On Becoming a Learner: The Concept of Learning Identity¹

Alice Kolb and David Kolb

Case Western Reserve University

David Justice was dedicated to learning in both his professional and personal life. We are privileged to have been his friend and to share the joy of living that his love of learning brought. He was for us a model of someone for whom learning was "a way of being". So it is fitting that we dedicate this essay in his memory to the concept of learning identity. In our 40 years of research on experiential learning theory (ELT) we have come to an approach to living that we call "the learning way" (Kolb 1984, Kolb & Kolb 2009). The learning way is about approaching life experiences with a learning attitude. It involves a deep trust in one's own experience and a healthy skepticism about received knowledge. It requires the perspective of quiet reflection and a passionate commitment to action in the face of uncertainty. The learning way is not the easiest way to approach life but in the long run it is the wisest. Other ways of living tempt us with immediate gratification at our peril. The way of dogma, the way of denial, the way of addiction, the way of submission and the way of habit; all offer relief from uncertainty and pain at the cost of entrapment on a path that winds out of our control. The learning way requires deliberate effort to create new knowledge in the face of uncertainty and failure; but opens the way to new, broader and deeper horizons of experience. Learning is intrinsically rewarding and empowering, bringing new avenues of experience and new realms of mastery.

Learning Identity

A learning identity lies at the heart of the learning way. People with a learning identity see themselves as learners, seek and engage life experiences with a learning attitude and believe in their ability to learn. Having a learning identity is not an either-or proposition. A learning identity develops over time from tentatively adopting a learning stance toward life experience, to a more confident learning orientation, to a learning self that is specific to certain contexts and ultimately to a learning self-identity that permeates deeply into all aspects of the way one lives their life. This progression is sustained and nurtured through growth producing relationships in one's life.

In ELT the concept of learning identity is based on the works of Carl Rogers and Paulo Freire. For both of these foundational scholars of experiential learning, people who see themselves as learners are those who trust their direct personal experiences and their ability to learn from them. Their primary focus is not on immediate performance or goal achievement but on the ongoing process of learning from these experiences. Instead of desiring some fixed goal they prefer the excitement of being in the process of potentialities being born.

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¹ An essay honoring the memory of our dear friend and colleague David Jusice appearing in Bamford-Rees et. al. (Eds.), *Learning never ends: Essays on adult learning inspired by the life and work of David O. Justice* Chicago, IL: CAEL Forum and News. We are grateful to Angela Passarelli and Garima Sharma for their thoughtful insights and contributions to this paper.

In his classic paper on how values are learned Carl Rogers, emphasizes the central role of experiencing in the learning process of the mature person: "He uses his experiencing as a direct referent to which he can turn in forming accurate conceptualizations and as a guide to his behavior." The process of learning values is, "fluid and flexible...highly differentiated...the locus of evaluation is within the person...There is also involved in this valuing process a letting oneself down into the immediacy of what one is experiencing, endeavoring to sense and to clarify all its complex meanings." (1964: 163-164) Echoing William James' radical empiricism he emphasizes that experiencing includes not only direct sensations and emotions but prior concepts: "For there is involved in the present moment of experiencing the memory traces of all the relevant learnings from the past. This moment has not only its immediate sensory impact, but it has meaning growing out of similar experiences in the past." (164)

He contrasts this approach of a mature learning person with fixed values formed through introjections acquired in youth in order to please loved ones: "These conceived preferences are either not related at all, or not clearly related, to his own process of experiencing. Often there is a wide discrepancy between the evidence supplied by his own experience and these conceived values. Because these conceptions are not open to testing in experience, he must hold them in a rigid and unchanging fashion." (162)

In a very different context, Paulo Freire also has emphasized the critical role that learning centered on one's own personal experience plays in forming a learning identity. In *Pedagogy of the Oppressed* he describes his literacy work with Brazilian peasant farmers helping to liberate them from a self-identity formed through internalized oppression, the incorporation and acceptance by individuals within an oppressed group of the prejudices against them—"So often do (the oppressed) hear that they are good for nothing, know nothing and are incapable of learning anything—that they are sick, lazy and unproductive—that in the end they become convinced of their own unfitness" (1970:49) His method for achieving the personal and social transformations necessary to escape this negative, fixed self-identity was to facilitate the creation of critical consciousness in these farmers through his version of the experiential learning cycle which he called *praxis*, "reflection and action on the world in order to transform it". In a definition echoing meta-cognition, Leistyna (2004) defines critical consciousness as presence of mind in the process of learning and knowing—the ability to analyze, pose problems and change the political and cultural realities that affect our lives.

