

BUILDING BLOCKS: PROJECT BASED LEARNING IN HUMAN DEVELOPMENT RESEARCH



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Problem Statement:

Research opportunities for students in human development (HD) are often related to funded projects with specific timelines and product requirements which may limit students to working on mentors' existing projects that allow minimal student influence.

Project Based Learning (PBL):

- Guides learning through project goals for which students tackle complex questions or tasks by posing and implementing possible solutions (Jones, Rasmussen, & Moffitt, 1997).
- Provides a framework for students and faculty to align interests while helping students develop proficiency in human development research.
- Offers students a 'first-hand feel' of particular work scenarios and requires students to take an active role in the development of the project.
- Used frequently other fields, PBL experiences in the training of developmental researchers is rarely detailed in the extant literature.

Research Questions:

- Does mentoring have a place in the HD PBL research process?
- What are the *challenges* of participating in a PBL research project?
- What are the *benefits* of participating in a PBL research project?

Study Design:

A *qualitative case study* using descriptive data to illustrate the experiences of university students and a faculty mentor involved in an ongoing group-based PBL research project in the HD field.

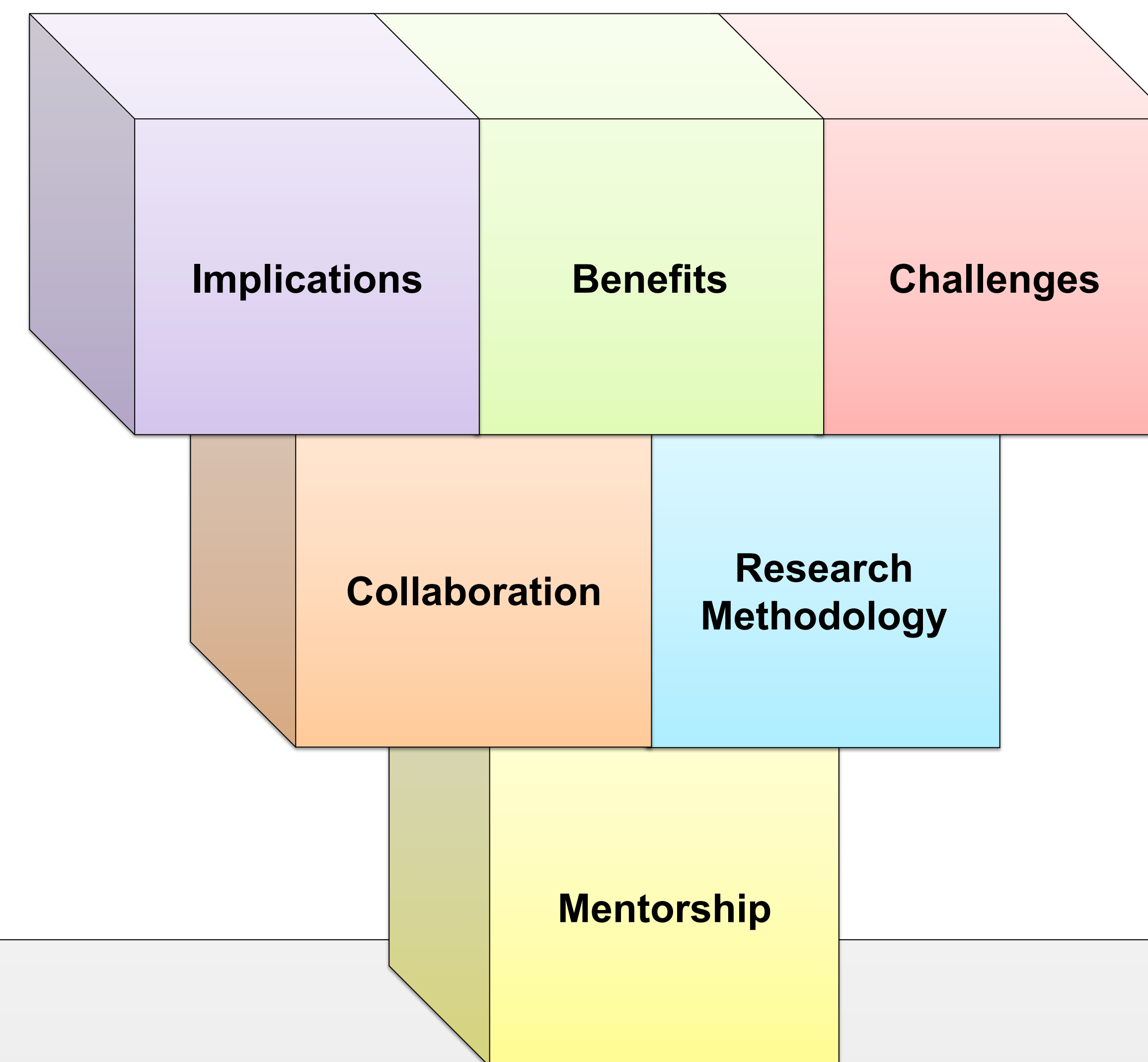
Methods:

Home Visiting Interest Group (HOVIG) began as a PBL research project with four graduate students and a professor in Spring 2013. The professor met consistently with students to guide project development and integrate student ideas. Over subsequent semesters, the group gained five graduate students, lost two graduate students, and had two undergraduates for up to a year each. Graduate students devote varying degrees of time as their project role and student status changes. Several student researchers earn credit, some participate as part of research assistantships, and others volunteer their time to gain research experience.

