What Do Adult Graduate Students Want? Using the Typology of Cognitive/Affective/Psychomotor Learning Domains to Explore Good and Bad Learning Experiences

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Abstract: Adult graduate students in five cohorts nation-wide listed factors of good and bad learning experiences; factors were sorted into cognitive, affective, and psychomotor categories. Overall a high frequency of response in the affective domain was revealed. Instructor/student relationship was prominent. This work can inform curricular and faculty development design decisions.

Introduction

Much has been written about how to create effective learning environments for adults in higher education. The purpose of this study was to examine what students themselves say makes for good and bad experiences of adult learning. Adult graduate students know what they want. When they tell about their classroom experiences, rich and provocative stories emerge. But how often are these stories used to inform course design or to support teaching methodology? The research contributes a new path for decisions about course design through inclusion of student voice.

The data set used here is from graduate school classrooms in which students were asked to name factors of both good and bad learning from their own stories of experience in adult learning classrooms. These lists then became part of a report sent out to students. Over the years a substantial set of "accidental data" accumulated. Although not initially designed as a research study, we felt these lists could provide valuable insight into adult student experience. In addition, from our grounding in qualitative research as an active cycle, we were confident this preliminary work would inform further study. We were curious to know the types of things graduate students named. We wanted to know if there were similarities or clear differences between the good and bad experiences. Finally, we wanted some way to denote broad categories of difference, and decided to frame the analysis work using the cognitive, affective, and psychomotor domains.

Brief Literature Review

One basic perspective underlying this research study is that adult students must move through a variety of levels to create deep learning. Jarvis (1991) conceptualizes the levels in a typology of no-learning, non-reflective learning, and reflective learning. Marone and Salio (1976) first conducted research on deep and surface learning; that was later elaborated on and expanded into critical thinking theory (Biggs, 1993; Ramsden, 1992).We aim to explore what gets in the way of this progress toward deep learning and critical thinking.

In the broader literature, adult learning theorists and educators have clearly articulated the guiding principles and programmatic structures needed for effective adult learning (Brookfield, 1985; Cross, 1981; Knowles, Holton, & Swanson, 2005; Merriam, 2001; Mezirow, 1991; Pogson, 2002; Vella, 2007). A major perspective of this research is to identify how adult

graduate students conceptualize and evaluate these program structures and experiences using the concepts of cognitive, affective and psychomotor domains. Bloom's (1956) seminal work on learning domains initially focused primarily on the cognitive domain. Cognitive learning theories still seem to dominate the literature (Clark, Nguyen, & Sweller, 2005; Flannery, 1993). However, the cognitive/affective/psychomotor models are found together consistently in education literature (Brown, 1971; Cropley, 2001; Marzano, 2001; Tuckman, 1972; Vella, 2004). The Cognitive/Affective/Psychomotor learning domains have been called Head/Heart/Hand, Mind/Spirit/Body and Think/Feel/Act. More recently the categories of Thinking/Feeling/Using Knowledge were developed by Mark Aulls (2004) in a study of student experience with good and poor university courses. How these domains apply to the experience of adult graduate students, however, is still not fully understood.

Research Design

Introductory courses for a graduate degree program taught in cohorts throughout the nation included a learning task in which students first told one another about good and bad learning experiences, and then synthesized those experiences into factors in answer to the probe: "What made that learning experience good or bad? Because these lists of factors were recorded as part of a report sent back to students after each course, they were available documents of adult graduate student experience. The overarching research question was: *What do adult graduate students think makes for good and bad learning experiences?*

The research here was intentionally designed as Phase 1 of a larger study. To begin, five sets of data from five university cohorts were examined using Cognitive/Affective/Psychomotor categories. Initial findings from this research will be used to create supplemental research questions to take into seven remaining sets of data during Phase 2. Eventually findings from all cohorts will be compared and contrasted. Phase 1 participants included 97 adult graduate students in the Northeast and Southern United States attending graduate school in the cohort model. Data were gathered during their first course in the program; their impressions recorded as factors are "general" to college learning and not specific to cohort or accelerated formats.

Confronting Limitations of "Accidental Data"

Initially a qualitative constant comparison method of analysis was chosen to embed the work within the grounded theory paradigm (Denzin & Lincoln, 1994; Glazer & Strauss, 1967; Lincoln & Guba, 1985). It was anticipated that categories would emerge from the data and the process of category coding and development of category systems would proceed. However, the factor lists lacked the context to allow for development of themes emerging from the data. Serious limitations to the data set quickly became evident. Without context, the data were too far removed from respondent experience. Careful consideration of context and ongoing reflection around what is going on is central to developing valid and useful themes that can lead to grounded implications (Charmaz, 2003; Ryan & Bernard, 2003).

