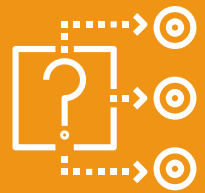
Reflection on Learning

IDE990 Independent Study

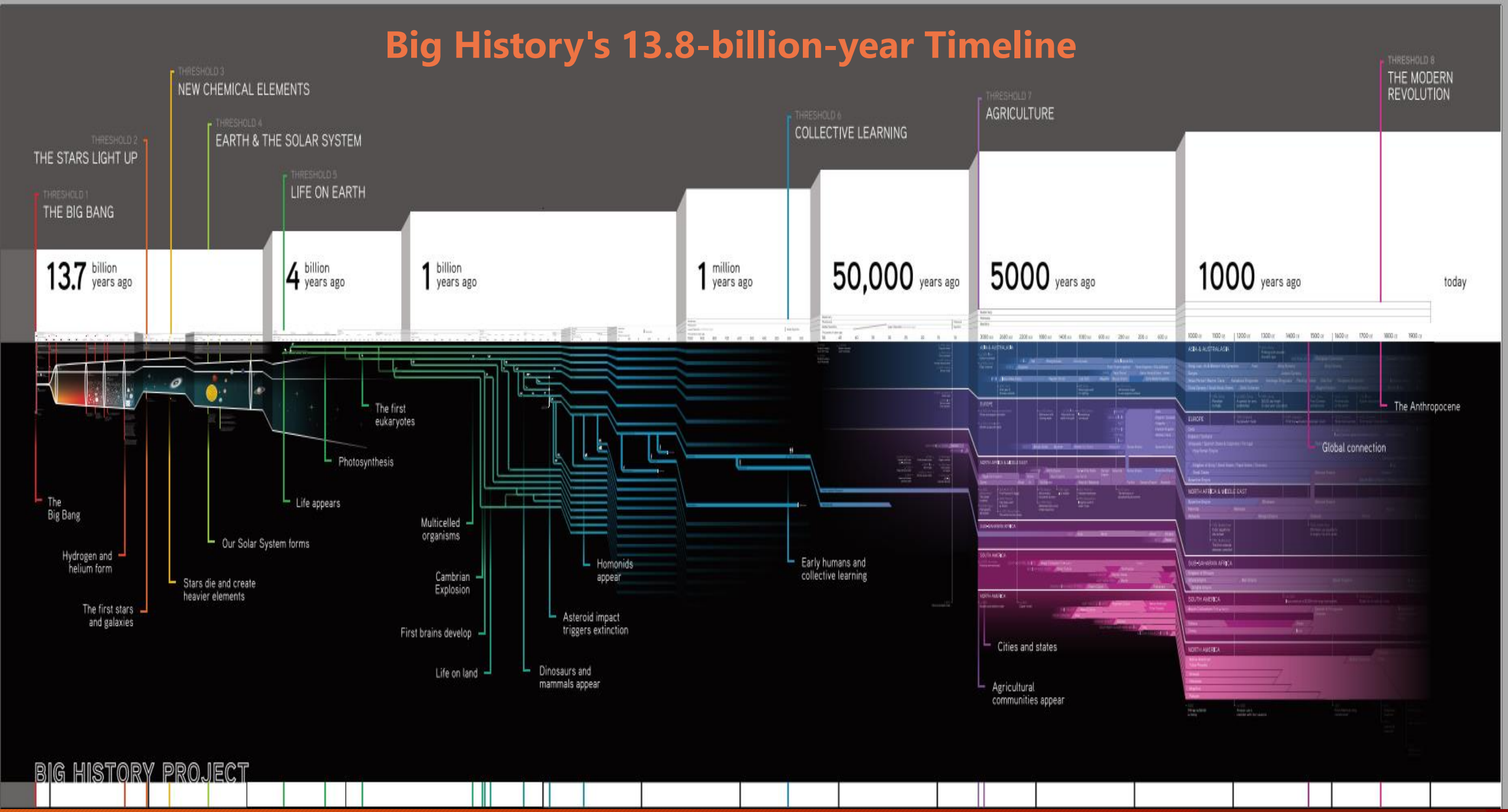
Lei Wang

Purpose



Why timeline?

