

Discovering and Uncovering Piaget

WebQuest Description: During the 20th century, Jean Piaget was one of the most important and influential theorists about cognitive/intellectual development. This WebQuest introduces his work through a variety of resources. It includes attention to basic concepts, stages, mechanisms of development, criticisms, misconceptions and educational implications, including Constructivism and videos of Constructivist lessons. It involves viewing You Tube clips, visiting other web sites, and reading attached documents. Although there is a group task, each individual is expected to complete the entire process. NOTE: This WebQuest is revised virtually every semester.

Grade Level: College / Adult

Curriculum: Professional Skills

Keywords: thinking, cognitive development, intellectual development, constructivism, Piaget, teaching children, adolescents, adults

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Introduction

Prior Knowledge: Have you ever heard of Jean Piaget before? If so, what do you already know about him and his ideas? Have you ever heard of Constructivism? If so, what do you know about it? What considerations should you make about teaching, based on Piaget's theory of intellectual development and its educational implications? Do you know the difference between Cognitive Constructivism and Social Constructivism? How would you characterize these differences? Objectives: This WebQuest was developed for my graduate and undergraduate teacher education students at CCNY. In some cases it is part of a larger WebQuest project in which they have to develop their own WebQuest. One reason I developed this WebQuest is that students often don't like learning about psychological theories through the use of traditional instructional methods. I thought that using an Inquiry approach, with an assortment of web-based resources, including multimedia, might make learning about Piaget's theory both challenging and fun! Another reason I developed this webquest is that too often teaching Piaget is limited to focusing on his stages and neglects the important educational implications of his theory of cognitive development. Currently we are not using the Zunal Quiz or Google Map features of the webquest. Think about the following: 1. What are Piaget's main contributions to understanding how students think and learn? 2. What are Piaget's stages and the characteristics of his stage theory? 3. How does Piaget view the roles of biology and experience in cognitive/intellectual development? 4. How does Piaget explain the mechanisms of cognitive/intellectual development? 5. What are the implications of Piaget's theory for teaching? 6. Why and how is Cognitive Constructivism used in teaching? 7. Why and how does the Piaget-based Learning Cycle help students develop intellectually? 8. How can you design a lesson for adolescents using Piaget's theory? 9. How can you analyze a lesson to assess its consistency with Piaget's theory? 10. What are common misconceptions about Piaget's theory? 11. What are criticisms of Piaget's theory? 12. What are modern views about Piaget's theory? 13. How could you improve your performance on a similar assignment in the future? This WebQuest will help you: 1. answer these questions, 2. develop strategies for applying Piaget's ideas to your current and/or future students, 3. apply what you learn about Piaget and Cognitive Constructivism working with at least one of your classmates to the development and implementation of an instructional activity based on what you learned, 4. share what you have applied with the rest of the class, 5. develop your own WebQuest using Zunal.Photo: The picture at the top of this page shows Piaget (center) with my mentor, Howard E. Gruber (left) and Jacques Voneche (right). Gruber and Voneche wrote "The Essential Piaget" (1977, Basic Books). Voneche was a psychology professor at CCNY until his death. Because of Gruber's relationship with Piaget, I met Piaget and Inhelder at a conference in New York in the mid 1970s. Shortly before Piaget died in the 1980, Gruber took over his role in Geneva. Here is a link to the official web site honoring my late mentor, Howard Gruber <http://davidlavery.net/Gruber/>

Tasks

Duedates are specified on the syllabus. Task 1: Plan Who You Will Work With A. Decide whether you will work with a partner or a group (up to four people). B. Give me the name(s) of the classmate(s) you will work with by the date specified on your syllabus. Task 2: Resources Report You will need to use at least 6 resources from the Process page of this webquest to help you design your activity: 3 Internet links or sets of links and 3 documents (see #4 on the Process page). The goal is to apply (transfer) what you have learned about Piaget and the educational implications of his theory, including Constructivism, through this WebQuest to your own teaching. Write a summary/description of your personal reaction to each of these six resources as specified in the template. USE the TEMPLATE ATTACHED BELOW. This is an individual activity with an individual grade worth 15%. You and your partner can choose the same or different resources, as you prefer. Task 3: Design Your Own Instructional Activity (PRODUCT) Create an instructional activity for using principles from Piagetian theory and its educational implications. This activity can be in any subject you want to teach, but for students in Adolescent Learning and Development, it should focus on middle or high school students. For students in the Psychology of Learning and Teaching, it can be for any grade level. You are expected to create your own activity for this project - NOT use an already existing one and try to fit it to Piaget's theory! This is a group activity. Write the following to describe the activity: 1. Goals/Objectives: What do you want to accomplish? What outcomes do you expect? These should be explained using concepts consistent with Piaget's theory. 2. Materials/Resources 3. Teaching Methods and Learning Activities. What will you as the teacher do? What will

