

Lev’s Research Legacy:

A Developmental Psychology Research Methods Activity

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Lev’s Research Legacy: A Developmental Research Methods Activity

Teaching Notes

This activity helps students explore developmental research methods while also familiarizing them with some of the ideas and background of the psychologist Lev Vygotsky. Although most students have at least heard of Jean Piaget and Erik Erikson in introductory or other psychology classes, many are completely unfamiliar with Vygotsky’s important work. I have used the activity in first-level lifespan development courses with 20-35 students, and I believe it would work well in any first-level developmental (child, adolescent, or lifespan) or educational psychology class. It is structured to take about 40-60 minutes after a short lecture reinforcing some of the basic methodological concepts in the first week of classes. However, instructors could easily expand it to be a more in-depth project. Students should read the background material (see pp. 6-10 below) prior to the class in which they will work on the activity; then groups can be formed and the report sheets (see pp. 11-12 below) can be given out on the day of the activity. Students should be prepared to search for information online as needed during the group work. They can read more about Vygotsky’s ideas of the Zone of Proximal Development and scaffolding or conduct a literature search to find research studies on these concepts. For a good, broad overview of Vygotsky’s theoretical perspective and ideas, see John-Steiner & Mahn (1996).

This activity is designed in the general *inquiry-based* or *problem-based* learning tradition, or what has sometimes simply been called *transformational teaching* (see, e.g., Slavich & Zimbardo, 2012). Proponents of this type of method suggest, like Vygotsky (1986), that allowing students to develop their own questions and pursue the answers with support and scaffolding from an instructor leads to a multiplicity of educational benefits, from greater intrinsic motivation and self-direction to more effective problem-solving and collaboration to more flexible knowledge structures and better transfer of learning (e.g., Bluestone, 2007; Hmelo-Silver, 2004; & Prince, 2004).

As Vygotsky himself would suggest, students may need more or less scaffolding depending on their level of study. In my sophomore level lifespan development classes, some groups take off with the question immediately, while others flounder a bit. When a group is having a hard time getting started, I try to encourage them through questioning of my own. For example, I might ask them if they understood the concepts of scaffolding and the Zone of Proximal Development. If not, I suggest they look up the terms and then ask me if they still need clarification. If they understand the terminology but cannot get started on the research question, I will ask them a series of questions such as, “What age children would you like to study?”, “What are some things we want kids this age to learn?”, and so on, leading them toward a focus. In general, my goal is to have them construct as much as possible themselves.

If instructors have less time or if students need more direction, the research question could be more specific, for example, having students design a study to test whether the scaffolding approach to learning to sew is more effective than direct instruction in sewing.

Student Learning Outcomes:

1. Be able to summarize the background of an important figure in developmental psychology, Lev Vygotsky;
2. Be able to define the terms *Zone of Proximal Development*, *scaffolding* and *direct teaching*;
3. Be able to evaluate the relative merits of various research designs for application to a particular research question;
4. Be able to apply fundamental research concepts to a research question;
5. Be able to apply ethical guidelines in working with children.

References

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Lev’s Research Legacy

Being born into a Jewish family, religious or not, in the Russian Empire in the last years of the 19th century brought with it numerous disadvantages and almost universal prejudice. Jews were seen as dangerous aliens to be firmly controlled, and they had been blamed for the assassination of the Russian Czar in the 1880s. It was into this society that Lev Vygotsky was born in 1896[[1]](#footnote-1).

The situation for Jews improved as Lenin came to power with the Marxist revolution and the Russian Empire gradually transformed, with many upheavals, into the communist Soviet Union. However, Lenin believed that the Jews needed to assimilate into the majority culture, and Jews continued to be frequent scapegoats for problems experienced throughout the country through at least World War II. Many prejudicial laws continued to exist for the first third of the 20th century.

Lev was an exceptionally bright young man, who was nurtured and supported in his intellectual pursuits by his mother, who had been a teacher. He was very interested in all forms of art and philosophy. Even though he was probably one of the best students in the country, only luck allowed him to go to University. At the time, Jews were allotted only 3% of all university slots, and these places were awarded by lottery to Jews who applied. Lev was one of the lucky students to win this lottery. He was forced to enter the University of Moscow as a medical student, though this was not his interest. As soon as he could, he changed to the study of Law—still not really his interest, but it allowed him to take some philosophy classes. Because the University didn’t really let him to study in his area of interest, he also took classes at an underground university, studying the history, philosophy, and psychology that fascinated him. After graduating with his law degree from the University of Moscow, he went on to teach at a teacher’s training college and established there a psychology laboratory, even though he had no formal training in psychology.

Lev’s varied background may help explain his extremely wide research interests. He was intensely interested in human development, particularly in how we learn, how we develop thought and speech, and how our environments impact our development. He was interested in studying and helping children with disabilities, in the interaction of people with art, and in how we form new concepts. After prominent psychologists in Russia noticed his work, he was invited to head a new psychology laboratory in Moscow. He interacted with some of the pre-eminent psychologists of the day, including Jean Piaget, and influenced several important psychological groups. He was probably just getting into his primary research area when he was struck with tuberculosis. He died in 1934 from the disease, with his best known book, *Thought and Language,* still in progress. It was published shortly after his death, but two years later it was determined to be subversive to communist thought and was suppressed until the 1960s. Thus the Western world knew little of his work until decades after his death.

