Teaching for Developmental Diversity:
An Approach to Academic Language and Critical Thinking

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For a successful transition into college, ABE learners will benefit from academic language and critical thinking practice that is informed by constructive-developmental theory.

Challenges of successfully transitioning into college

Adult Basic Education (ABE) programs are increasingly being charged with teaching academic reading and writing, including embedded critical thinking skills. The 2014 GED test emphasizes evidence-based reading and writing, requiring the critical thinking skills of identifying a claim and the information used to support it (Paul & Elder, 2008). The new ABE College and Career Preparation standards released by the Office of Vocational and Adult Education likewise include evidence-based reading and writing standards informed by the K-12 Common Core (Pimentel, 2013). For ABE learners who aim to attend post-secondary institutions, the ability to read and write academically and think critically is especially crucial. Both summarizing and critical thinking have been identified as essential skills for college success, and often lacking among college students (Conley, 2005) and within ABE instruction (Johnson and Parrish, 2010).

While academic writing and critical thinking are important, many ABE learners struggle with these skills. My own ABE learners transitioning into college struggle significantly with skills essential for passing college classes, including stating a text's purpose, main idea, and important information, and these learners are testing into the highest levels of ABE. Perhaps not surprisingly, many ABE learners who say they want to attend post-secondary never go on to earn a credential. Of GED graduates who do begin post-secondary, 95% drop out within a year (American Council on Education, Center for Adult Learning, 2000). Most ABE learners who do enroll in post-secondary test into developmental or remedial classes (Pimentel, 2013). Here, they face another challenge with academic reading and writing, as fewer than 25% of students who enroll in developmental classes ever go on to pass mainstream college courses, much less graduate (Bailey & Cho, 2010).

The case for considering adult development in learning

Supporting ABE learners to read, write and think critically at the level required in post-secondary is a significant challenge. A relevant, but rarely considered perspective on this challenge is that of adult development. Perhaps because the fields of adult development and adult learning have only recently intersected (Taylor, 2006), the conversation about how adult development impacts learning is new. However, developmental theory suggests that some adult learners will struggle with academic reading, writing and critical thinking (Taylor, 2006; Kegan, 1982, 1994). That is, some adult learners are still developing the very epistemological structures that make complex and abstract thinking possible (Drago-Severson, 2004; Kegan, 1982, 1994).

This paper briefly describes constructive developmental theories of adulthood, implications for academic language and critical thinking, and outlines developmentally scaffolded learning activities.

The family of constructive developmental theories of adult development originate with and extend from Piaget's work on child development (Inhelder, & Piaget, 2000) and include Kohlberg's (1981) and Gilligan's (1982) models of moral development; Loevinger's (1976) theory of ego development; and Perry's (1970) stages of ethical and intellectual development in the college years. They are based on the constructivist tenet that people actively construct rather than passively observe reality (Drago-Severson, 2004). Critically, they're also founded on the empirically supported (Kegan, 1982; Loevinger, 1976; Perry, 1970) theory of developmentalism, which maintains that the logics through which people construct reality develop over time and follow predictable patterns. While children's stages of development as identified by Jean Piaget can be roughly correlated with age, an adult's developmental stage is determined solely by the challenges, supports and continuity thereof in his or her life (Kegan, 1982).

Varying needs of support for developmentally diverse students

Among ABE and English as a Second or Other Language (ESOL) learners, the challenges and supports in learners' backgrounds vary widely. This translates into a likely range of developmental diversity. Therefore ABE/ESOL learners construct meaning according to different logics, and "…the very same curriculum, classroom activities, or teaching behaviors can leave some learners feeling satisfied and well-attended while others feel frustrated or lost" (Drago-Severson, 2004, p.15).