Freire argues that traditional education also promotes a form of internalized oppression and a non-learning identity. It is based on a "banking concept" where all-knowing teachers deposit ideas in students' minds to be received uncritically, mechanically memorized and repeated. He offers the alternative of "problem-posing education" that empowers a learning self-identity. It is based on a democratic relationship between student and teacher that begins with the here and now experience of students' lives and encourages the praxis of critical reflection and action to improve their lives.

Fixed vs. Learning Identities

If there is a starting point for learning from experience it must be in the belief that I *can* learn and develop from my life experiences. In our many years of sharing results from the Kolb Learning Style Inventory with thousands of people, we have discovered to our surprise that not only do most people not understand their unique way of learning; many have not thought about what

learning is and themselves as learners. More people than we imagined do not think of themselves as learners at all and have what psychologist Carol Dweck calls a "fixed" view of themselves, in varying degrees believing that they are incapable of learning. At the extreme, if a person does not believe that they can learn they won't. Learning requires conscious attention, effort and "time on task". These activities are a waste of time to someone who does not believe that they have the ability to learn.

A story from our recent work with an experiential learning focused high school provides an example. A colleague at the school teaches remedial mathematics to freshmen and sophomore students. He was lamenting the fact that students were failing repeatedly to grasp the most elementary of mathematics concepts, and was frustrated that most never did any homework. He had just given a quiz that was an exact copy of the homework he had given the week before with the "heads-up" that the homework questions would be on the upcoming quiz. Still the majority of students failed. In desperation he asked the students what was going on. Why did they think that some students got better grades than others? Didn't they understand if they just did the homework they would get better grades? To his surprise he found that students didn't believe that they could learn by studying and that the reason that some students got good grades was because they were "smart".

Carol Dweck (Molden & Dweck 2006) has studied the "lay theories" that people have about themselves and others. In particular she and her colleagues have examined the differences between those who see their abilities and attributes as fixed and static and those who believe that they can incrementally learn and change themselves. Those individuals who believe that they can learn and develop have a learning identity. The learner faces a difficult challenge with a "mastery response" while the person with a fixed identity is more likely to withdraw or quit. Learners embrace challenge, persist in the face of obstacles, learn from criticism and are inspired by and learn from the success of others. The fixed identity person avoids challenge, gives up easily, avoids criticism and feels threatened by the success of others. Not surprisingly students with a learning identity, regardless of their tested intelligence, are more successful in school than those with a fixed identity.

Learning Relationships and Learning Identity

Like other aspects of self-identity, learning identity is strongly influenced by one's important relationships. Learning identity is determined not by past learning successes and failures alone but by the self attributions about these successes and failures that a person makes. These attributions are strongly influenced by important relationships. We have already seen Roger's description of the lasting power that introjected evaluations from loved ones can have. Evaluations from others can also influence learning identity, sometimes in unexpected and subtle ways. Dweck (2000) has shown that teachers who reward students for successful learning by praising them for being "smart" actually promote a fixed identity and less expenditure of study effort ("I don't need to study because I am smart."). Peers also play a role in shaping learning identity. One of our colleagues shared this story of one of her undergraduate students who was struggling to preserve her learning identity in the face of stigmatizing messages from her team members:

This student was working on a team project in my class that involved research and a team paper and presentation. She expressed frustration that once the other students in the team

found out that she was taking developmental English (the course that students have to take if they score below a certain cut score on the SAT), the team members micromanaged her writing. Prior to discovering this, each team member was 'equal' and after she brought it up, they spent more time scrutinizing her writing than other team members. Her learning identity was challenged in this team interaction. Her frustration was that she was trying to change the stigma of being one of 'those developmental English people'. "I want people to think I am a good student, a good team member, a good writer".. Her conclusion was that she would hide this fact from future classmates, so that she could change.

With Angela Passarelli we are currently conducting interviews with adult learners about their learning relationships and learning identity. At this point two interesting patterns are emerging. First, learning relationships that create a hospitable space for learning seem to promote learning identity. This learning space provides an optimal balance of support and challenge, reminding us of Vygotsky's concept of the proximal zone of development (1978) where the learner is supported in incremental learning by models that set challenging but achievable goals.

