

FOUNDATIONS FOR LEARNER-CENTERED EDUCATION: A KNOWLEDGE BASE

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Learner-centered education has a long history of development. Two of the first educators to put emphasis on the learner were Confucius and Socrates (5th to 4th centuries B.C.). Over two millennia passed before seventeenth century Englishman John Locke introduced experiential education (the idea that one learns through experience). Another two hundred years passed before European educators Pestalozzi, Hegel, Herbart, and Froebel designed and popularized experience-based, learner-centered curricula.

A century later, nineteenth century educator Colonel Francis Parker brought this method to America. Twentieth century Russian sociologist Lev Vygotsky, Swiss psychologist Jean Piaget, and American philosopher and educator John Dewey shaped the existing learner-centered education into a program called constructivism. This article traces this development and examines the major contributions of each of these educators.

Learner-Centered Education:

A Definition*

The Citadel has for its conceptual framework Learner-Centered education. This is a fluid theoretical model which is subject to change, and, indeed, does continuously change as the faculty continues to redefine this term. The following statement was the basis for The Citadel's original concept of learner-centered education.

Learner-Centered Education is defined by McCombs and Whisler (1997, p.9) as: The perspective that couples a focus on individual learners (their heredity, experiences, perspectives, backgrounds, talents, interests, capacities, and needs) with a focus on learning (the best available knowledge about

learning and how it occurs and about teaching practices that are most effective in promoting the highest levels of motivation, learning, and achievement for all learners.)

This dual focus, then, informs and drives educational decision-making.

In this perspective, learner-centered education involves the learner and learning in the programs, policies, and teaching that support effective learning for all students. Administrators are responsible for developing, maintaining and enhancing a school environment that enhances effective learning. They are also responsible for ensuring that teachers are knowledgeable about their students and about how learning occurs best. Teachers are responsible for having classrooms that promote effective

tive learning for all and for being familiar with the instructional techniques that promote effective learning for all. School counselors are concerned with improving both the conditions for learning (parent education, classroom environment, teacher attitude) and with helping each learner develop to his/her fullest potential. The following five premises support these assertions.

1. Learners have distinctive perspectives or frames of reference, contributed to by their history, the environment, their interests and goals, their beliefs, their ways of thinking and the like. These must be attended to and respected if learners are to become more actively involved in the learning process and to ultimately become independent thinkers.
2. Learners have unique differences, including emotional states of mind, learning rates, learning styles, stages of development, abilities, talents, feelings of efficacy, and other needs. These must be taken into account if all learners are to learn more effectively and efficiently.
3. Learning is a process that occurs best when what is being learned is relevant and meaningful to the learner and when the learner is actively engaged in creating his or her own knowledge and understanding by connecting what is being learned with prior knowledge and experience.
4. Learning occurs best in an environment that contains positive interpersonal relationships and interactions and in which the learner feels appreciated, acknowledged, respected, and validated.
5. Learning is seen as a fundamentally natural process; learners are viewed as naturally curious and basically interested in learning about and mastering their world.
* Taken from The Citadel Undergraduate Catalog (2002-2003, p. 207)

Central emphasis and understanding emerge from an integrated and holistic examination of a learner-centered approach. For educational systems to serve the needs of every learner, it is essential that every instructional decision focuses on the individual learner – with an understanding of the learning process.

The history of learner-centered education has one foot in philosophy and the other in psychology. Following is a cursory review of some of the important contributions of educational philosophy to the development of learner-centered education followed by a review of some of the most important contributions of educational psychology. This section, titled "Philosophical Knowledge Base" will be followed by a similar section titled "Psychological Knowledge Base."

Philosophical Knowledge Base

Signs of learner-centered education began appearing with the dawning of education, and formal education can be traced back to the Sumerians and the development of written language (around 3500 B.C.). Within 500 years, the Chinese had also established formal schools. These early teachers emphasized individual character and citizenship.

Perhaps the earliest individual teachers to have a profound, direct effect on learner-centered education were the Chinese

philosopher Confucius (551 B.C.-479 B.C.) and the Greek philosopher Socrates (469-399 B.C.). Confucius stressed character and good citizenship, and Socrates stressed the individual. (His maxim was "Know thyself.") "Confucius believed that every person should strive for the continual development of *self* until excellence is achieved (Ozmon & Craver, 1999, p. 105).