Cognitive Affective and Psychomotor Learning Domains

The research design was reframed; even without context, the lists of factors provided possibilities for understanding learning experience. We selected the typology of Cognitive/Affective/Psychomotor learning domains as a pre-determined framework denoting broad categories of difference. The data at hand could was then sorted into one of three domains and then counted using the labels "good" and "bad" provided by students. Counting the number

of times something is mentioned from field notes can provide a rough estimate of frequency. The process of enumeration allowed us to quantify the lists of qualitative data at hand.

Clear descriptions for each learning domain category were developed through a series of extensive of trial and error sorting sessions. Lists from five courses were initially sorted and categorized by both researchers individually, and then compared to create parameters for each category. Integrity of the cognitive, affective, and psychomotor category descriptions held firm when tested by six outside sorters.   Table 1 presents descriptors for each learning domain and examples of factors in both good and bad category.

Table 1
Content, Affective and Psychomotor

Domain Descriptors	Examples of "Good" Factors	Examples of Bad Factors
Content: Thinking and content-related skills. Outcomes; Creation of new knowledge.	meaningful content; I was challenged to move to the next academic level; effective feedback on assignments	useless information; I didn't know the course expectations; lack of teacher credentials; I didn't learn anything
Affective: Feelings, reactions and emotions; interpersonal aspects not related to content.	inspired; empowered; respect; enthusiasm; felt open to share; safe; enlightened; respect for instructor; respected instructor	frustration; disrespected; anxiety; fear; humiliation; unfair; stupid; self doubt; embarrassed in front of others; helpless; failure; dumb; not listened to; angry; gypped
Psychomotor: Activity; doing in class; physical environment; physical comfort; group work.	hands-on activities; interaction in groups; actively engaged; applied learning; let us try things out; comfortable room	too many students in the class; too early; too hot; boring lecture monotone; no interaction

Participants

Participants were all adult students attending graduate school in the cohort intensive weekend format. During their first course in the program 97 students were asked to tell stories about both good and bad learning experiences and then synthesize the experiences into lists of good and bad factors. Participants in five cohorts in five states created lists that during the course were used as a basis for establishing positive classroom environment, and after the course were included in a report back to students.   Participants participated in this learning task during their first course in the program; however, their impressions recorded as factors are "general" to college learning and not specific to cohort or accelerated formats. All participants were working toward a Masters degree in education. Participants were primarily female.

Initial Findings

The research here was intentionally designed in phases. Much of the initial phase was involved with identification of category descriptions and building clear category parameters. Initial data sort results will be used to inform a deeper examination of the factors of student experience, and to create on-going research. A second phase of the current project will examine each of the learning domain categories for possible sub-categories. Initial data were separated

into good and bad categories and sorted into domains.   The results of this phase of the study were meant to point to next steps. The data to date have revealed several core points:

- Of the three learning domains (cognitive/affective/psychomotor), the affective domain was mentioned most often by students when listing both good and bad learning experiences.

- when separated into Good and Bad data sets, the affective domain was more prevalent by a 3:1 margin for good experiences and by a 7:1 margin for bad adult learning experiences. .

- Cognitive and psychomotor aspects are more prevalent in "good learning" data sets and less prevalent when students are describing "bad learning."

- Teacher-student relationships were prominent in all domains for both good and bad learning.
      This study is in early stages. At this point data would seem to indicate that the affective domain is important to the experience of adult learners. Questions emerge from the initial sorting of factors that can inform course design decisions and faculty professional development: To what extent is the affective domain considered during planning and implementation of courses? What can instructors do to create and environment in which learners feel safe enough to meet the challenge of learning?

Implications for Adult Education Theory and Practice
      For too long, the idea of creating a safe learning environment was, at best, a course design add-on and at worst dismissed as "touchy-feely" and insignificant. This small study calls attention to the possibility that rigorous learning is directly linked to the affective domain. Data indicate that affective domain needs must be addressed foundationally in order to support the challenge of creating new knowledge. The quality of adult learning in higher education has been called into question (Amiran, 1989). Educational experiences that keep students at the surface of learning are the norm. According to Fink (2003), this surface-level work results in a dearth of graduates with grounding or ability to engage in complex critical thinking. The research proposes examining what can be done to allow adult student to meet the challenge of learning. Our initial research suggests that when affective issues such as feeling safe and feeling respected are not adequately addressed, cognitive and action domains are less engaged and student learning remains at the surface level. This research mandates further research exploring how adult students move through levels of learning.

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