

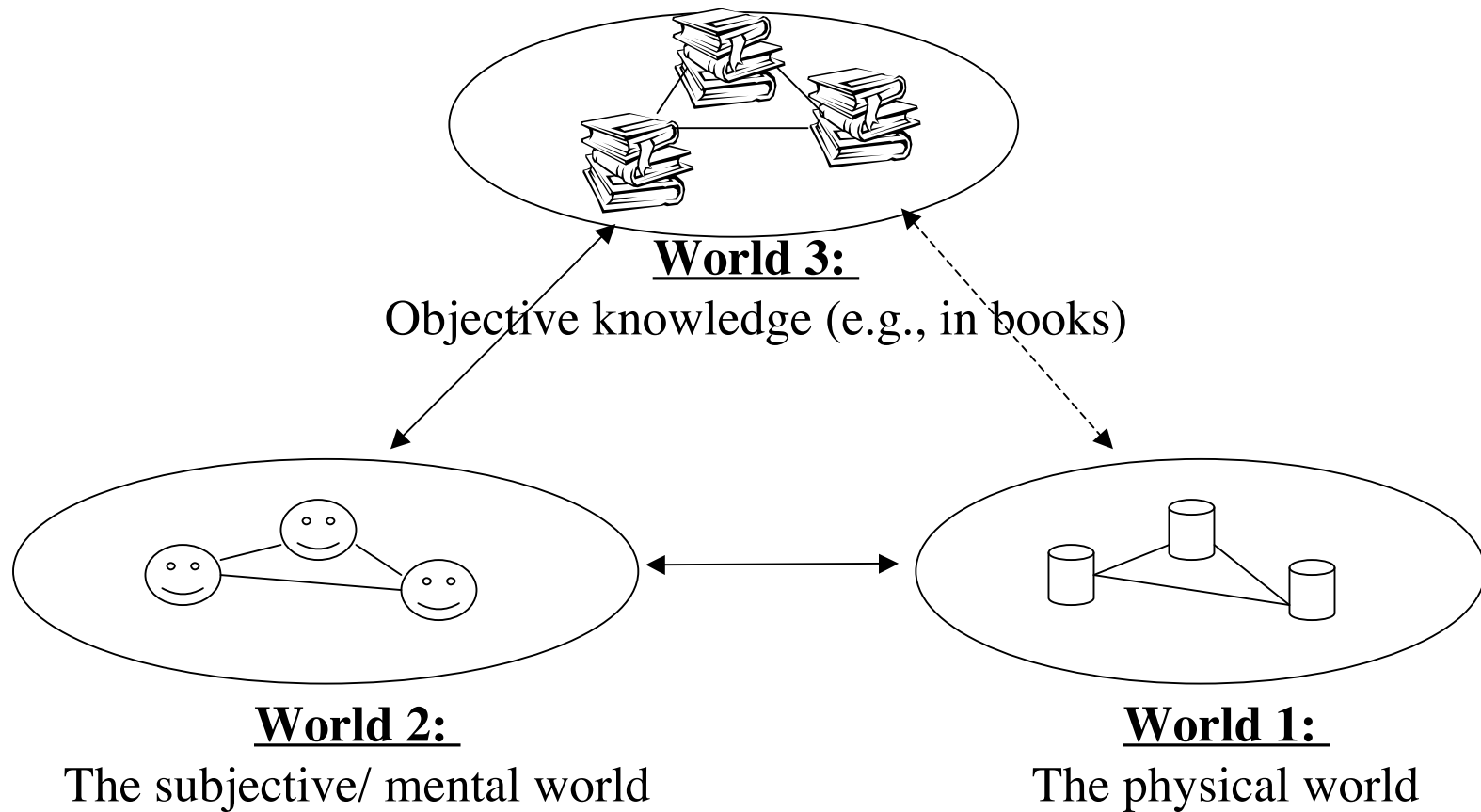
Creating Knowledge Building Communities

Jianwei Zhang

New Insights in Creativity and Knowledge Creation

- Beyond flashing of new ideas: *continually* improve them!(Bereiter, 2005; Cooper, 2003)
- Social: Knowledge and ideas have a social life out in the world (Bereiter, 2002; Brown & Duguid, 2000; Popper, 1972); Knowledge creation is a *social and collective* **PROCESS** (Csikszentmihalyi, 1999; Sawyer, 2003, 2007).
- Emergent: collaborative improvisation, complex interaction in a network of ideas & people (Sawyer, 2003, 2007; Valsiner & Veer, 2000)

A Framing of Knowledge-Creating



(Popper, 1972)

Work with a Community Knowledge Space

Knowledge Forum® (KF)

- Create a view
- Create a note
- Read a note
- Build-on
- Referencing citation
- Rise-above