Englishman Francis Bacon (1561-1626) introduced the scientific method as a way of thinking and learning, which was opposite to the way Aristotle had taught people to think. Bacon took exception with the Aristotelian method, which had dominated for almost two millennia and remained the popular method of the day. Aristotle began his thinking by making assumptions, and assumptions introduce thinking errors. Realizing that this convergent method was flawed, Bacon warned that if we begin our thinking with certainties, we end with questions, but if we begin with questions, we end with certainties. He insisted that we rid ourselves of four idols, which cloud our thinking. Bacon said that our thinking is limited by our lack of experience (Idol of the Den), by what others believe (Idol of the Tribes), by unclear language (Idol of the Market Place), and the by influence of religion and philosophies (Idol of the Theatre). To escape these errors, Bacon insisted that we use problem solving, which begins not with uncontested assumptions but with divergent or inductive thinking, considering all possibilities.

The earliest known formal teaching method was the tutorial method. For five thousand years, the tutorial method continued to dominate. Although English philosopher John Locke (1632-1704) rec-

ommended its use, he introduced the concept, *tabula rasa* or blank slate, proposing that at birth the mind is a blank slate, and the only way to fill it is through having experiences, feeling these experiences, and reflecting on them. Locke's experience-based educational philosophy gave birth to a concept called *experiential education*. In answering the question as to where the mind gets its understanding, Locke (See Garforth, 1964) in his work, An Essay Concerning Human Understanding, replied, 'To this I answer in one word, EXPERIENCE.' (1690, p. 42)

The Swiss-born philosopher Jean Jacques Rousseau (1712-1778) was one of history's greatest contradictions. With the birth of his own children, he gave away each child; yet, perhaps no one else has ever done so much to help children. In his adopted country, France, as perhaps was true universally at the time, children were seen as small adults. Even worse, they were treated so. Rousseau understood that such treatment was unnatural and damaging to children. After tutoring a boy named Emile, and Emile's sister (Sophie), Rousseau wrote a book titled Emile.

In his book Emile Rousseau recommended a type of education that at the time was unknown, an education that was natural, child-centered, and experience-based. His intent was to protect the children from a corrupting society and permit them to develop naturally. Emile was given the freedom to explore and interact with nature. When Emile behaved inappropriately, his punishment was administered by nature, not by his tutor. On one occasion, Emile broke out a window pane in his bedroom. Instead of giving him a whipping, which

was the common response to misbehavior, Rousseau ignored the event and let him experience the resulting cold wind and rain. Rousseau's book *Emile* quickly became, and has since remained, the most widely read education book of all times.

Influenced by Rousseau's writings, a European neighbor in Switzerland designed a learner-centered school. In Switzerland, Johann Pestalozzi (1746-1827) opened a school with a learner-centered curriculum. Pestalozzi believed that the *whole* child should be educated (physically, mentally, and emotionally), and that children should be *nourished* like a plant while they *learned by doing*. Pestalozzi believed that teachers must respect children and base their discipline on love. He said that the school should be like a good home and the teacher should be like a good parent. Pestalozzi's school succeeded educationally but failed financially. In Germany, Friedrich Froebel used the learner-centered, child-centered, experience-based ideas to develop the world's first kindergarten, a school for young children.

In the early nineteenth century, Thomas Jefferson (See Ikenberry, 1974, p.114) echoed concern for both society and the individual:

If a nation expects to be ignorant and free in a state of civilization, it expects what never was and never will be. There is no safe deposit for the functions of government but with the people themselves nor can they be safe without information. (Thomas Jefferson 1816)

But a half-century passed before American educators became serious over learner-centered education. At the end of the Civil War, a soldier and teacher named Colonel Francis Parker returned to his home state of New Hampshire where he first accepted some short-term political assignments and later, in 1865, accepted a principalship in Manchester. Three years later (1868), unhappy with the rote memorization that characterized schools at that time, Parker accepted a principalship in Dayton, Ohio, where he headed the first Normal School, giving demonstration lessons to help teachers learn how to use learner-centered methods. But Parker found Americans slow to embrace learner-centered education. Finding the climate rigid, he said that the residents of the area were attached like barnacles to the older methods. (Campbell, 1967)

Colonel Parker had heard about some Europeans who as long as a century earlier had begun implementing learner-centered education, including Pestalozzi (1746-1827), Hegel (1770-1831), Herbart (1776-1841), and Froebel (1782-1852). In 1872, Parker went to Berlin to pursue an academic degree; however, his main goal was to learn directly from the Europeans about their learner-centered education. When told that the courses he had chosen would not lead to a degree, his response (See Campbell, 1967, p.68) was, "But they do lead to the children of America."