Robert Kegan (1982, 1994) explains that a concrete, or instrumental thinker constructs reality with the same black-and-white logic that characterizes Piaget's concrete operational stage. At this stage, a person cannot yet make abstractions or inferences. Adult developmental research suggests that up to 36 percent of adults have not yet fully emerged from this stage. Another 46 percent make meaning primarily from the socializing stage, where making abstractions, inferences, and generalizing becomes possible. Finally, 18 to 34 percent of adults make meaning from the self-authoring stage, where a person can take responsibility for his or her own thoughts, patterns, and learning (Kegan, 1982, 1994).

Learners who likely to struggle with academic reading, writing and critical thinking are those who construct meaning from, or partially from, an instrumental way of knowing. At this stage, the underlying epistemological structure is *categorical* (Kegan, 1994). That is, instrumental learners think through one category at a time, and thus can't relate and synthesize different categories of information. This makes it impossible for a fully instrumental knower to make inferences, abstractions, or generalizations (Drago-Severson, 2004), which is germane to academic reading, writing and critical thinking. Taylor (2006) describes the writing that instrumental learners are likely to produce as "a brain dump," of disconnected and unedited thoughts (p.207).

A case study that I recently conducted reflected this theory, suggesting that learners with a dominantly instrumental way of knowing were more likely to perform lower on reading and

analyzing an article, with a greater tendency make sweeping generalizations or to mistake details for big ideas (Ouellette-Schramm, 2013).

Classroom activities informed by constructive-developmental theory

The following activities come from a critical thinking and academic literacy class that I teach informed by constructive-developmental theory. Each activity marks a step in the reading and writing process with a single article or text and can be used with a variety of texts. Each aims to scaffold both the complexity of thinking that evidence based reading and writing requires, and the academic language to express that complex and abstract thinking.

Helping instrumental learners to identify big ideas

Many learners struggle to distinguish "big ideas" and supporting information, or details in a text. For an abstract thinker, it is logical to begin a text discussion with stating the author's purpose or a main idea. For instrumental learners, however, beginning with the abstract main idea can draw blanks or wild guesses. One of my students taught me that she found it easier to start with the details, and move toward a main idea by asking, "What do these details have in common?" Instead of beginning with the main idea, I now ask learners to start out with simply highlighting sentences that they think are important - what Zwiers (2011) calls "deep quotes" - and to explain the significance of the quotes they chose. As learners share sentences with the whole class, I write and project a few that clearly relate to the author's purpose or main idea or that express supporting information. Bringing those sentences together narrows the scope of information learners need to process, and helps them distinguish main ideas from supporting information. Where learners get stuck, I've provided metaphors, such as a table, and asked, "Which sentences are like the top of the table, with the big ideas? Which sentences are like the legs of the table, holding those ideas up?" Providing concrete metaphors for abstract concepts can be particularly helpful to concrete thinkers.

Another activity that supports distinguishing "big ideas" and support details, or claims and evidence, is to type about ten sentences from a text and create sentence strips, which learners categorize into two piles, e.g, "claim" and "evidence". This can be done in pairs, then debriefed as a whole class. This allows instrumental learners in particular the opportunity to consider one idea at a time and make the significant distinctions between abstract and concrete statements.

Structured academic conversation as a scaffold for abstract thinking

Academic conversations support learners with spoken academic language functions including elaborating and clarifying, supporting ideas with examples, building on or challenging a partner's idea, paraphrasing, and synthesizing conversation points (Zwiers & Crawford, 2011). From a developmental perspective, they can also scaffold the process of thinking abstractly and critically by giving "sentence starters" that linguistically and conceptually frame complex ideas. I've found that structured academic conversations work best after an activity where learners have already clarified some big ideas and supporting information in the text. I have learners move through a sequence of conversation tasks, including a warm-up with general questions about the

text, identifying a main idea or two in the text, identifying supporting information for each main idea, and clarifying the main idea by connecting it to life (Paul and Elder, 2012). I incorporate Zwier and Crawford's (2011) academic conversation sentence starters such as, "Did you find any interesting or puzzling parts?"; "I think the purpose/main idea of this section could be that…"; "Can you give me an example from the text?"; and When have you seen something like this?"

