

**Teaching educational psychology with VITAL-based case studies:  
Going beyond psychological theories in context-specific case analyses**

**Noriyuki Inoue  
University of San Diego**

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**Introduction**

Many teacher education programs require pre-service teachers to complete an educational psychology course in the beginning stage of their program. The common roles of these courses are to help students understand key psychological theories and research relevant to educational practices and apply their understanding of these theories to actual educational practices. In achieving these goals, the key lies in establishing context-specific understanding of actual educational practices as the pre-service teachers make critical use of psychological theories for learning situations that inherently involve complexity (Blumenfeld & Anderson, 1996; Kumar, 2005).

To achieve this goal, many recently published educational textbooks incorporate a variety of case studies in which pre-service teachers practice analyzing actual cases of learning (or failed learning) in terms of the psychological theories and constructs that they have learned (e.g., Ormrod, 2008; Willems & Gonzalez-DeHass, 2003). However,

there are a number of limitations in this form of case study analysis. First, the pre-service teachers' process of reasoning is not very transparent in the written case studies; it is difficult to see how they incorporated their choices of actions, utterances and interactions in reaching each step of their analyses. Secondly, the situation described in a written case often incorporates the subjective lens of the textbook writer who chose to describe specific components—and ignored other components—of the situation for molding the cases into the psychological theories discussed in the textbook. The following is a typical example of a case study from an educational psychology textbook.

**Case Study: Darren's Day**

...In the afternoon's art lesson, Darren's class is making papier-mâché masks. His friend Carla gives her mask a very large nose by adding a crumpled wad of paper below the eyeholes and then covering and shaping the wad with several pieces of glue-covered paper. Darren watches Carla closely throughout the process and then makes a nose for this mask in a similar way.

- What does Darren learn during his art lesson? Can you identify one or more factors that affect his learning in each situation? (Ormrod, 2008, p. 191).

In this example, it is not clearly described how Darren interacted and reasoned about Carla's paper craft technique as well as how the overall activity was set up. Furthermore, the case does not clearly describe how Darren observed Carla, and how he made his construction resemble (or not resemble) Carla's construction. The case seems to be written to illustrate the importance of observational learning, but whether this is true or not depends on more details and other contextual factors that are not described in the case. Furthermore, even if the case describe these points clearly, it is questionable whether the students who learn to give appropriate answers to the case study question would notice these key points and analyze a child's learning process in depth when confronted with a similar situation in their own classrooms.

One often-employed solution to this problem in educational psychology courses is to have students personally observe children's interactions in K-12 classrooms and analyze their observed interactions. However, the complexity of actual classroom situations can be overwhelmingly challenging for the students and may not be very educationally meaningful for pre-service teachers. The following example is an observation report by a pre-service teacher in the author's educational psychology course. The student was asked to report on an effective learning activity she observed in classrooms and analyze the effectiveness of the learning activity in reference to the learning and developmental theories that the class discussed or read.

The students were split into partners and each set of partners were handed a bag of blocks. The students began to play with their bags and not pay attention, so the teacher sang a song to get their attention. The song started with the words, "put your hand in your lap." She told the students that they will have their chance to use the blocks, but that they need to let her have a chance to explain first. The teacher took a bag of blocks and showed the students how to represent fact families with the blocks. The students raised their hands and were good listeners. They came up with different ways of using the blocks and took turns showing their classmates their different methods. After the demonstration, the students split off with their partners and began the activity (anonymous pre-service teacher, Fall 2008).

In this example, children seem to have engaged in an interesting interaction and reasoning, but the student who reported this case failed to report many details or notice the children's thinking about demonstrating fact families using blocks in the context. This is not surprising given that a lot of things must have been going on in the context, and these distracting factors could have prevented her from noticing evidence of interesting thinking that the children exhibited in the activity. As seen in this example, the

observation activity has its limitations in linking theory and practice in educational psychology courses.