Another intriguing finding is that learning identity may be contagious in the sense that those who have a learning identity tend to create relationships that stimulate it in others and those with fixed identities also act in ways that pass on fixed views of others. For example, those with a fixed versus incremental view of themselves show greater stereotype endorsement, perceive greater out-group homogeneity, and show greater intergroup bias and more biased behavior toward out-group members. They are more susceptible to the fundamental attribution error—believing that others actions indicate the "kind" of person they are; underestimating the influence of situational factors on their behavior (Levy et. al. 2001). One of our respondents describes how this contagion may be passed on through generations:

In the introduction I mentioned my Father and the impact that his upbringing has had on my Learning Style. I can recall stories of my Father describing a childhood in which he was shown very little love and was repeatedly told he was stupid. He was told that he wouldn't understand things. To this day, my Grandmother still says to him that she will tell him [confidential things] when he is old enough to understand. He is 63 years old. As a child, I remember my Father's dislike for any kind of game. On the rare occasion when he would play, he got angry and frustrated if he didn't do well and often quit. I now know that my father developed a "fixed" self-concept around learning. He was told he was stupid and wouldn't understand and therefore, in his mind, he was and didn't. He also criticizes educated people, which I can now link to the fixed self-identity. This fixed self-concept has implications beyond his attitude towards games – it impacted my learning development. As a child, I often heard my father ask me "what were you thinking?" when I did something wrong. I believe that contributed to the lack of confidence I have with my decision-making.

Strategies for Developing a Learning Identity

It is possible to develop a learning identity. Research studies have shown that educational interventions can influence the development of a learning identity. Blackwell, Trzesniewski and Dweck found that eight 25 minute classes for 7th graders focused on the message that "learning changes the brain by forming new connections and that students are in charge of this process"

(2007:254) led to increased classroom motivation and reversed a decline in grades experienced by the control group. Similarly, Good, Aronson and Inzlicht (2003) found that an incremental learning intervention led to significant improvements in adolescents' achievement test scores and Aronson, Fried, and Good (2002) found that such teaching led to higher grades among college students.

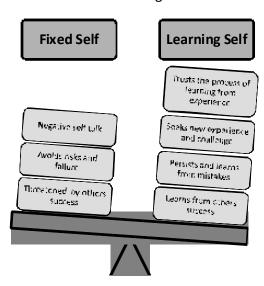
Another example in higher education has focused on the difficult problem of mathematics anxiety and the sense of inferiority many students feel when required to take remedial mathematics education. Hutt (2007) implemented an experiential "learning to learn" course focused on transforming students' math learning identity from one of anxious inferiority ("I don't do math") to one of confident self efficacy ("I can totally do math") as well as improving students' math learning performance in developmental mathematics courses. Results from this research showed that the experiential course content and the teachers' conscious attention to unconscious processes in the learning space, combined with the students' reflections on their learning experiences and self talk, had a positive impact on learning. Students' mathematics anxiety was reduced, with students in the course feeling safer, more confident and efficacious about themselves as learners. Students in the "learning to learn" course performed a letter grade better than controls in their developmental math course. Students' learning style preferences played an interesting role in the findings. Typically in mathematics courses, students with an abstract "thinking" learning style preference, which tends to match that of their instructor's teaching style, perform better than students with other learning styles. This learning style difference was erased for students in the experiential course where students of all learning style preferences earned better grades than controls. Hutt maintains that change from a fixed to learning self-identity requires a safe learning space characterized by unconditional positive regard (Rogers 1951) from the teacher. This space reduces defensive behavior and allows persons to experience themselves as learners in a new way.

Becoming a learner, someone who can say with confidence, "I am a learner" is not accomplished overnight. One's self-identity is deeply held and defended against experiences that contradict it. For the vast majority of us our self-identity is a mix of fixed and learning beliefs. We may feel that we are good at learning some things like sports and not good at others like mathematics. Dweck and her colleagues argue that lay theories are domain specific, e.g. one can believe that

intelligence is fixed and morality is learned (Levy, Plaks, Hong, Chiu, & Dweck 2001). Every success or failure can trigger a reassessment of one's learning ability.

