Review of: "Actual problems of creative activity and new cognitive possibilities: a transdisciplinary approach"

Leonardo da Silva Guimarães Martins da Costa

Potential competing interests: No potential competing interests to declare.

Dear authors,

Please allow me to establish a dialogue between your interesting transdisciplinary article and the HPTD-M theory, just in case the Holopraxis Transdisciplinary Management is a subject that may interest you.

Next, I will quote excerpts from your text in*italics.* This is to differentiate them from my comments.

A)

• Revolutionary ideas in physics (A. Einstein, L. De Broglie, […]

I guess the authors refer to the complementarity principle of modern physics, as seen in Einstein´s mass-energy convertibility and in De Broglie´s wave-particle duality, aiming to explain the limitations of binary logic. Complementarity is a key issue in transdisciplinarity in the HPTD-M theory.

B)

In our opinion, the key causes of these systemic problems are:

- *accelerated digitalization of education and science;*
- *increasing information complexity of science, technology and education;*
- *dominance of linear (binary) thinking in problem-solving.*

In the circular economy of the 21st century, industries, governments and even consumers are increasingly recognizing the intuitive value of cyclical principles. Therefore, it is necessary to develop not only logical (mathematical) thinking in the process of activity, but also emotional intelligence on a natural scientific basis.

How can emotional intelligence be applied to natural science? I understand emotional intelligence as a complementarity of intrapersonal-interpersonal, i.e., the capacity to control yourself in dialog with the promotion of integration and synergy among participants in working groups (an HPTD-M theory approach).

C)

3. Stimulation of the emotions of individuals in the process of fruitful creative activity, which contributes to the accumulation of successful experiences

How to stimulate emotions concretely in working groups, if the case may be?

D)

Meanwhile, the mutual enrichment of the natural sciences contributes to interdisciplinary connections, leading to their convergence. The escalating complexity of computer science and other specialized disciplines has begun to constrain the cognitive possibilities of online learning.

How would the idea of transdisciplinarity fit in this context? The difference between inter and transdisciplinarity is relevant for the authors, i.e., between and among = “inter” and beyond and through = “trans”?

E)

- *Science – looking for similarities between things that are different;*
- *Art – finding differences between things that are similar;*
- *Design – creating a possible “whole” from impossible “parts”.*

If I understand correctly, Design would be the integration of Science (rationality) and Art (creativity) for problem solving, in this context?

F)

[…] the cognitive capabilities of an individual are determined by:

- *Intuition, experience and emotional intelligence;*
- *natural-scientific worldview, which forms in the process of activity;*
- *perceptions of culture (art) by researchers, technologists and designers.*

[…]

Emotional intelligence and intuition are associated with successful experiences in solving real problems.

I agree completely. In the HPTD-M theory, there are four types of intelligence, i.e.:

i) emotional and intuitive types of intelligence as soft skills or human abilities;

ii) empirical and rational types of intelligence as hard skills or technical abilities.

The balance of those four is the key to concrete problem solving in the HPTD-M view.

G)

Fig. 3 Cognitive metamodel of the structure of systemic thinking through conjugated triads

Finally, as a transdisciplinary theorist and creator of the HPTD-M theory, I like this idea of colors taken from Goethe´s model and guess this Star of David schema is very illustrative and intuitive, especially in the sense of the

complementarities involving concrete problem solving, i.e., the triangle of soft skills (emotion + reflection + intuition) and the triangle of hard skills (composition + knowledge + practice), if I understand correctly. Just as a provocation: Could UNDERSTANDING be considered as the whole Star of David, since UNDERSTANDING is much more than KNOWLEDGE and could be seen as the transdisciplinary perspective for problem solving? What about emotional and intuitive intelligence, how those could be applied concretely for problem solving?

Congrats on this very interesting article.

Best regards.

LEONARDO DA SILVA GUIMARÃES MARTINS DA COSTA

Independent Transdisciplinary Theorist (HPTD-M Theory-2022)

Federal Auditor of Finance and Control (AFFC career-2009)

Executive MBA in Corporate Management (FGV-2002)

Postgraduate in Engineering Economics (FDC-1996)

Civil Engineer: focus on sanitation (UFMG-1992)

https://www.researchgate.net/profile/Leonardo-Costa-44: