet*, London and Philadelphia: Jessica Kingsley Publishers.

Noddings, N. (2005). 'What Does It Mean to Educate the Whole Child?' in *Educational Leadership*, September, 63(1), pp. 8–13. The article is available for free here: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.457.8800&rep=rep1&type=pdf>

OECD, (2007). *Understanding the brain: the birth of a learning science*, Paris: OECD

Ramphele M. (2015). Meaning and Mission. In *What Is Learning For?*, *European Journal of Education*, Vol. 50, No. 1, 2015. DOI: 10.1111/ejed.12108.

Taylor, C. (2015). Learning in Early Childhood: experiences, relationships and 'Learning to Be.' In *Learning to be – Idealism or core business?* *European Journal of Education*, Vol. 50, Number 2. (pp. 160-174). Doi:10.1111/ejed.12117.

Weston, P. (2002). *The Froebel Educational Institute: the origins and History of the College*, University of Surrey Roehampton, p. 115 (Also at: <http://www.friedrichfroebel.com/elements.html>. Accessed 13 Dec. 2017).