In 1875 Parker accepted a superintendency position in Quincy, Massachusetts, where he gave model learner-centered lessons in all seven Quincy schools. He also held district-wide teachers' meetings where he demonstrated learner-centered

techniques to the teachers. By replacing drill with inquiry activities, Parker replaced memorization of facts with understanding. The school board was divided over support for the new reform. The New York Tribune (Editorial Our Schools, Jan. 1880) sent a reporter who credited the Quincy system with being the "starting point in the reorganization of the deplorable American system." But the criticism only increased the school's reputation. An estimated 30,000 people visited the Quincy schools between 1878 and 1880. (See Campbell, 1967, p. 99)

In 1880, the Boston School Board persuaded Parker to bring his "Quincy System" to the Boston schools. When asked to define this system, the committee said, "In a word it may be said regarding the whole system, the pupil is treated less like a machine, and more like a child."

In 1882, hearing of Parker's success with the Boston schools, a representative of the Cook County Normal School near Chicago asked him to take over the institution. He accepted, and by the 1890's he had worked out his theory of education, which he called the Theory of Concentration; "the leading point (in this theory) was that all effort should be centered on the child rather than on the subject matter." (See Parker, 1901, p.130)

In 1899 Parker's health was failing when he accepted the position as Head of the Chicago Institute, Academic and Pedagogic. In 1901, the ten year-old University of Chicago established a School of Education, acquired the normal school, and made Parker its first dean. John Dewey, who was head of the Department of Philosophy, Psychology, and Pedagogy,

would remain in this position. In 1900, Parker returned to New Hampshire and opened a new school the next year. Two years later, at age 65, Col. Frances Parker died.

John Dewey (1859-1952) used his very long life (92 years) to exert more influence on education and philosophy than any other American, before or since. Dewey was influenced by Locke's *tabula rasa*, Bacon's scientific method, Immanuel Kant's pragmatism (the idea that philosophy is only valuable if one can apply it), Charles Peirce's (1839-1914) insistence on the clarification of ideas and his belief that one's mental grasp of any idea depends on the unification of the idea in actual experience, and William James' (1842-1910) beliefs that truth is inseparable from experience and that experience, like life itself, is a stream of sequential events.

Dewey's works were made powerful because he recognized that each child has both a psychological dimension and a social dimension and to be effective, education must begin with understanding how the child's capacities, interests, and habits can be directed to help the child succeed in the community. In opposition to Rousseau, who wanted to protect children from society, Dewey (1897, Jan.) believed that the only way a child would develop to its potential was in a social setting. He believed that the school should be a microcosm of its community and that education is living, not just a preparation for life.

Dewey viewed life as a process of continuous renewal, a series of on-going experiments. At the University of Chicago, he created the nation's first laboratory school, whose curriculum was a series of

problem-solving activities. (See Campbell, 1967) Dewey's laboratory school became so popular that eventually every state had one or more laboratory schools. Unfortunately, to cut back on expenses, most of these highly successful learning communities have been eliminated and most of the approximately one hundred surviving laboratory schools have abolished the secondary grades. For a list of these schools and for further information about laboratory schools, see National Association of Laboratory Schools (1991).

Dewey's (1938, p. 97) view of learner-centered education embraced the idea that education should be both problem-based and fun, "Unless a given experience leads out into a field of previously unfamiliar no problems arise, while problems are the stimulus to thinking." On the surface, this comment, taken from his book Experience and Education, may appear to suggest that the curriculum should be highly sequential with all the content and experiences mapped out, but this would be a gross misinterpretation because Dewey believed that the experiences of each learner must come from within each individual learner. Dewey was saying that each experience should leave each student motivated and that the solving of each problem must lead to new, related questions about the topic. (Dewey, 1938, p. 48)

Another idea that enabled Dewey to advance the theory of learner-centered education was his recognition of what he called *collateral learning*, an idea that has since been labeled *confluent learning*. Confluent or collateral learning recognizes that the richest learning involves our emotions, and Dewey (1938, p. 48) considered this type of

learner-centered education the richest of all.

Collateral learning in the way of information of enduring attitudes, of likes and dislikes, may be and often is much more important than the spelling lessons or lesson in geography or history that is learned. For these attitudes are fundamentally what count in the future. The most important attitude that can be formed is the desire to go on learning.

Learner-centered education was advanced by the Progressive Education Association, which was formed in 1919. The Progressive Movement flourished until the United States entered World War II, in 1941. A massive evaluation of the learner-centered approach to education, known as the "Eight Year Study," was conducted from 1932 until 1940. The study found this approach equal or superior to traditional education in every way. Some of the advantages of learner-centered education over the traditional teacher-centered education included the students':

- attaining higher grades
- attaining more academic honors
- developing superior intellectual curiosity
- developing superior creativity
- developing superior drive
- developing superior leadership skills
- becoming more aware of world events
- developing more objectivity

Unfortunately, with the Russian's launching of Sputnik in October 1957, many critics blamed the "progressive" learner-centered education for letting

American schools fall behind in the space race, and these critics rallied for a return to the traditional basic education.

While all of the philosophers mentioned in the previous section focused on the learner, and some addressed conditions needed for learning to occur, these scholars were philosophers, and the role of philosophy is neither to prescribe or direct behavior but to effect thinking. Therefore, any serious discussion of learner-centered education must include an examination of the psychologists' views on learning and teaching. One might assume that to be considered a serious and legitimate theory of education, learner-centered education should have a psychological knowledge base to support it. Following is a brief glimpse of some of the psychological theory and understandings that support learner-centered education.

Learner-Centered Education: A Psychological Base

During the 20th century, several psychological developments influenced the development of learner-centered education. Paramount among these were the developments of perceptual psychology, constructivism, and dispositions. Following is a brief discussion of each.

The Role of Perception in Learner Centered Education

In the mid-twentieth century, a considerable amount of research and thought was given by psychologists to the effect that perception has on behavior and ultimately to the power that perception has to shape the kinds of people learners will become. In 1962, Arthur Combs (1962) edited the

yearbook of the Association for Supervision and Curriculum Development, titled *Perceiving, Behaving, Becoming*, which says that if students perceive themselves as good students and worthy individuals, they will work hard to protect these images; however, if they perceive themselves as poor students and people of little value, they will behave accordingly. Teachers have tremendous power to shape their students' behaviors and futures by the way they treat them. Interestingly, teachers usually are not very aware of how they treat their students. For example, Good and Brophy (1997, pp.90-91) list several ways that teachers unknowingly treat high and low achievers differently:

1. Waiting less time for lows to answer a question (before giving the answer or calling on someone else)
2. Giving lows answers or calling on someone else rather than trying to improve their responses by giving clues or repeating or rephrasing questions
3. Inappropriate reinforcement: rewarding inappropriate behavior or incorrect answers by lows
4. Criticizing lows more often for failure
5. Praising lows less often for success
6. Failing to give feedback to the public responses of lows
7. Generally paying less attention to lows or interacting with them less frequently
8. Calling on lows less often to respond to questions, or asking them only easier, nonanalytic questions
9. Seating lows farther away from the teacher
10. Demanding less from lows (e.g., teach

- less, gratuitous praise, excessive offers of help)
11. Interacting with lows more privately than publicly, and monitoring and structuring their activities more closely
 12. Differential administration or grading of tests or assignments, in which highs but not lows are given the benefit of the doubt in borderline cases
 13. Less friendly interactions with lows, including less smiling and fewer other nonverbal indicators of support
 14. Briefer and less informative feedback to questions of lows
 15. Less eye contact and other nonverbal communication of attention and responsiveness (forward lean, positive head nodding) in interaction with lows
 16. Less use of effective but time-consuming instructional methods with lows when time is limited
 17. Less acceptance and use of lows' ideas
 18. Exposing lows to an impoverished curriculum (overly limited and repetitive content, emphasis on factual recitation rather than on lesson-extending discussion, emphasis on drill and practice tasks rather than on application and higher-level tasks).

Combs (1962) and his colleagues explored the process by which young people grow up to be psychologically healthy and become the type of adults that they call adequate people. These perceptual psychologists say that a term that all teachers should know well is *efficacy* because highly successful teachers have a strong sense of efficacy toward their students and toward themselves; they believe that their

students are capable of succeeding at a high level and that they are capable of ensuring that they do. Learner-centered teachers can nurture the development of positive self-concepts by: (1) assigning problems that challenge students but are within their abilities, (2) encouraging them to succeed, and (3) recognizing their successes.

In this same book, (Combs 1962, p. 99) Combs' own mentor, Carl Rogers explains that "Self and personality emerge from experience." According to perceptual psychologists, learner-centered education is essential for healthy development. Combs' contemporary, Earl Kelly (1962, p. 118), says "The growing self must feel that it is involved, that it is really part of what is going on, that in some degree it is helping shape its own destiny, together with the destiny of all." These comments echo the very nature of learner-centered education, explaining the need to put the student in the center of learning and in an active role, and, furthermore, as Kelly indicated; when students are engaged in activities that nurture their development, they can even help shape the destiny of their classmates.

But to nurture positive self-development, the classroom must be relatively free of risks and fear. The competition that characterizes most classrooms must be replaced with cooperation. Becoming an adequate person addresses both of the two roles that John Dewey believed to be the most important goals for all schools: developing the individual and developing citizenship. Learner-centered education is an excellent means of achieving both goals, Combs said, (1962, p. 198) "Adequate persons usually possess a deep sense

of duty or responsibility and are likely to be democratic in the fullest sense of the word."

In his book Democracy and education, Dewey said that with each generation democracy must be reborn and that education is the mid-wife for this rebirthing. Clearly, like Thomas Jefferson, Dewey saw education as essential to maintain a democratic society. But, the relation between democracy and education is reciprocal and symbiotic; just as education is essential to having a democracy, democracy is a prerequisite to education.

Garrison (2003) said, Democracy functions to reconstruct and renew meaning as any society focused on merely transmitting the status quo will not...As education transmits society's values and institutions, democracy in action promotes the renewal of their meaning. (p. 527-528)

Constructivism: A New Look at Learner-Centered Education

Constructivism is a learner-centered educational theory that contends that to learn anything, each learner must construct his or her own understanding by tying new information to prior experiences. Constructivism has two sub-groups, one which focuses on the interaction among students, the other focusing on each student's perceptions.

A Focus on Social Interaction

During the early part of the twentieth century, a Russian psychologist and sociologist named Lev Vygotsky (1896-1934)

studied children's interactions. He saw that when students worked in small groups to solve problems, by discussing problems, the learners were able to talk each other through to the solutions, which is to say that by helping other group members, they collectively solved problems more efficiently than they could solve them when working alone. He called this social learning approach "negotiating meaning."

Vygotsky used a system, which now is known as cooperative learning, to encourage cooperation within each learning group. To receive a good mark on any task, the members had to successfully help their fellow group members understand and succeed at the task. This system is in sharp contrast to traditional education in this country in that it is not teacher-centered but is learner-centered; not passive but active and problem-centered; and is based, not on competition but on cooperation.

Because constructivists believe that individuals must construct their own knowledge, they believe that all knowledge is temporary (each concept is considered true until further experiences enable the learner to refine it). Because learners in constructivist classrooms use a problem-centered approach, content is studied not as isolated facts but as broad concepts and interdisciplinary themes.

A Focus on the Individual Learner

Another leading psychologist who contributed significantly to constructivism was the Swiss educator Jean Piaget. Born in 1896 (the same year that Vygotsky was born), Piaget focused his attention on the learner as an individual. While many may not think of him as a constructivist, his work consisted of giving his students (usu-

ally his own three children) problems to solve, not written problems but problems that encouraged them to manipulate concrete objects. He watched the ways they manipulated the objects and saw that each learner made assumptions and drew right or wrong conclusions about the objects. That Piaget was, indeed, a constructivist of the first order is reflected in the title of his book, *To Understand Is to Invent*. For further discussion on constructivism, see Henson 2004; Henson 2001; and Henson and Eller 1999.

