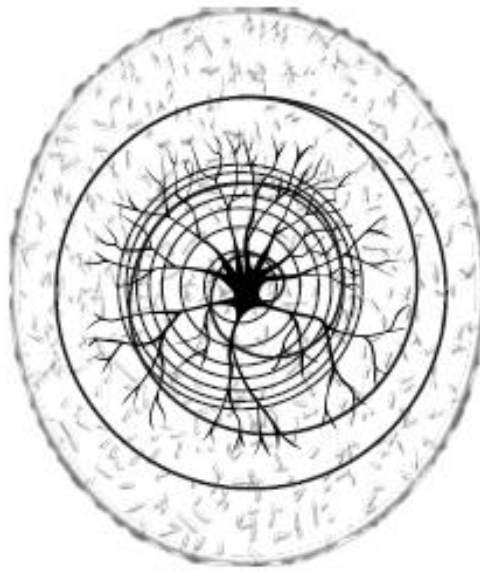


**Laszlo Institute of New Paradigm Research**  
**Annual Research Project Report**

**Complexity Patterning Based Education**



**Dr Shae L Brown**

28 February 2025

*'Where there is no complexity there is no life'*

*Alessandro Bernard*

## Overview

Since starting this project AI has expanded exponentially into the world of education and knowledge. Alexander Laszlo's term *augmented intelligence* is preferred here, to denote that AI is a cross referencing and integrative repository of all that is uploaded to its memory (personal communication). AI's relevance to the Complexity Patterning Based Education research project relates to answers to two questions that were recently asked of a large language model. The first question was asked on November 17, 2024 by Christopher Chase, "How can humanity become wiser as a species, reach our full potential and come together to solve the many problems we are now experiencing?" The response listed 10 points. Point No 1 was *'Prioritise universal education, critical thinking and systems thinking, teach systems thinking. Creative systems thinking. Educate people on how interconnected systems work in ecological, economic and social systems to foster deeper understanding and decision making'*. Christopher Chase asked another question on December 22, 2024, "What are the implications of the new paradigm in science...for a more unified understanding of fundamental structures and dimensions of reality on our universe?" The long and detailed response began with, "Shifting from a space-and-time-centric paradigm to one that emphasises Consciousness, Fields, and Systems as primary dimensions of reality would indeed represent a profound transformation in both scientific understanding and every day human experience."

These responses are of course a concentrated echo of the knowledge already expressed by many people. Yet it is profound that a complexity perspective was placed as the number one point in both responses. The connection between the importance of education, critical thinking and complexity knowledge is also the first point in the second answer. These responses indicate that this current research project is indeed timely.

I have replaced the word 'systems' with complexity in general in this work, as my prior research indicated that a systems perspective can include reductionist limitations, and can be co-opted into a mechanistic and controlling approach to understanding and engaging with phenomena. A system is a humanly delineated selection of a complex phenomenon, and these terms will be used this way here.

This project is focused on the teaching and learning of complexity competence, which includes perceiving, engaging, thinking and understanding complex phenomena, as well as our inseparable relationality with and within phenomena. It engages a deeply embodied and dynamically present relationality, encompassing fields and flows of information, energy, matter and meaning. Complexity competence includes the experience of being as a trans-personal and trans-temporal phenomenon. This embodied approach to complexity supports a trans-systemic knowledge and understanding that is based in broad relational connectivity. All and any aspects, elements and relational connections are taken into consideration, even if they are not within our current scope of systemic attention, towards a critical complexity approach to learning and knowledge.

The educational approach taken is through the implementation of Complexity Patterning, a pattern-based design and educational strategy generated for this purpose. The educational

implementation design is described as Complexity Patterning Based Education, or ComPatt.Ed. for short.

## **Progress**

ComPatt.Ed. is in the process of being operationalised for classroom teaching and learning. I originally planned to write the teacher materials first, then follow up with the classroom modules. However, I found that I needed to have a mapping of the concepts and modules across the stages of education, to clarify the process of ComPatt.Ed. before I could write the teacher materials. This way around the teacher materials will be created in direct partnership with the modules.