Big History's 13.8-billion-year Timeline



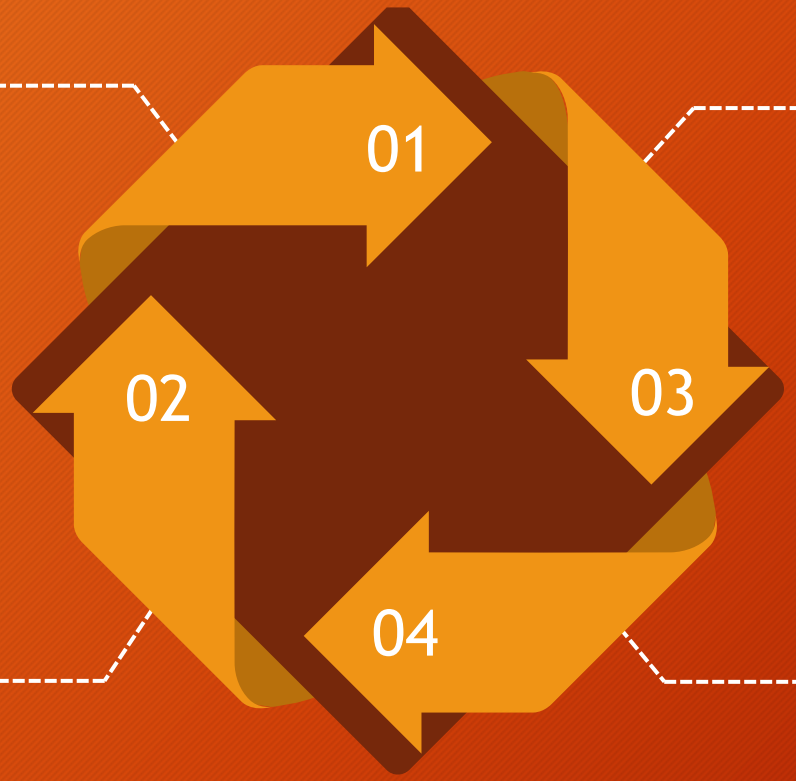
Reflecting on the historical research of instructional design

- Individualized Instruction plans were developed in the 1920s
- Ample theories and principles we use today developed(1950s-1970s)
- The future trend would still be focused on instructional practices that teachers can use to facilitate students' learning.
- Technology-based learning instruction

In the future research…

- As technological advances, new ideas and theories regarding the learning process and new views of how to promote learning and performance in classrooms and in the workplace will be the trend.
- The future models should be designed based on the age of information, the explosion of knowledge and the need for technologies.
- They should accommodate a range of developer expertise and practice, from extremely simplified to high complex and sophisticated approaches.
- The instructional design field will be focusing more on construction of personal experience than an emphasis on skill development and knowledge acquisition.

Work plan with Garmondyu



Horn my skills and build my competencies in both my professional development and project management

Historical timeline

Develop my design thinking

Reflecting on the two projects

	Importance	Relevance	Significance
Review of the journal literature	• It is another timeline task. It also helped me developed the habits of reading journals and finding the trends in our own research interest. We review what happened in the past and predict the future to see where we can fit and how we can fit in the field.	• Of all the journals I have reviewed, some of the current instructional design trends are influenced by technology advances in social media and big data.	• Most of the articles related to self-regulated learning in the past five years are about the investigations on the effectiveness of new programs or interventions.

The value of fixed versus faded self-regulatory scaffolds on fourth graders' mathematical problem solving

Citation: Gidalevich, S., Gidalevich, S., Kramarski, B., & Kramarski, B. (2019). The value of fixed versus faded self-regulatory scaffolds onfourth graders' mathematical problem solving.InstructionalScience,47(1), 39-68. doi:10.1007/s11251-018-9475-z

