Knowledge Area Module 2

Principles of Human Development

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March 2006

Knowledge Area Module 2

Principles of Human Development

Breadth Component

SBSF 8210: Theories of Human Development

Abstract

The theme for the Breadth of KAM 2, Human Development, centers on the ideas of theorists as they refer to human development from birth to adulthood. The foundation of the Breadth section stems from a comparison of Freud's psychoanalytic theory and Erikson's psychosocial stages of development, combined with a critical analysis of theories by Bandura, Maslow, Gardener, and Piaget.

Knowledge Area Module 2

Principles of Human Development

Depth Component

EDUC 8221: Current Research in Human Exceptionality

Abstract

The theme for the Depth section of KAM 2 is adolescent impulsivity. Where does it come from? How can we teach our youth to manage it to get positive and not negative results? Synthesizing the theories of human development in an analysis of impulsivity will offer additional insight into where in the development process impulsivity is most prevalent.

Knowledge Area Module 2

Principles of Human Development

Application Component

EDUC 8231: Professional Practice and Human Exceptionality

Abstract

The Application of KAM 2 demonstrates the combination of the Breadth analysis of Human Development theories with the Depth theme, an investigation of impulsivity, specifically in teenagers. The results produced will report the outcomes of the decision making process when young people react too quickly, resulting in negative consequences. The report will be based on a case study completed in 2002, involving a group of high school resource students.

Copy of signed Learning Agreement Approval Form

I am writing to inform you that the learning agreement for KAM 2 has been received and approved by the OAA. Please save this email for your records. If you submit your final KAM as a hard copy, please print and attach this entire email as proof of an approved LA.

If you have any questions, please do not hesitate to contact me.

Regards,

Joel Edwards
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The Learning Agreement for KAM 2, Human Development, submitted by Marsha Swindler looks very good. Marsha has provided the required components of a Learning Agreement, including an overview of the KAM, adequate outlines of the Breadth, Depth, and Application components, including objectives, references, and a description of how she plans to meet the objectives. Her focus on the study of five theorists in human development is appropriate for the Breadth section. Her Depth plan to analyze adolescent impulsivity within the context of human development should be a very interesting and worthwhile focus. Marsha will annotate at least 15 articles or journals and, in addition, will write a 25-30 page Depth paper. Marsha's Application focusing on an analysis of a 2002 study which investigated impulsivity in teenagers in order to identify and analyze methods to assist teens in controlling impulsivity should also be very useful. Marsha will also describe how the application is connected to the theory and research related to human development. F. DiSilvestro 9/30/04

Student Self-Evaluation: Knowledge Area Modules (KAMs)

This area is intended for submitting the final version of your KAM Self-Evaluation form to your assessor(s), faculty mentor, and the Office of Student Records.

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KAM Number	2
KAM Title	Principles of Human Development

1. What knowledge/experience did you bring to this KAM? How did you capitalize/expand on this base?

Life experiences in multiple arenas provided a base of knowledge for KAM 2: Principles of Human Development:

- 21 years classroom experience with middle school and secondary students and educators
- Instructional Assistant with special needs high school students
- High school teacher of regular education and special needs students
- 5th grade teacher of inclusion and English as a second language students (ESL)
- Teacher of Confirmation classes for at risk students
- Mentor for two of my four brothers with special needs: inability to learn to read
- Counselor/instructor for religious medals for Boy Scouts of America
- Mother of two sons and a daughter (one diagnosed with ADD; one with ADHD)
- BA in Human Development
- MA in Education
- 37 years of marriage
- raised in a family with four brothers and two sisters

The wealth of knowledge from many years of life experiences coupled with formal education provided ample insight to ask the questions in human development areas needed for research.

2. Describe the quality of the **Breadth** section in the light of the intellectual and communication skills demonstrated in this KAM.

Knowledge is powerful as described in the Breadth section, based on the characteristics of classical human development theorists. The quality of the synthesized and integrated information provided in the well documented narrative reflects human development growth from birth to the inevitable, death. The essential nature of human growth and potential are captured in the summary, easy for the reader to understand and interpret from the comprehensive quality of the report.

3. In the **Depth** section, what key ideas/concepts most engaged your thinking and imagination relative to your area of study?

Brain research from the social scientific perspective develops faster than text can be published opening doors to explain why teenagers often react impulsively, using a Superman mantra for invincibility: nothing can harm me. The age group of adolescence is fragile, and the development from the protection of childhood to the responsibility of adulthood requires strong tenets from parents and positive peer influence. The connection of brain research to environmental influences from peers and adults produced fascinating phenomenon related to adolescent impulsivity.

4. Expound on the most meaningful theoretical construct studied and applied to your professional setting in the **Application** section. What can you do differently/better as a result of this KAM?

Multiple Intelligences, developed by Howard Gardner (1993), provides many clues to the mysteries of impulsivity in the adolescent age group. Individual potential for learning is not currently recognized outside two areas of intelligence commonly used in educational settings, that of linguistic and logical intelligence. Gardener's theory recognizes seven areas of intelligences to consider in developing curriculum for all levels of learners. As a result of the information gathered for the human development KAM, the realization that classroom curriculum can be adapted to reach all learners in the classroom developed. Using the Multiple Intelligences theory guidelines offers more opportunity for all learners to reach full learning potential, easily adaptable to current curricular practices. I can now better adapt curriculum to all levels of learners as a result of KAM 2 research. I can now better understand impulsive outbursts from adolescents by offering suggestions for alternative behavior.