Figure 1 depicts self-identity as balancing characteristics that reinforce a fixed self—negative self-talk, avoidance of risk and failure, and being threatened by the successes of others—and those that build a learning self—trusting one's ability to learn from experience, seeking new experiences and challenges,

FIGURE 1: Becoming a Learner



persistence, learning from mistakes and using other's success as a source of learning. To develop your learning identity we suggest below some ways to overcome your fixed self characteristics and improve your learning identity characteristics, thus tipping the balance toward becoming a learner.

Trust the process of learning from experience. For both Paulo Freire and Carl Rogers it is embracing the process of learning from experience that tips the balance from a fixed to a learning self-identity.

Trust your experience - Place experience at the center of your learning process, making it the focal point of your choices and decisions. This does not mean that you shouldn't learn from experts or the experience of others since this advice is also part of your experience. The key is to own your choice of what you learn and validate it in your experience. When you do this you take charge of your learning and your life. A female student shares how she learned to own her experience by proactively creating a learning space of her own:

"The first principle that would maximize my learning effectiveness is the ability and encouragement to make the learning space my own. By taking ownership of my own learning, I can incorporate the aspects that make me feel more participatory in my learning experience."

Trust the learning process - Avoid an excessive focus on the outcomes of immediate performance and focus instead on the longer term recursive process of learning by tracking your performance progress over time. Rarely is a single performance test a matter of life and death, and to treat it as such only reinforces a fixed identity. Every performance is an occasion for learning and improvement in future performances. Karla Sahl, CAEL 2008 Learner of the Year Award recipient, exemplifies a learner who is deeply committed to her learning process. She is described as "kind of woman who does not take "No" for an answer." For us, what makes her a remarkable learner is her courage to say "No" to short term gains and achievements and continue to create her own unique learning path toward achieving her long term learning goal. Her five-year journey from Waste Technician to Nuclear Plant operator is a clear testimony of her strong self identity as a learner.

Redefine your relationship to failure. No one likes to fail but failure is an inevitable part of doing something new. Thomas Edison provided a role model for the learning response to failure when he said "Failure is the most important ingredient for success." James Dyson, the inventor of the Dyson vacuum cleaner and founder of Dyson, Inc, sees Edison as a role model saying he, "achieved great success through repeated failure. His 10000 failures pale in comparison to his 1093 US patents. Each one of Edison's inventions, from the Dictaphone to the light bulb came from his inability to give up" (Yang 2008:28). Failures can also help focus your priorities and life path on your talents and strengths. In her commencement address to the 2008 graduates of Harvard University, J. K. Rowling described the low period in her life after graduation, which was marked by failure on every front, and talked about its benefits;

"...failure meant a stripping away of the inessential. I stopped pretending to myself that I was anything other than what I was, and began to direct my energy into finishing the only work that mattered to me. Had I succeeded at anything else, I might never have found the determination to succeed in the one arena where I believed I truly belonged. I was set

free because my greatest fear had been realized and I was still alive, and I still had a daughter whom I adored, and I had an old typewriter and a big idea." (Rowling 2008:56)

Control emotional responses to learn from failure. Failures, losses and mistakes provoke inevitable emotional responses. Yet it is important to learn to control emotional reactions that block learning and feed into a fixed identity. Golfers who slam their club and curse themselves and the game after a bad shot lose the opportunity to coolly analyze their mistake and plan for corrections on the next one. Another of our respondents, Carol, was a high level executive who attended our Master's Program. She recounted in her paper her visceral experience during a team building simulation exercise where she felt she had contributed to her team's disastrous performance. The Brushfire simulation required high stakes decision making in a very limited time period where failure to make right calls would result in death of some or all team members. Because she felt that she let the team down the experience provoked much reflection, and she decided to turn it into a learning opportunity and apply the acquired knowledge into a real high stake meeting few days later at work:

"The Bushfire simulation stirred two primary reactions: a basic hunger for understanding and recognition that my current position...occasionally requires analogous high-stakes decision-making in brief time period. How could I learn from this simulation and so be more effective in "real" ones? As chance would have it, the days immediately following the residency involved a high-pressure, rapidly developing situation at the office where organization leaders needed to consult and reach conclusions quickly. With the Bushfire simulation fresh in mind, I consciously waited and listened to the situations described and others' recommendations for action. In several instances my initial response was that we needed to gather more information before reaching a conclusion – even if time was short. In other moments during this situation I actually took the time to recognize my own emotional reactions (for example, to the need for quick responses) and then tamp them down. My goal was to consider options from a more analytical perspective. I wasn't always successful, but fortunately, one of the other participants in the discussion is overwhelmingly quantitative in orientation. I watched and tried to absorb as much as possible from the way he approached the issues at hand. Because of the complexity of the variables and individuals involved, we neither "burned" nor "escaped" this situation. But I felt my own contribution was enhanced by virtue of the lessons of the Bushfire simulation."