Rather than expecting learners to work through a full academic conversation from the beginning, I've found it more successful to scaffold by introducing one new academic conversation task (with corresponding language) at a time. Initial conversations focus on the tasks of paraphrasing what another learner has said, e.g., "So, you are saying that…" and prompting clarification or elaboration, e.g. ""Can you unpack that for me?" Once students have learned the academic language and concepts to hold a full structured academic conversation, many struggle to put it all together. This is consistent with the struggle of coordinating multiple categories of information that instrumental learners struggle with. To scaffold the process metacognition, or being aware of the task that corresponds to the academic language being used, I've implemented academic conversation "dance floors". In this activity, learners stand up during their conversation and physically step on the "dance step" corresponding to what they're saying. For example, a learner might step on a piece of paper that says "support ideas with examples" while saying, "Can you show me where it says that?"

Online conversations can complement to live academic conversations. In individual discussion threads, learners can ask and respond to general warm-up questions about an article, state main ideas, identify supporting information, or relate the main idea to life. Each learner can create a post within a thread, and other learners can respond, using language to build off of or challenge their peer, e.g., "Then again, I think that…" (Zwiers, 2011). In each case, they reinforce spoken academic conversation language by typing, or writing it.

Focused peer-review to support critical thinking outcomes

After learners have collaboratively constructed main ideas and important supporting information in a text, I move them toward writing summaries and basic analyses of what they read. Just as in academic conversations, I scaffold the complexity of meaning construction with sentence frames. This helps learners acquire the academic language for summary/analysis writing (Zwiers, 2008), It can also scaffold complex thinking itself, which Drago-Severon (2004) and Hoare (2006) recommend for instrumental learners. Sentence starters I use include "In the article _____, _____ describes/illustrates/argues that _____. For example, _____."

As in many writing processes, this process includes drafting, peer review, editing and revising. To scaffold peer review, I have learners post their summary/analysis draft on a wiki, which allows learners to electronically create, edit, and comment on documents. One learner posts her draft, and her partnering reviewer then posts her feedback. I make feedback questions specific, incorporating critical thinking standards (Paul & Elder, 2012) such as clarity, relevance, and precision. To scaffold, I ask reviewers to think and respond to one question at a time, looking at no more than two sentences (or, in developmental terms, categories of information) at one time. Review questions include, "Is the first supporting idea directly relevant to the main idea? Explain why or why not" and "Is the information sufficient to support the main idea? That is, does the

writer state anything in the main idea that she doesn't back up with supporting information from the text?"

After drafting a summary/analysis and receiving peer responses, I ask learners to revise and edit their drafts to submit to me using the same paragraph frame and sentences starters and paragraph frames that they used in their wiki drafts. By the time I read and assess their summary/analysis of an article, they have individually and collaboratively distinguished big ideas from supporting details; held live and/or online academic conversations to collaboratively clarify the purpose, main ideas, and important supporting information in the text, related the main idea to real life; drafted a summary/analysis, received peer review, reviewed their peer's draft, and, using sentence frames, revised a final summary/analysis of an article.

Summary

Constructive-developmental theories of growth and development in adulthood predict, and initial research suggests, that ABE and developmental college learners constructing meaning from a wholly or partially instrumental perspective will struggle with academic language and critical thinking. Concrete, or instrumental knowers, are asked to think and write at a level of complexity of meaning-making that they are still in the process of developing. Teaching academic language and critical thinking to concrete learners requires scaffolding abstract and complex thinking. Moving through the steps of reading, discussing, and drafting summary/analysis of texts, the activities above aim to scaffold the complex thinking that academic language and critical thinking demand. In turn, these activities strive to support instrumental learners not only in acquiring the skills needed to succeed in reading and writing classes, but to contribute to developing the complex thinking skills required to succeed in their post-secondary goals.

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