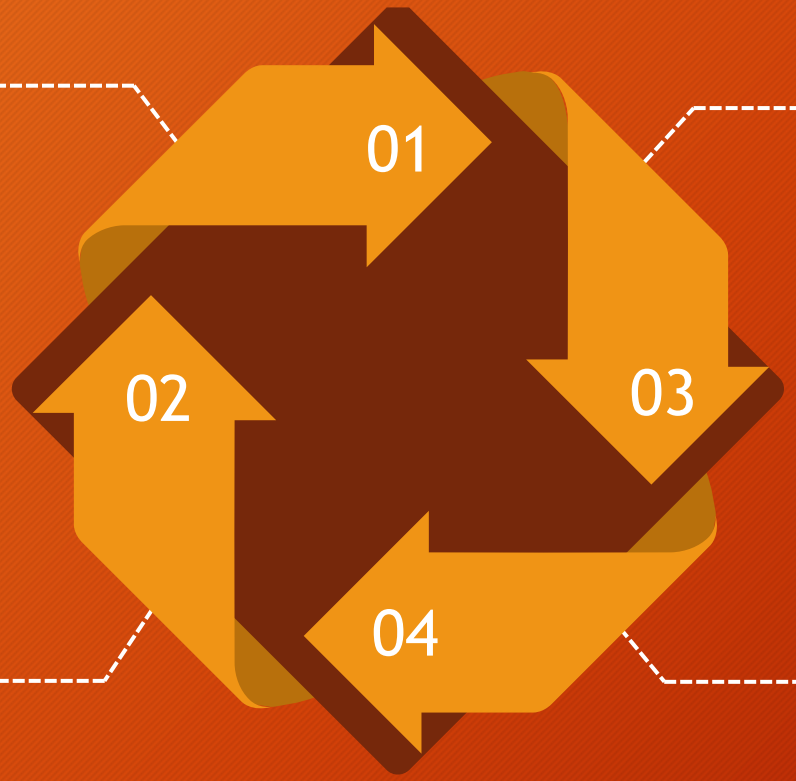
- This quasi-experimental study of fourth-graders examined the effectiveness of metacognitive self-question prompts in a *Fixed (continuous)* versus *Faded (graduated reduction*) scaffolds model during planning, monitoring and reflection phases, on the facilitation of students' SRL (metacognition, calibration of confidence judgment, motivation), and sense making of mathematical problem solving at the end of the program (short-term effect) and 3 months later (long-term/lasting effect).
- This study didn't talk about scaffolding strategy itself, but focused on a fixed continuous practice (e.g., metacognitive question prompts), which is the fading role of scaffolding to prepare autonomous learning. A unique approach for fading is suggested that offers a graduated reduction model of scaffolding prompts according to the SRL phases involved in the solution, which allows assimilation of processes to prepare learners for autonomous activity and on the long-term retention effect.

Fostering creative performance in art and design education via self-regulated learning

Greene, J. A., Greene, J. A., Freed, R., Freed, R., Sawyer, R. K., & Sawyer, R. K. (2019). Fostering creative performance in art and design education via self-regulated learning. Instructional Science, 47(2), 127-149. doi:10.1007/s11251-018-9479-8

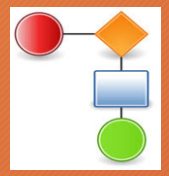
- The authors of this article chose from a large number of creative performance pedagogical practices,including direct and indirect methods to foster SRL.
- They were trying to identify the ways art and design professors enacted practices that foster their students' self-regulation during learning and performance.
- Focused on creativity and high-order thinking process

Metacognitive and cognitive analysis



Students' use of behavioral or cognitive-behavioral processes to cope with clinical problems, such as hyperactivity and anxiety.

Self-regulatory processes that are social and motivational in nature



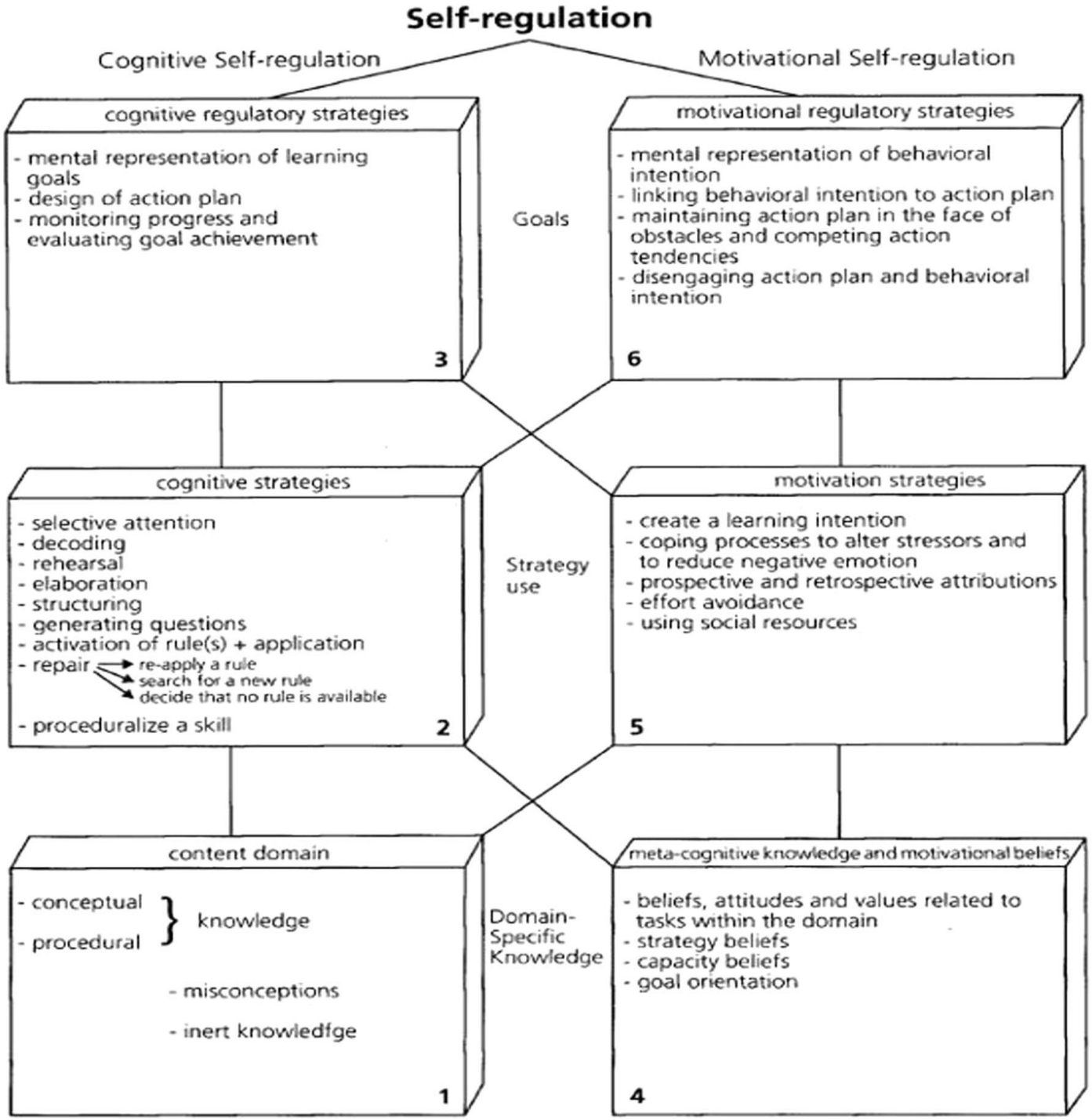
Studies of SRL dealt with developmental issues