I am realising the extent of the professional learning required for teachers too, to move into engaging with the concept and reality of complexity thinking and relationality in their practice as an authentically embodied knowledge. Complexity competence is not an abstract theoretical or materially positivist knowledge. By its nature it is embodied and experiential. Professional development materials are therefore also needed.

The module mapping process is well underway. Some early primary school modules are in draft form. A standard lesson module template is being used.

The challenge is to build on complexity concepts from the very early years to stage 6, the senior school years. To do so I am taking aspects of the curriculum and re-imagining them through ComPatt.Ed. A simple logic is applied in this approach. Complexity is a life wide dynamic; all areas of existence come into being and continue as complex phenomena. Therefore, Complexity Patterning based teaching and learning includes, and extends and enriches, current curriculum. This is an approach to transformational education that can be implemented directly by educators without the need for entire educational institutions to change.

As a meta-cognitive knowledge ComPatt.Ed can be incorporated into classrooms at any Stage of education. ComPatt.Ed. engages with aspects of teaching and learning as classroom dynamics and culture, social and epistemic justice, environmental sustainability, health, identity emergence, communication and well-being. Prior doctoral research with ComPatt.Ed. has demonstrated that students grasp and engage with complexity concepts quickly when it is based on their own experience of life and learning, including knowledge they are already familiar with. This point is foundational in the design of ComPatt.Ed.

In this current project new research has been undertaken in the form of engaging and reviewing literature related to calls for complexity thinking and understanding in the world today, as well as appropriate educational theory and practice. ComPatt.Ed. requires a solid foundation of current understanding to underpin the teaching and learning materials. A separate draft literature review is included with this report. This literature review is related to the operationalisation of Complexity Patterning into teaching and learning materials, as the need for deep complexity-based education was established in previous publications (Brown, 2019, 2021, 2023a & 2023b). The review has formed a foundational 'how to' for the process of designing the teaching and learning materials. This strong *root system* provides

knowledge and conceptual stability for the design process tree, holding it firmly in the ground, and feeding nutrients into the creative process. A succinct rational and some theoretical foundations can be found in the research proposal for this project.

Documents in draft form:

- Educators Handbook, sections 1-5
- Complexity concepts table
- Modules for Stages 1-3
- Module template

Documents in rough draft form

- Modules Stages 4-6
- Detailed Lesson plans

## **Project Challenges**

This work is a huge undertaking for one person. Whilst I have experience preparing curriculum materials and lessons for secondary and university classrooms, the operationalisation of an entire metadisciplinary and metacognitive educational strategy for students across all stages of education is a new undertaking.

Having employment that requires the contribution of working days is also a challenge. Often, I plan to engage with this work when I return home from work, but find that I am mentally tired and the details of the evening require attention. Weekends are the time I have available for this research project. I appreciate my employment as I am in a stable and convenient situation, however, having more days to concentrate on ComPatt.Ed. would be of great advantage. There is some frustration for me in this situation, and I practice patience with the understanding that all knowledge has its own temporal rhythms and that my service to this work has its own time. I am aware of the urgency for the availability of complexity integrated education, and also taking care to undertake this work in a flow state.

## **Further Considerations**

### **Teamwork**

I am currently working to the level of my expertise and when appropriate I will seek expert assistance to polish the teaching and learning materials. This will provide peer review and feedback. A series of handbooks, relating ComPatt.Ed. to different disciplines and subject areas could also happen in team with experts in each knowledge area. I am also aware that materials differentiation for students with special education needs is currently outside of my professional scope, and this element will require assistance. Whilst I have a great

interest and some experience with education for gifted students, this aspect of ComPatt.Ed. may also require expert advice, particularly in the fields of science, maths and creative arts.

### **Dissemination and Business Model**

Once the material is completed, a dissemination and accompanying business model will be required. This process is on the horizon at the moment and will be engaged into emergence at the appropriate time.

### **Potential Publications**

**Article ideas.** These could be chapters in a monograph? With one chapter based on the current state and changes need in education? – although this information is well published, it would still be appropriate as a complexity focused introduction to the work here. Maybe the teaching and learning modules could form a chapter or two, as implementation examples. A primary school chapter and a secondary school chapter?

**1. Complexity Based Education.** What it is and why it is needed. There is so much connection between Riddle and Hickey’s work in relational pedagogy and ComPatt.Ed. that it deserves further engagement.