### **VITAL in an Educational Psychology Course**

The VITAL (Video Interactions for Teaching and Learning) system can offer a solution to these problems. The VITAL system allows pre-service teachers to be exposed to a wide variety of authentic cases that incorporate moderate levels of complexity and to approach the complexity by not only applying their understanding of psychological theories but also using context-specific lenses to analyze the cases. Ideally, the pre-service teachers can go beyond these psychological theories to analyze various events and interactions observed in the videotaped cases that may not necessarily fit the theories they learned easily. Furthermore, the VITAL system allows transparency in seeing how pre-service teachers chose and focused on specific components of the cases, as well as how they went through reasoning processes using these components.

The following section illustrates this point in terms of an educational psychology course that the author taught as a part of a university-based teacher education program in Southern California. All the students in the class were pre-service teachers who were required to take the course as a part of the teacher credential program. In the course, about 4-5 VITAL assignments were assigned to the students, encompassing various topics such as cognitive development, students' misconception, teachers' motivation technique, and pedagogical content knowledge.

The following is an assignment that used a short video clip in which two pre-school children are playing with blocks. The video segment includes a wide variety of interactions between the children as they construct a house together.

**Instructions:**

Watch the associated video, and answer the following questions. Support each of your arguments with at least one video clip.

- 1) Identify the disequilibrium that the child (Armando) encountered and how he attempted to resolve it. What is the role of social interaction there?
- 2) What kinds of personal meanings did he construct and attach to the process of the construction? How did Armando make the construction meaningful?

Answer these questions in 600 words and supporting video-clips.

This VITAL assignment was given after the class discussed Piaget's theory of cognitive development focusing on how children construct knowledge as they encounter and overcome disequilibrium. During class, the concept of disequilibrium was introduced first, and then how it contributes to children's cognitive development. The discussion mainly centered on the disequilibrium that emerges in children's minds as a result of interactions with the physical environment. The discussion did not cover how the emergence of disequilibrium might owe to the social context and how children make personal meaning as they overcome disequilibrium in the social context.

In the video, one can observe that Armando (the first child) encounters a wide variety of disequilibrium physically and socially, and resolves the disequilibrium as he constructs different meanings out of the activity. The class first viewed the video in class together and had group discussions on the video; later they were asked to complete the VITAL assignment individually at home. The question was how students went about analyzing the case, namely, whether they could apply the concept of disequilibrium to

analyzing the videotaped block play that involves physical and social interactions that dynamically unfold as the two children engage in the block play.

Topic: Meaning-making in Reality Oct. 7, 2008 – Oct. 21, 2008

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Essay: [Meaning-making In Reality](#) DUE: Oct. 21, 2008

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**Instructions:**

Watch the associated video, and answer the following questions. Support each of your arguments with at least one video-clip.

- 1) Identify the disequilibrium that the child (Amando) encountered and how he attempted to resolve it.
- 2) What kinds of personal meanings did he construct in the process of the construction? How did Amando make the construction meaningful?

Answer these questions in 400 words and supporting video-clips.

**Assignment Videos:**

 [Playing with building blocks](#)

This assignment was given to all the students who took the educational psychology course from Fall 2007 to Spring 2008 (including Winter 2008). The examination of the assignment completed by 54 students indicates 91% of the students were able to demonstrate their understanding that the way that children encounter disequilibrium owes not only to physical environment, but also to the social context with different degrees of understanding on the role of social interactions. Eighty-nine percent of their arguments were supported by specific video segments, with different degrees of linkage between the argument and evidence. The following response is an example of such an answer by a student (pre-service teacher).

Armando encountered a few different moments of disequilibrium in this video-clip. At the very beginning, he discovered that the two support structures were too far apart for the bar to lay across.



He got over this disequilibrium quickly when his friend pushed the two supports closer together until the bar fit across them. As they were laying bars across the top he was continually

guessing how many they still need to add to cover the whole thing. He thought two, but then experienced disequilibrium as he saw that after one there was still room for another two.

 [we need two more 0:01:12-0:01:34](#)

This disequilibrium was also short-lived as he corrected his guess and his friend laid the last bar on the supports.

Then, he again encountered disequilibrium when he tried to use the short bars for the sides of the house. His friend told him to use the longer bars, but he didn't understand that those could be the sides and fit perfectly since they were the same as the bars that were lying across the top. In order to resolve this disequilibrium, he tried laying the short bar on the side of the house. He saw that it did not cover the gap. Then, he looked under the roof structure to where his friend had laid the longer bar, and, seeing that it fit perfectly, he quickly agreed that those were the correct choice.