The screenshot displays a Knowledge Forum interface with a central note titled "how are rainbows made?". The note contains two paragraphs of text and a diagram of a rainbow. The first paragraph states: "Our Understanding is there is 7 colors Red, orange, yellow, green, blue, indigo, and violet. Rainbows are made by leftover raindrops on bushes and trees that act like a prism that casts a rainbow." The second paragraph states: "What we still do not understand is that why are rainbows so big on such small raindrops but so small on a prism that's bigger than a raindrop." Below the text is a simple diagram of a rainbow. The interface includes a left sidebar with a navigation menu and a right sidebar with a list of related topics. The navigation menu includes items like "How Light Travels", "absorbing and reflecting light", "Natural and Artificial Light", "All We See Is Light?", "Shadows", "Cone theory", "Newton's d", "mirage coming from a pictur", "Matt H.'s theory of why 'Hello, Red Fo", "What happens when light", "why did the colour change?", "coloured lig", "Liked heart becom", "different colour", "Why I think we saw those! colour", "how prisms work.", "prisms", "Stronger light.", "eye con", "LEMON LIG", "Absorbing", "visible spectrum", and "How do different cones work". The right sidebar includes items like "Primary Colours of", "low", "primary colours?", "colour and light are", "Light is like a", "Primary colours", "lot of primary colours", "primary colours are there?", "ed fox work?", "Prism light", "o with light", "Rainbow", "How are rainbo", "Prisms", "How a rainb", "yellow", "what are rainbo", "What are Rainbo", "What are rainbo", "Light and r", and "Prisms a".

(see Scardamalia, 2004 for an intro)

Knowledge Building Principles

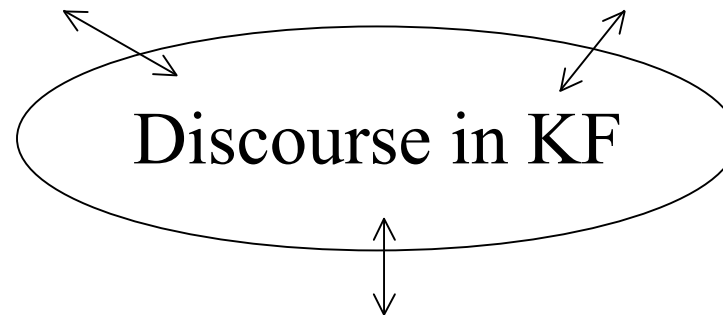
- Task-centered --> idea-centered processes
- Finding an answer --> continual improvement of ideas, sustained inquiry
- individual knowledge --> collective/community knowledge
- Epistemic agency: Student taking high-level responsibility



Knowledge Building Process

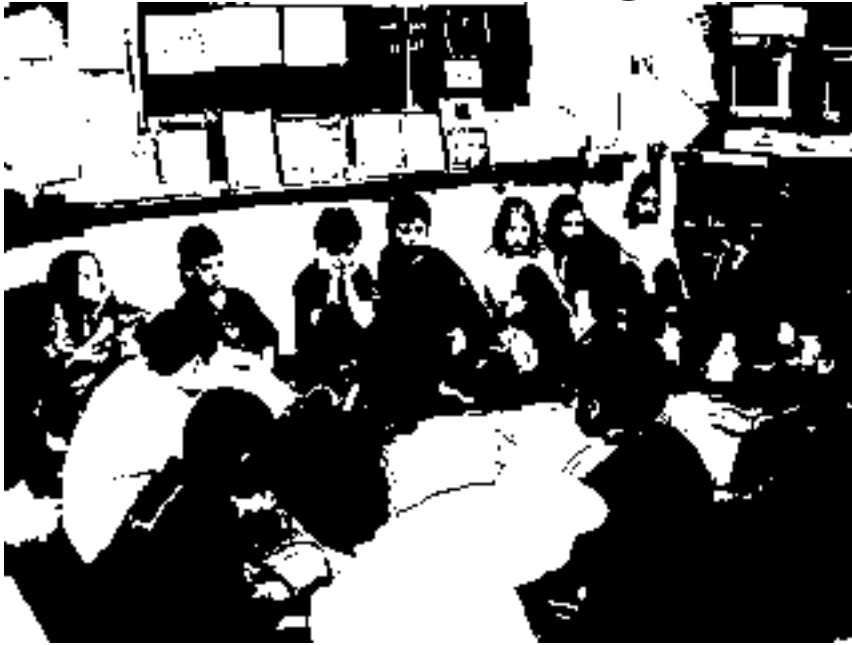
F2F knowledge
building talk

Library work and
cooperative reading



Self-generated experiments

Knowledge Building Discourse



Student Agency



Progressive curriculum, continual idea improvement

- *“I used to be worried about...covering curriculum, that you know, we need to make sure to tick off everything... Now I truly believe that the curriculum...is about the process and how deeply the children go. And as a result, anything can be curriculum. It could be something that comes from the younger grades, as easily as it's from, you know, a higher grade, as long as it's an area where you can go deeply... I know what the concepts are. I have to know. But I also know that we might go deeper than my own understanding is.”*