

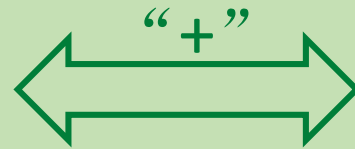
# AN EXPLORATION OF STEM PEDAGOGICAL APPLICATION FACILITATING ENVIRONMENTAL EDUCATION

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STEM  
Pedagogy



Environmental  
Education

1. Results from literature and programs
2. Introduction of an civil engineering project



# Environmental Education

Public environmental awareness

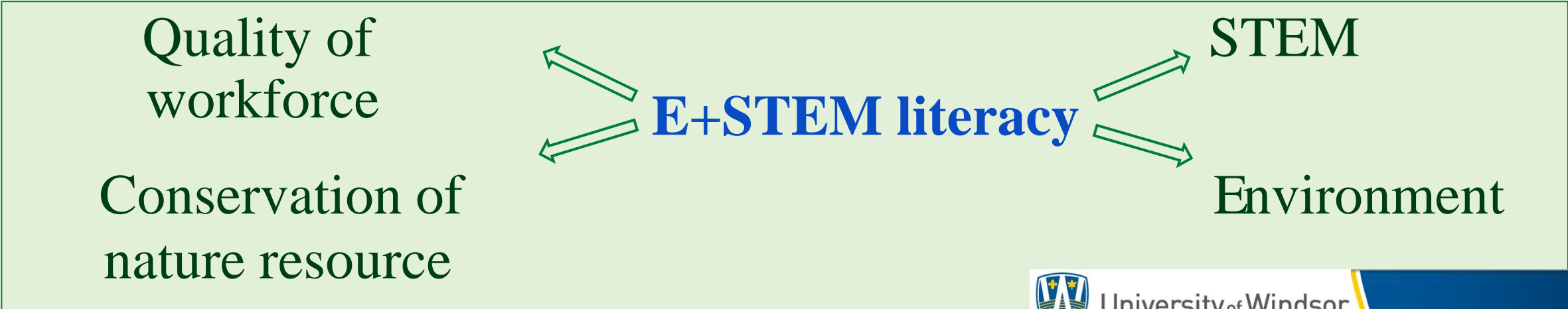
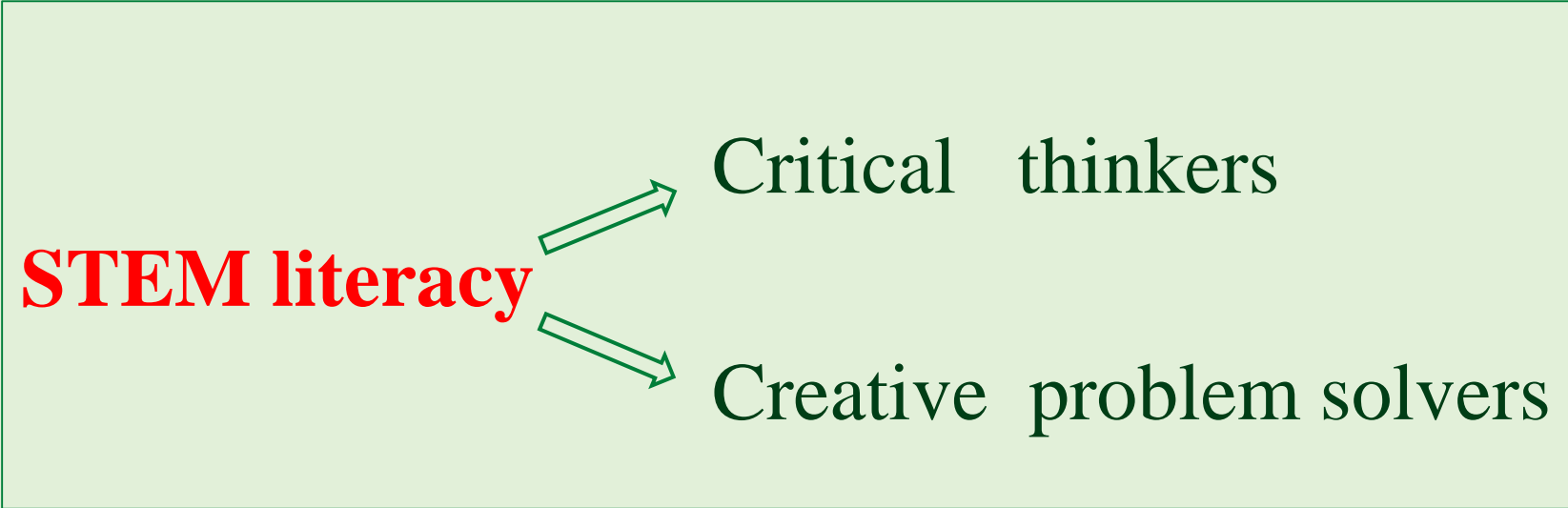
All education should be environmental education (Orr, 1992).