**2. Complexity based education for democratic education.** How to apply ComPatt.Ed. for the classroom culture in a range of ways. Communication, conflict resolution, learning commons, emergence. This connects to new paradigm governance knowledge and skills.

**3. ComPatt.Ed. and teacher education.** So much to say about this...

**4. ComPatt.Ed. and Environmental Education.** Connect with Lisa’s work, and the latest ideas of early childhood ed. People as nature, and the intimacy of co-generativity. SDG’s need engaging here.

**5. Identity as a complex phenomenon** (as a specific entity in patterning configurations connected to embodied contextual contingencies *and* as an intra-connected/interconnected transtemporal, and trans-phenomenal field engaging being). How this is the basis of learning, and what we can do to strengthen identity as an individual and also concurrently an aspect of the generativity of the commons. What this means for wellbeing and success in education.

**6. The neurodiverse learner.** Not Special Needs, as this is not my areas of expertise, but the neurodiverse student who needs a more complex approach to their education. Possibilities and ideas for teaching and learning. I believe young people are becoming more and more multidimensional, which is lumped in with ASD and ADHD, hmmm, lots to consider here. Also relates to gifted students, and the multidimensionally inclined ones.

**7. ComPatt.Ed. and Time.** Futures thinking and engaging our past. Updates on ideas about time and futures.

**8. Complexity Competence and Leadership.** Draw on the work with Steven and Sherrian, maybe co-publish. Connects also to Governance.

### **Books**

As I am designing the learning modules, I am aware that specific books that illustrate the material would be very useful, especially for younger students. I have one book in storyboard form. Several others are forming in my thinking. (Shanny's Patterns, Trees Are Patterns, Weather Patterns, Life is a Pattern). A creative illustrator is needed (wish I had this skill!).

### **Auxiliary Materials**

An inventory of appropriate videos and other support materials would be useful.

### **Schools to Implement Compatt.Ed.**

I am aware that Education theorist and scholar Stewart Riddle is in the process of developing an independent school here in Australia in South Eastern Queensland, he may be an excellent contact. Riddle's recent scholarship on relational pedagogy, and education for authentic democracy in times of change and upheaval has contributed a strong foundation for ComPatt.Ed. His work, and in collaboration with others, most notably but not limited to, Andrew Hickey, brings a clear and scholarly foundation of pedagogical considerations that are being built upon in the design of ComPatt.Ed. teaching and learning materials. I am inspired by the relationality between ComPatt.Ed. and Riddle's work (2019, 2022), and Riddle and Hickey's work (2022, 2023, 2024, 2025), as well as Riddle's work with other scholars, such as Riddle and Heffernan (2018). ComPatt.Ed. engages directly with their calls for educational transformation. Detail about these publications can be found in the literature review reference list.

### **Next Steps**

The literature review process has forged a strong foundation for the process of module design. The modules begin with the embodied relationality we share with air, water, ground and light, and other species/ecologies, as well as each other. The presentation of complexity concepts and relational dynamics develops in sophistication throughout the stages of formal education. It is a post-disciplinary approach that engages directly with the experience of living. The modules will also be aligned or connected to aspects of current curriculum, because working with current education is a logical approach. ComPatt.Ed. is a metacognitive educational strategy, and as such is able to be engaged concurrently with required curriculum.

An educator's Handbook is in draft form. It provides an overview of ComPatt.Ed. It includes an introduction, an explanation of complexity, a description of Complexity Patterning, and an overview of the educational principles engaged. The handbook is presented in language easily available for every teacher.

A complexity concept bank has been created, which is then being translated into teaching and learning modules across the stages of education. This will inform a glossary of concepts, offered in complexity language and also everyday language. Completing the Handbook and the teaching and learning modules are the tasks ahead. The Stage 1- 3 modules are in draft form and there are notes and ideas for other stages.

### **(In)Conclusion**

This project is emergent. The appropriate timing of this work is without question. I know this also because the work is alive. It is surprising and challenging, generative and expanding. Drawing boundaries around ComPatt.Ed. will also be important along the way.

I am really enjoying this project, even if I feel a little out of my depth sometimes – which indicates its generativity. It is a privilege and a joy to be able to contribute to new paradigm education.