Developing = 1
 Mastering = 2
 Excelling = 3
 Beginning = 0

Category and Score	Beginning 0 = F	Developing 1 = C	Mastering 2 = B	Excelling 3 = A	Score
Meeting Assigned Due Dates 1. partner/group 2. resource report 3. product & implementation, 4. self-evaluation.	Met one or none of the due dates. The later the submission, the greater the penalty!	Met two due dates. The later the submission, the greater the penalty!	Met three due dates. The later the submission, the greater the penalty!	Met all four due dates.	5 % (Individual Grade)
Resources Report: At least 3 websites or sets of websites groupings and 3 documents. See Template to be posted on Task page.	Unacceptable. Template not used and/or no resources are discussed thoroughly.	Minimally acceptable. Template used. Few resources are discussed thoroughly.	Acceptable. Template used. Most resources discussed thoroughly.	Exemplary. Template used. All resources discussed thoroughly.	15 % (Individual Grade)
Self-Evaluation	Did not do self-evaluation.	Did superficial self-evaluation or did not systematically address all criteria specified on the Task page.	Did relatively thoughtful self-evaluation of all criteria specified on the Task page.	Did very thoughtful self-evaluation of all criteria specified on the Task page.	10% (Individual Grade)
Instructional Activity Product & Classroom Implementation Criteria	PRODUCT: Incomplete specification of goals/objectives, teaching methods & learning activities, materials specified or not consistent with & explicitly connected to Piaget. PRESENTATION: Inadequate or does not reflect Piagetian theory.	PRODUCT: Complete but unclear specification of goals/objectives, teaching methods & learning activities, materials or not thoroughly specified; or not consistent with & explicitly connected to Piaget. PRESENTATION: Adequate but only moderately reflects Piagetian theory.	PRODUCT: Complete and clear goals/objectives, teaching methods & learning activities, materials clearly & thoroughly specified; consistent with but not explicitly connected to Piaget. Instructional activity. PRESENTATION: Good, and reflects Piagetian theory.	PRODUCT: Complete and clear goals/objectives and specifically linked to Piaget. Teaching methods & learning activities, materials clearly & thoroughly specified; consistent with & explicitly connected to Piaget. PRESENTATION: Exemplary and an excellent reflection of Piagetian theory.	Product and Implementation 15% (Group Grade)
				Total Score	45% grade in course

Conclusion

What, if anything, did you already know about Piaget before you did this WebQuest? What, if anything, did you already know about Cognitive Constructivism before you did this WebQuest? How has your knowledge of Piaget's ideas and Cognitive Constructivism changed? To what extent has it deepened? What are specific examples. To what extent has it been refined? What are specific examples? To what extent have you replaced your prior conceptions with new and different conceptions? What are specific examples? When, why, how and to what extent might you apply what you learned through this WebQuest to your own teaching? How did you benefit from seeing the Instructional Activities implemented from your peers? What else would you like to know about Piaget's theory and its educational implications? How could you improve your performance on a similar assignment in the future?

Teacher Page

This picture shows how NOT to teach, based on Piaget's theory because it appears to be very teacher-centered with a "show and tell" approach which tends to minimize students' active engagement in learning! As previously mentioned, one reason I developed this WebQuest is because students often dislike learning about psychological theories through traditional teaching methods. I thought that inquiry learning and use of the Internet might make it more interesting, and it places students at the center of their own learning, encouraging inquiry, discovery, and application so a WebQuest is consistent with a Piagetian approach to teaching and seems to be ideal! Another reason I developed this WebQuest is that I wanted my teacher education students to be able to use existing WebQuests and to create their own WebQuests, so I gave them an experience engaging in a WebQuest as learners, and I had to develop one myself! While your students are engaged in this WebQuest, it's important for you to monitor how the groups are functioning to make sure that all students are contributing and working together in a timely and collegial fashion. To facilitate these characteristics of the project, I allow some time in class for students to work on it so that not everything has to be done outside of class. One thing to watch out for is students using the wrong resources for their Resources Report. Some students confuse websites with documents for this project and mistakenly believe that any document they find on a website from the

Process page qualifies as an acceptable document for this part of the project rather than only using the documents attached at the bottom of the Process Page. Any documents they find on websites on the Process page qualify for the website component of the Resources Report. It's also important that you carefully monitor students' understanding of Piaget's ideas in general and stages in particular because there are some common misconceptions: 1. that he equated age with stage 2. that he was a maturationalist 3. that he didn't appreciate the role of environment in cognitive development 4. that he thought education couldn't help students develop cognitively Finally, it's important to carefully monitor students' understanding of Cognitive Constructivism, based largely on Piaget's theory, (although Dewey and Bruner were also constructivists) and make sure that they differentiate it with Social Constructivism, based largely on Vygotsky's theory. Make sure that students don't get so focused on learning about the stages that they neglect the educational implications of the theory. The stage theory generally doesn't hold up as well as the educational implications of Piaget's theory. Two books of Piaget's writing on education are To

Understand is to Invent: The Future of Education, Penguin Books, 1976
(see link to free copy provided on the Process page of this webquest)
and Science of Education and the Psychology of the Child, New York:

Viking Press 1971. Both are short and well worth reading! Currently I am not using the Quiz feature of the Zunal webquest because it only allows multiple choice items, without a structure whereby students can explain their reasoning, so the quiz is inconsistent with fundamental characteristics of Piaget's theory. Related Links: Introduction to Vygotsky's Theory Vygotsky and Social Cognition Computational Thinking for middle and high school teachers (almost an hour long)

<http://www.youtube.com/watch?v=JoodJILnhRw> This is my first WebQuest, so I would appreciate feedback so that I can improve it in the future! I regularly change it based on feedback. So far I have revised it every semester to better meet the needs of my students. The most recent changes were made February, 2013. To learn more about my use of WebQuests, see my chapter, "Consuming and Constructing Knowledge through WebQuests". In Increasing Student Engagement and Retention using Online Learning Activities: Wikis, Blogs and WebQuests - Volume 1 of the Cutting-edge Technologies in Higher Education series. C. Wankel & P. Blessinger, Eds. (2012) Emerald Publishing Group, London.

Standards

Credits

Other