Risk losing. Winning is not everything and too great a focus on it can block learning. Joel Waitzkin in *The art of learning* provides a handbook of his meta-cognitive learning based on his process of becoming first a chess master and then a martial arts champion. He emphasizes the importance of losing in order to learn how to win:

"If a big strong guy comes into a martial arts studio and someone pushes him, he wants to resist and push the guy back to prove that he is a big strong guy. The problem is that he isn't learning anything by doing this. In order to grow, he needs to give up his current mindset. He needs to lose to win. The bruiser will need to get pushed around by little guys for a while, until he learns to use more than brawn. William Chen calls this *investment in loss*. Investment in loss is giving yourself to the learning process" (Waitzkin 2007: 107).

Reassess your beliefs about how you learn and what you are good at. It is important to consciously reflect on and choose how you define yourself as a learner. Often people are unaware of the way in which they characterize themselves and their abilities. Jim, one of respondents retells how he successfully freed himself from a fixed perception of self and embraced his new identity as a learner. Being primarily an active learner, he was hesitant about accepting a new position which required competency in abstract skills:

"This was a dream job for any true Assimilator, but not for a 40 year old Accommodator who started early in this new career with "negative self-talk". Fortunately for me though, I am able to positively embrace change and learned that I do have intellectual flexibility. So I was able to take this opportunity and instead of generating pain, I was able to generate a bounty of knowledge for myself."

Monitor the messages you send yourself. Pay attention to your self-talk. Saying to yourself, "I am stupid." or, "I am no good at ..." matters and reinforces a negative fixed identity; just as saying, "I can do this" reinforces a positive learning identity. Beware of internalized oppression. Some of these messages are introjections from others that you have swallowed without careful examination. A male respondent who realized his lack of self confidence was a result of growing up internalizing opinions and views of others decided to turn his learning identity around:

"I need a learning space where I can feel safe to express my opinions and I don't have to worry if they are not perfect enough. More specifically, I will accomplish this task by monitoring my self-talk while accessing the validity of the negative statements imposed by the circumstances or others thus limiting my internalized oppression. In addition, I will control my emotional reaction to perceived negative results to risk. Having accepted the ideology that failure is unappreciated success within results, I intend to let go of my toxic mindset."

Balance your success/failure accounts. Most of us remember our failures more vividly than our successes. For example, as teachers both of us tend to focus on the one or two negative remarks in our course ratings and ignore the praise and positive reactions. "Negative experiences have lasting negative effects *primarily* when they affect an individual's beliefs". (Blackwell, Trzesniewski, & Dweck 2007:259-260). Sometimes it is useful to make an inventory of learning strengths and successes to balance your accounts.

Seek positive learning relationships. Develop relationships that support the development of a positive learning identity and avoid those people and situations that make you feel bad about yourself and incapable of learning. One of the adult students we interviewed, Jennifer, describes how doing so can create positive learning identity contagion:

"What is important to me at this point in my life is I really try to align myself with people who will keep that dialogue going, expansive, limitless. If I start chatting with someone and everything is the worst-case scenario, I choose not to incorporate that person into my life. I'm just deliberate about that."

She gave the example of a recent job interview where she lost out to another candidate and chose who to share it with, "It's funny because I was very careful about who I told I was going through this interview process...But she was one of the people I did tell because I knew that she would always keep it in a very positive frame of mind...It was funny, then when I called her and told her I didn't get the posting, there was no drama. It was like 'I wonder what that was about?' And 'I don't know, what do you think that was about?' So then we kind of dissected that. And it made sense.

It was cool because with Rebecca when we dissected it, it was just okay, this is prepping. This is life. Is this what you really wanted? Helping you to get clear, versus some people would have been like 'oh my god, I'm so sorry. You must be so depressed'. And it just takes you down and stops your learning process and stops your forward advancement.

By sharing that with her and talking about it, keeping it in an optimistic frame of mind and laughing, it's like it started opening up all these other doors. Then two weeks later, this person sits next to me on the plane and gives me all that information that that job wasn't what it looked like on paper. And then when I get off the plane she taps me on the shoulder, and asks if I have a business card. You know 'I might know of people at WHO or at FOA in Rome or whatever. She said, keep in touch, you just never know. And that would have never happened. The conversation with Rebecca left it in a very positive frame. If I had gone the other route, then when I sat down next to that woman, I might have had a very different conversation. And she wouldn't have asked me for my business card and then in turn give me hers. I mean, I didn't ask. So that's for me the learning.

Summary

David Justice was, for us, an inspirational leader on the learning way. On the wall above his desk at home was a poster commemorating the founding of the US Department of Education that said: "LEARNING NEVER ENDS." This was his creed in life and his gift to future generations of learners.

References

- Aronson, J., Fried, C. B., & Good, C. (2002). Reducing stereotype threat and boosting academic achievement of African-American students: the role of conceptions of intelligence. *Journal of Experimental Social Psychology*. 38:113-125
- Blackwell, L. S., Trzesniewski, K. H. & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development.* 78(1):246-263
- Dweck, C. S. (2000). *Self-theories: Their role in motivation, personality and development.* Great Britain: Psychology Press, Taylor & Francis Group
- Freire, P. (1993). *The Pedagogy of the Oppressed*. N.Y.: Continuum Press.
- Flavell, J. H. (1979). Meta-cognition and cognitive monitoring. *American Psychologist*. 34(10): 906-911
- Good, C., Aronson, J. & Inzlicht, M. (2003). Improving adolescents' standardized test performance: An intervention to reduce the effects of stereotype threat. *Journal of Applied Developmental Psychology* 24:645-662
- Hutt, G. K. (2007). Experiential learning spaces: Hermetic transformational leadership for psychological safety, consciousness development and math anxiety related inferiority complex depotentiation. Ph. D. dissertation, Department of Organizational Behavior, Case Western Reserve University
- James, William (1890). The Principles of Psychology. 2 Volumes. NY: Henry Holt & Co.
- James, William (1912). Essays in Radical Empiricism. N. Y. & London: Longmans, Green and Co.
- Kolb, A. Y. & Kolb, D. A. (2009). The learning way: Méta-cognitive aspects of experiential learning. *Simulation and Gaming*.
- Kolb, David (1984). Experiential Learning: Experience as a Source of Learning and Development. Prentice-Hall, Inc.
- Kolb, D. A. (2007). *The Kolb learning style inventory—version 3.1: LSI workbook.* Boston, MA: Hay Learning Transformations
- Kolb, D. A., Boyatzis, R., & Mainemelis, C. (2001). Experiential learning theory: Previous research and new directions. In R. Sternberg and L. Zhang (Eds.) *Perspectives on cognitive learning, and thinking styles*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Leistyna, Pepi (1999). Presence of mind: Education and the politics of deception. Boulder, CO: Westview Press

Levy, S. R., Plaks, J. E., Hong, Y., Chiu, C. & Dweck, C. S. (2001). Static versus dynamic theories and the perception of groups: Different routes to different destinations. *Personality and Social Psychology Review*. 5(2):156-168

Molden, D. C. & Dweck, C. S. (2006). Finding "meaning" in Psychology: A lay theories approach to self-regulation, social perception and social development. *American Psychologist*. 61(3):192-203

Owings, R., Peterson, G., Bransford, J., Morris, C. & Stein, B. (1980). Spontaneous monitoring and regulation of learning: A comparison of successful and less successful fifth graders. *Journal of Educational Psychology.* 72:250-256

Rogers, C. R. (1951). *Client-centered therapy: Its current practice, implications and theory.*. London: Constable. ISBN 1-84119-840-4

Rogers, C. R. (1964). Toward a modern approach to values: The valuing process in the mature person. *Journal of Abnormal and Social Psychology*. 63(2): 160-167

Rowling, J. K. (2008). A stripping away of the inessential. *Harvard Magazine*. July-August 2008:55-56

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Edited by M. Cole, V. John-Steiner, S. Scribner and E. Souberman. Cambridge, MA: Harvard University Press.

Waitzkin, J. (2007). The art of learning: A journey in the pursuit of excellence. N.Y.: Free Press

Yang, J. (2008). My latest product launch was a failure. How do I move on? *Fortune* 7/7/2008:28