Dispositions

The review of literature supporting learner-centered education suggests several important dispositions including: (1) education should be experience-based, (2) each individual learner's own unique qualities and dispositions should be considered when planning experiences, (3) the learner's perceptions should shape the curriculum, (4) learner's curiosity should be fed and nurtured, (5) learning is best when it involves the emotions, and (6) the learning environment should be free from fear. Following is a brief discussion of each of these dispositions.

Disposition #1 *Education should be experience-based.* John Locke believed that the only way an individual can learn is through experience. Lev Vygotsky believed that all learning involves tying new information to prior experiences. Bacon, Montessori, Rousseau, Froebel, and Piaget believed that the best experience occurs when learners are manipulating objects and solving problems. John Dewey is known for his

expression, "Learning by doing," an expression used a century earlier by John Locke.

Disposition #2 *Each individual learner's own unique qualities and dispositions should be considered when planning a curriculum.* Locke, (See Garforth, 1964, p. 167) believing that the planning of educational experiences should begin by focusing on the learner, "A good disposition should be talked into them before they be set upon anything." Locke recommended that teachers observe their students to learn their dispositions. By doing so, the curriculum can be personalized to meet each student's needs.

Disposition #3 *The learner's perceptions should shape the curriculum.* In his work titled *Conduct of Understanding*, Locke (See Garforth, 1964, p. 12) expressed the important role that perception plays in learning: "knowledge is seeing...till we ourselves see it with our own eyes and perceive it by our own understandings, we are so much in the dark and as void of knowledge as before." Learner-centered teachers must learn to view the curriculum through the learners' perceptions.

Disposition #4 *Learners' curiosity should be fed and nurtured.* Locke understood that curiosity is the engine that drives learning. He advised that teachers always answer students' questions and when doing so, listen not to the learners' words but to the learners' thoughts. Dewey (1938, pp. 47 & 49) clearly used learner activities to nurture learner curiosity. "In a certain sense

every experience should do something to prepare a person for later experiences of a deeper and more expensive quality...The most important attitude that can be formed is that of desire to go on learning." (p. 49)

Disposition #5 Learning is best when it involves emotions. As mentioned earlier, Dewey (1938, p. 49) wrote about "collateral learning," or learning that involves the emotions. "Perhaps the greatest of all pedagogical fallacies is the notion that a person learns only the particular thing he is studying at the time. Collateral learning in the way of formation of enduring attitudes, of likes and dislikes, may be and often is much more important than the spelling lesson or lesson in geography or history that is learned."

Abraham Maslow (1973, p. 159) gave an equally strong testimonial for emotionally tied learning, which he called intrinsic learning,

As I go back in my own life, I find my greatest education experience, the ones I value most in retrospect, were highly personal, highly subjective, very poignant combinations of the emotional and the cognitive. Some insight was accompanied by all sorts of autonomic nervous system fireworks that felt very good at the time and which left as a residue the insight that has remained with me forever.

Disposition #6 *The learning environment should be free from fear.* Locke (See Garforth, 1964, p. 13) cautioned teachers that "affection, not fear, is the incentive

that spurs children to their duty." Rousseau felt a need to protect children from society, which was not child-friendly. Pestalozzi thought teachers should be as good parents and schools as good homes. His commitment to removing fear from schools greatly influenced Froebel, Herbert, and Montessori.

Conclusion

Learner-Centered Education

A thorough review of the literature shows that learner-centered education has been developing for over five thousand years, and it continues to take on different shapes. Yet, many of the dispositions that are embedded in this education model tend to endure. The nature of all theory is to guide thinking; therefore, learner-centered education should guide teachers' thoughts, which will inevitably shape their behavior. Because the nature of all knowledge is fluid and temporary, responsible use of this model requires educators to commit to a life-long pursuit of improving their understanding of learner-centered education and of the broader processes called teaching and learning.

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Curriculum (CAC), Citadel 101, and The Writing and Learning Center) are dynamic organizations that continuously assess their progress toward support of learner-centered classrooms.

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TITLE: Foundations for Learner-Centered Education: A
Knowledge Base

SOURCE: Education 124 no1 Fall 2003

WN: 0328803481002

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