Empathy cultivation

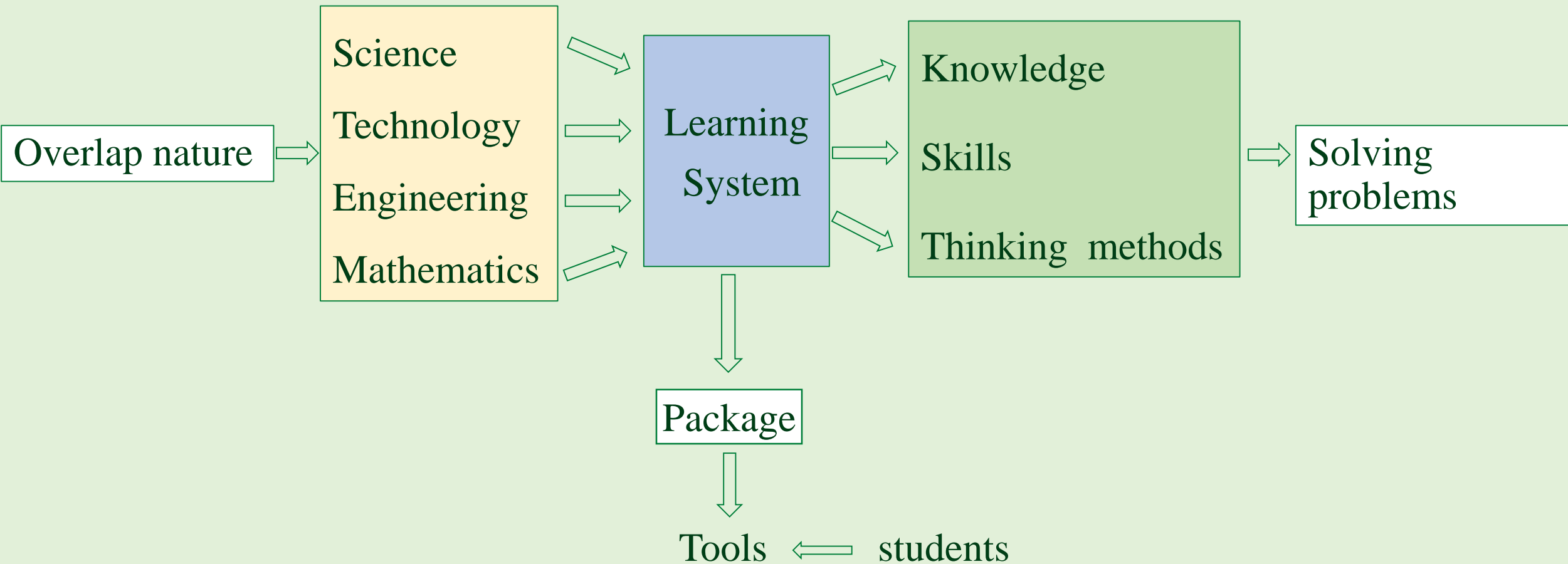
Multi-dimensions



Science, Technology, Engineering, Mathematics, medicine, digital media etc.



# Interdisciplinary approach



Conventional



a single-subject  
understanding



Transformative



multi-dimensional  
comprehension



## Inquiry-based learning (IBL)

“think and act like scientists” (Crippen and Archambault, 2012, 158).



It makes learning authentic and easier for retention  
(Barron & Darling-Hammond 2008).