Reflecting on the historical research of SRL

What did I learn?

- Precursors seem to have different and separate research questions, processes and directions, however, as I read more, I found they have something in common, they formulated definitions, frameworks, identified key self-regulatory processes, investigated the relationships between SRL and achievement outcome, and finally developed research methodologies.

- Considerable empirical evidence attests to the positive impact of SRL not only plays a key role during schooling, but also in the life-long learning journey (van Beek et al. 2014; Kuo 2010). It is a demanding requirement of teachers to teach students to become autonomous and metacognitive learners (Nykiel-Herbert 2004). Also, as I mentioned before, rooted in Chinese culture and nurtured by Confucius and Confucians, developing life-long learning skills has been one of the major concerns as an educator.



A multidimensional construct that involves cognitive, metacognitive, motivational, and social aspects of learning.

Theoretical framework:

- Boekaerts (1996b)
- Social cognitive theory
- Self-efficacy
- Reflective thinking
- Generative learning

Appropriate model for pre-service teachers

- I can find empirical studies about different models that can work better at different educational levels (Dignath and Büttner, 2008), but I haven't found one that is appropriate for pre-service teachers.
- The teacher training for SRL is needed, however, it needs to be tailored so that the interventions take the effects of SRL models into account.
- I was thinking a practical rubric would be appropriate because pre-service teachers can judge their personal effectiveness, often from observations and recordings of their prior performances and outcomes to guide them in instruction and students' self-regulatory development.

References

van Beek, A., F. P. C. M. de Jong, A. E. M. G. Minnaert, and T. Wubbels. 2014. “Teacher Practice in Secondary Vocational Education: Between Teacher-Regulated Activities of Student Learning and Student Self-Regulation.” *Teaching and Teacher Education* 40: 1-9.

Kuo, Y. 2010. Self-Regulated Learning: From Theory to Practice. Advance online publication. Accessed April 3, 2017. https://files.eric.ed.gov/fulltext/ED510995.pdf.

Nykiel-Herbert, B. 2004. “‘Mis-Constructing Knowledge: The Case of Learner-Centred Pedagogy in South Africa’. Prospects: Quarterly Review of.” Comparative Education 34 (3): 249-265.

Nykiel-Herbert, B. 2004. “‘Mis-Constructing Knowledge: The Case of Learner-Centred Pedagogy in South Africa’. Prospects: Quarterly Review of.” *Comparative Education* 34 (3): 249-265.

Dignath, C., Buttner, G., & Langfeldt, H. P. (2008). How can primary school students learn self-regulated learning strategies most effectively? A meta-analysis on self-regulation training programmes. Educational Research Review, 3,101-129.

Boakaerts, M. (1996b) Het Interactief Leergroepn Systeem (ILS). Een innovatieprogramma op het MBO. [The Interactive Learning Group System (ILS). An innovation program in secondard vocational education] *Studiehius-reeks*, 10, pp.7-26.