Lev believed strongly in the importance of interaction and engagement in guiding a child’s development. But he also believed that in order to learn, a child needed to start from his or her own knowledge and creativity and be led to more advanced ideas by an adult helping to shape the experience. In *Thought and Language* Vygotsky said

Practical experience also shows that direct teaching[[2]](#footnote-2) of concepts is impossible and fruitless. A teacher who tries to do this usually accomplishes nothing but empty verbalism, a parrot-like repetition of words by the child, simulating a knowledge of the corresponding concepts but actually covering up a vacuum. (1986, p.159)

Vygotsky’s best known concept, his idea of the Zone of Proximal Development, focuses on the child’s active engagement in a task combined with an adult’s guidance to explain how children develop and progress to more advanced levels of cognition. The Zone of Proximal Development is the difference between what a child can do on his or her own and what that child can do with some help. For example, a child may be able to read and comprehend a book at the 2nd grade level without help, but if a teacher helps with several harder words, that child may be able to read and comprehend a book at the 4th grade level. This child’s Zone of Proximal Development would be 2 years for reading. Development occurs when an adult shapes a child’s activity, by taking what the child does and showing the child how to do something a bit beyond what the child can currently accomplish alone. Vygotsky disputed ideas like Piaget’s that emphasized the role of maturation and independent exploration in cognitive development and ideas like strict behaviorism that said that all adults need to do is show children how to do something and then reinforce them for doing it. Instead, he felt the dynamic interaction of a child as director of an activity and an adult as a guide would lead to the best development.

The adult guides the child’s activity through a process called scaffolding. A scaffold in the construction of buildings is a temporary structure that lets workers do work off the ground. In Vygotsky’s theory, a scaffold is a temporary structure that lets a child reach levels of learning he or she could not reach alone. Take an activity such as sewing. In preschool, a teacher provides scaffolding for the skill of sewing by giving children lacing cards to play with. They get the idea of drawing a cord through material (in this case, usually a shoelace-size cord through cardboard) when they are not yet coordinated enough to hold a small needle. Later, the teacher might show them how to thread a needle, give them the needle and two pieces of fabric, and then let them sew through the fabric. As the children become more skilled, the adult can let them do more of the process on their own and show them more advanced skills. Once they can thread the needle themselves, the adult can withdraw that bit of scaffolding and move on to something more advanced. This continuing process of guided interaction allows children to develop the skills that their culture values.

References

Gallagher, C. (1999). Lev Semyonovich Vygotsky. Retrieved from <http://www.muskingum.edu/~psych/psycweb/history/vygotsky.htm#Biography>

Vygotsky, L. (1986). *Thought and language* (Rev. ed.;A. Kozulin, Ed.). Cambridge, MA: MIT Press.Your Task:

Unfortunately for the world, Lev died before he could do much empirical testing of his biggest idea, and the Soviet suppression of his work meant that psychologists of the day also did not have the chance to work with his ideas. Your task now is to design a research study that could help support Vygotsky’s concept of the Zone of Proximal Development. You will work in small groups to plan a study to test the idea. Try to plan the most effective research possible (see the research methods section of your textbook and/or any additional information on developmental research methods you have been given, think about what you learned about research in your Introduction to Psychology class, and ask questions when you need to as you consider what will be most effective). You have an unlimited budget, but you must follow ethical guidelines of research. Within your group, assign the following roles: *record keeper*, *idea people*, *devil’s advocate*, and *organizer*. The *record keeper* will take notes on all your ideas to be submitted at the end of class. The *idea people* generate ideas—they should be as creative as possible, without worrying about whether the ideas are realistic or not. Once ideas are generated, then the group can discuss which seem to make the most sense. The *devil’s advocate* works to poke holes in the ideas—it is this person’s job to be constructively critical and come up with any possible problems in the ideas. The *organizer* keeps the group on track so that the group keeps moving toward a solution by the deadline for completion.

1. Discuss all the various research designs you could use (survey, experiment, etc.) and briefly consider something you might do using that design. Write these ideas on your assignment sheet.
2. Decide which basic design or combination of designs makes the most sense to answer the question.
3. Consider what developmental design you want to use: cross-sectional, longitudinal, or a combination (what is often called cross-sequential) and why one might be better than another.
4. Discuss the ethical guidelines you must follow in your study.
5. Plan your study: what participants will you recruit, what will they do, what will you do? What are your variables? Consider details like the ages of your participants, what materials you will need, etc. Write down your ideas for the research study in enough detail that someone else could follow your plan.
6. At any time during the process, write down questions you have—how a design works, what your variables should be, whether something is ethical, etc. Any time you need more information to complete your task, take note of this. You can ask your instructor these questions or look up online as time permits.

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You will turn in this sheet and the methods report, along with any additional pages you need to fully explain your ideas. The methods report should include as much detail as possible about your research plan; try imagining that you will be starting to conduct this research next week, so you need to know exactly what you will do.

Basic Question: Will children learn a concept faster and/or more accurately by being involved in an activity with guidance and scaffolding or with direct teaching from an adult?

Group Roles:

|  |  |  |  |
| --- | --- | --- | --- |
| **Recorder** | **Idea people** | **Devil’s Advocate** | **Organizer** |
|  |  |  |  |

Questions we need to ask:

Methods Report

Hypothesis:

Participants:

Materials:

Procedures (include developmental design being used and explain the reason for choosing this design):

Ethical issues:

1. The majority of the biographical information on Vygotsky comes from Alex Kozulin’s introduction to the 1986 edition of Vygotsky’s *Thought and Language* (Vygotsky, 1986), with some supplemental facts from Christina Gallagher (1999). [↑](#footnote-ref-1)
2. Direct teaching involves a teacher giving explicit instructions for completing some task, followed by students completing the task. For example, a teacher might explain what an adjective is, giving some examples in a text, then give students a worksheet asking them to circle all the adjectives in a story. It does not generally involve discussion or input from students. [↑](#footnote-ref-2)