 [short or long bars on side 0:02:29-0:02:54](#)

He resolves this disequilibrium by seeing the correct bars cover the gap compared to the short bars that left a gap. When they begin laying the rest of the side bars he says they will need eight bars to cover all the sides.

 [going to need eight 0:02:56-0:03:07](#)

He does not explain why or how he came up with that idea, but I think it is an example of disequilibrium because they actually need more than two per side. He doesn't resolve this potential disequilibrium out loud, but he does see that there are actually three blocks on each side.

He constructed two personal meanings during the process. At one point his friend referred to the fact that they had built the same structure the day before, so he actually called on his prior knowledge and experience of

 [yesterday 0:01:39-0:01:48](#)

building the same construction.

He also made the construction meaningful by calling their building a house. He has a schema of what a house is and consists of, and he brought that to the

construction.  [make a house 0:02:42-0:02:51](#)

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This analysis indicates that she understood that physical disequilibrium takes place in a social context, often intertwined with social disequilibrium as she identified the specific evidence. She was able to consider the emergence of disequilibrium not only in terms of interactions of physical objects, but also a social context that dynamically changes and allows children to construct rich personal meanings as they overcome the

disequilibrium. VITAL allowed her to practice applying her theoretical understanding of the developmental concept to the actual, context-specific case.

The other students' answers indicated different degrees of understanding on these issues. Again, most of the students were able to mention the social context and other context-specific factors that contributed to the emergence of disequilibrium and personal construction of meaning in the video-based case study. Similarly, in each of the other VITAL activities, about 85-90% of the students were able to develop a context-specific understanding of the way a theoretical concept relates to a real life learning activity.

### **Discussion**

It can be inferred that the students' high levels of achievement can be attributed to various features of the VITAL activities, including: the need to support each argument with video-based evidence; selection of video clips that elicit the context-specific understanding of the theoretical concept; having in-class group discussions on the assigned videos before working on the VITAL assignments; the pre-service teachers' interest in understanding learning theories as relevant to their future teaching practice; the quality of assignment questions; and the few years that the author spent refining his VITAL assignments. The observed effects could likely be replicated in other educational psychology courses if these features are meaningfully incorporated.

As discussed before, linking theory and practice has been one of the largest agendas in teacher education. VITAL allows pre-service teachers go beyond theories and analyze physical and social interactions that dynamically take place in context-specific activities. The pre-service teachers learn to flexibly apply the theories and support their



reasoning with specific evidence in order to better understand the ways children learn. VITAL also allows educational psychology courses to go beyond context-general theories that are included in the textbooks and help beginning pre-service teachers practice grounding their understanding in context-specific examples in the way that is not prescriptive or too challenging. This can make learning educational psychology in a teacher education program a powerful experience for pre-service teachers.

In fact, VITAL could be seen to possess much wider potential in the area of teaching educational psychology. For instance, VITAL could be used to link an educational psychology course to the other courses in teacher education programs. Particularly, methods courses could implement VITAL in the way that links the discussions on a specific teaching method to the discussions on how students learn in the educational psychology course. In doing so, educational psychology and methods courses could share several VITAL assignments in the way that allows students to learn to analyze their teaching and students' learning more effectively. This could help avoid the disconnect between educational foundation and methods courses, which is seen as one of the major problems in many teacher education programs.

To conclude, VITAL is not merely a learning technology that supports teachers' learning of specific concepts or skills. It can serve a powerful epistemological tool for teachers to bridge their theoretical understanding of educational concepts and context-specific understanding of learning activities. It can challenge teachers to link context-general views of the world to real life meanings that constantly and dynamically emerge and shift in specific contexts that teachers are in. VITAL activities can require teachers to flexibly employ and examine different assumptions and the ways we understand and

relate to the world at meta-cognitive levels. Such flexibility in employing different assumptions depending on contextual needs is what educational psychology courses need to aim as one of the learning objectives for educators in the 21st century.

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