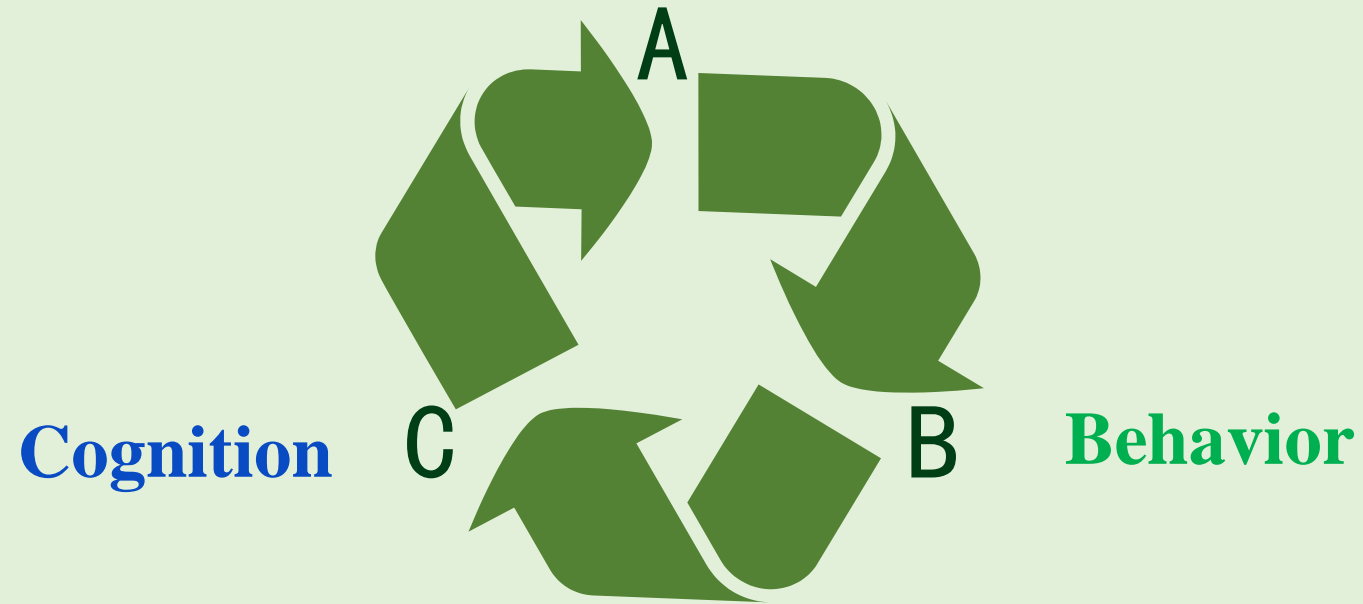
# Project-based learning(PBL) at a civil engineering college

<b>Steps</b>	<b>Participants</b>	<b>Setting</b>
1	students teacher	classroom
2	students engineers	construction site
3	students manager	construction company
4	students residents	village
5	students	classroom





**Affection**

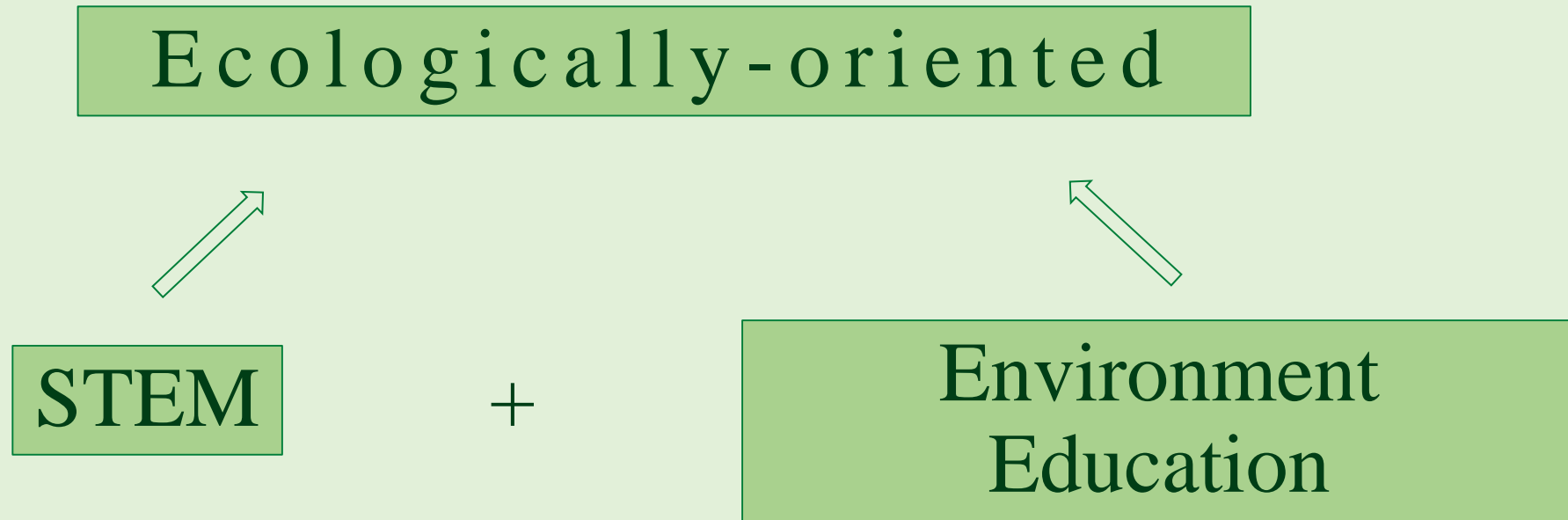


**Moral autonomy**

**Agent of change**



Most teachers have limited or no training in the knowledge and skills required to support their students' sense of connection to the natural world (Gillian 2010).



An aerial photograph of a vast, dense green forest. The trees are a vibrant green, and the canopy is thick. In the background, the forest meets a bright, hazy horizon. Above the forest, the sky is a clear, bright blue with scattered, soft white clouds. The overall scene is bright and positive.

**THANKS**

# References

- For information of 23 references used in this paper, please refer to the full paper.