8 Survey Participants: 7 female.
4 PhD; 3 Masters; 1 Undergraduate

Survey Completed 6 Sp2014; 2 Sp2015

- 1) We formatted questions that addressed student researcher growth and ways the project facilitated and hindered engagement. We also asked questions about perceived challenges and benefits.
- 2) Researchers participating in HOVIG responded to these questions via email.
- 3) One author then sent out the answers to fellow authors asking them to identify themes and provide quotes that represented each theme.
- 4) In 2015, two more graduate students were asked to complete the survey.



Challenges

- * Multi-level mentoring takes time and group members are busy.
- * Some short-term tasks need to be negotiated and the team may take a long time to reach consensus.
- * Different members learn at different rates due to varying interest, commitment, and experience.

"Finding time and organizing the unique thinking of each partner has been tough."

Benefits

- * Multiple possible mentors, depending on the topic.
- * New student researchers present new mentoring opportunities.
- * Everyone feels they belong and the long-term goals are team driven.

"Motivated students can test ideas and learn collaboration together. Additionally, the professor can be efficient in teaching a group of learners rather than solely focusing on one person at a time."

Implications

- * Professor is investing in future of the field.
- * Students are motivated and rewarded through the experience of gaining intensive learning experiences.

"I get to explore my interests and start to see how those interests might turn into a career after graduation."

Research Methodology

- * Building this project from the ground up showed student researchers the utility of using literature to identify unanswered questions in the field.
- * The steps of research became clear when students needed to plan and prepare for data collection with people rather than using extant data.

"We were able to see it from the writing of the IRB and slowly we saw a glimpse of the big picture, the potential, and how this little project fits into the big picture. Better than any class I've had because it is applying everything in a hands on way."

Collaboration

- * Smaller group work with interest driven teams made work more efficient.
- * Larger group conversations provided opportunities for more creative answers to questions about research.

"Our meetings facilitated collaboration. Everyone participated and made comments. We all felt safe stating our opinions, even if they differed from other group members."

Mentorship

- * Project tasks, when learned can then be taught to a less experienced member.
- * Professor models mentoring behaviors actively and passively in the group context.

"I get to mentor, be mentored on research, and be mentored on how to mentor. There is a tiered structure that provides each piece of mentorship opportunity, which is rewarding in preparing me for the next step of my education."

Selected References

- Jones, B. F., Rasmussen, C. M., & Moffitt, M. C. (1997). *Real-life problem solving: A collaborative approach to interdisciplinary learning*. American Psychological Association.
- Roggman, L. A., Cook, G. A., Innocenti, M. S., Jump Norman, V. K., & Christiansen, K. (2013). *Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO)*. Baltimore, MD: Paul H. Brookes Publishing.
- Roggman, et al. (2014). *Home Visit Rating Scales-Adapted & Extended: (HOVRS-A+) Version 2*. Unpublished measure.

Home Observation of Parenting and Early Development (HOPED)

This professor guided, student run project tests an established observation measure of parent and child interactions (PICCOLO) with parents of younger infants (4-9 m) in relation to children's concurrent and later development (14 m). Some students also gain home visiting experience.

Professor characteristics:

- Years of experience with long term projects
- Numerous publications with colleagues, including previous students
- Collaborative creation of multiple measures
- Consistent review of literature and conference attendance with notable colleagues
- View of the whole student development
- Appreciation of mentoring practices

Professor research goals:

- Work with students and research participants from diverse backgrounds
- Build on previous experience in collaboration with various research partners
- Train aspiring researchers to lead research projects with increasing independence
- Guide student researchers in publishing

Parenting Observation Skills Training (POST)

Two teams of four student researchers are learning the PICCOLO & HOVRS-A+ observational measurement tools. Each team is led by one graduate student, reliable on the measure and knowledgeable about the theory underlying the research constructs.

Student researcher roles: Research & practice

- Develop and build the project with support
- Attend weekly team meetings
- Human subjects and IRB application training
- Recruit families and conduct research visits
- Observation coding of parent-child interaction (PICCOLO) and quality of interactions during visits with families (HOVRS-A+)
- Enter data, analyze data, and write reports

Student research goals:

- Refine project coordination skills
- Guide and motivate student teams
- Gain deeper knowledge of tools and literature
- Integrate research goals across projects
- Refine problem solving skills
- Professional development
- Publish and present research findings

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