5. Briefly describe the most important **Social Issue** covered in this KAM.

Mainstreaming special education students into regular education classrooms is an urgent social issue in education. A deeper understanding of adolescent impulsive actions and reactions provides answers for better possibilities to adapt regular education classrooms. Flexibility in the classrooms to accommodate all levels of learners is no longer an option, so the need to

understand why adolescents do what they do leads to more successful teaching and learning environments. Impulsive actions and reactions are natural experiences of the process in adolescent human development that all teenagers face. If adults are better prepared for how their children/students attempt to reach adulthood, impulsivity may not impede teaching and learning.

The Individuals with Disabilities Education Act (IDEA) (1965/2004) mandates the placement of special education students in the least restrictive environment creating a paradigm shift in special education student rights to a free and appropriate education. All students deserve the right to the best education opportunities, despite learning disabilities. A learning disability does not diminish the individuality of a human being capable of growth and potential development, albeit from an alternate style of learning. The enormous social issue facing educators is adapting curriculum to all students within the mainstream classroom environment.

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Introduction

Discoveries in brain research, emotional development, motivation, and informational processing of human beings from birth to death, offer proof as to what may cause individuals to do what they do. Of particular interest is where, when, or how the development of impulsivity in the process of human development takes place. The development of the various stages of life in the Breadth section opens a window to the reasoning behind impulsivity in human development. The often misunderstood age group of adolescence tends to place more value on peer influence than any other age group in human development. Peer influence leads to impulsive reactions. Considering the broad scope of human development, and then uncovering a narrower aspect, impulsive reactions, the Depth section will provide insight into a common flaw in teenage decision making skills. When impulsivity leads one into harms way, then control is lacking. Teenagers often tend to believe in the invincibility of the Superman complex: nothing can harm me. Where does this belief come from? Research in the Depth section sheds light to answer the question. The Application of KAM 2 is a demonstration of the intrinsic value of human beings, specifically teenagers' view of self worth, combined with the desire for control of impulsivity. A report on a 2002 study involving a group of Resource students demonstrates the need to protect self worth, yet at the same time set standards for acceptable conduct when impulsive urges arise, combining the theory with the research.

Knowledge Area Module 2: Principles of Human Development

SBSF 8210: Theories of Human Development

Breadth Component

Contents

Breadth Component

Search for Human Value

Human knowledge is finite in that we can only know *so much* about a topic from which to form opinions and draw inferences in search of creating value in life. There are factors regarding human development from beyond what we can see and know, but for this Knowledge Area Module (KAM), various perspectives on how, why, and when development takes place will be discussed and classified with examples from theories and philosophies examined in each perspective. Myron Dembo (1994), Robert Kegan (1983), John Santrock (1999), and Gail Sheehy (1977) are cited frequently, as each wrote a comprehensive perspective regarding human development encompassing many theories and philosophies. Work from Albert Bandura, Erik Erikson, Sigmund Freud, Howard Gardner, Abraham Maslow, and Jean Piaget is analyzed and synthesized, providing background and empirical evidence. Theories and philosophies developed in the field of human development provide guidance, in Kegan's (1983) words, "While any number of theorists and frameworks can be said to take an interest in the person . . ." (p.3), as human beings search for meaning throughout life.

Implications for Social Change

Curiosity, innate to human beings, propels the search for finding meaning throughout life. We want to know why human beings do what we do. Theories used as guidelines provide general observations that predict behavior, but theories cannot establish everything beyond all doubts. A theory can be modified or disproved by testing, as social scientists continue to demonstrate through learned experiences. As testing continues to disprove or modify a theory, the need for a new theory arises with implications for social change. Human beings need answers which become constructs for new ideas and new ways of thinking about past theories. With social change come new theories creating schema that enables testing and modification of

classical theories, building and improving a stronger, healthier society along the way (Hatch, 2002).

Learning, a human process for storing information, was the apex of life according to the early Greeks, Plato, and Aristotle. Thomas Aquinas, a great thinker and philosopher of his time who blended the teachings of Plato and Aristotle, "acquired a reputation as an influential intellectual" (O'Donnell, 1995, p. 88), and chose learning over family fortune and fame, so that truths could be revealed through his learning. He overcame his shyness and reluctance to public speaking as his love for the truth prevailed. As theories develop and evolve in the cycle of learning seeking truths, only to be tested, challenged, and redeveloped by social scientists seeking improvement, the process of human development continues to evolve and improve. Social scientists take a risk with acquired learning through the generating of social change, as Kegan (1983) states, "at helping us to see better what it is that people are doing, what the eye sees better the heart feels more deeply" (p. 16).

Overview of Theoretical Perspectives

In order for a life span to develop productively there must be a strong and stable, yet nurturing beginning that has the sustenance to carry individuals throughout a lifetime as theorists have taught. The Breadth component of KAM 2 examines contributions from theorists and how their ideas relate to human development across a lifespan. As individuals choose a path for the future using the tools provided by parents, guardians, and educators, ideas emerge as guidelines from the theorists. Gender, ethnicity, intelligence, and self-esteem are but a few of the influential factors imposed as human beings try to muddle through the obstacles in life in search of an individual identity (Santrock, 1999; Sheehy, 1977).

The adolescent generation in search of an individual identity attempts to close the gap between childhood and impending adulthood by looking to parents, guardians, and educators for guidance. According to Santrock (1999), imparting the proper and necessary guidance carries a tremendous weight of responsibility. What a generation thinks of itself is influenced by what transpires between the walls of classroom discussions, lecture halls, online courses, and simple conversational sessions occurring between the present and future generations. Parents, guardians, and educators must arm themselves with knowledge from the theorists in the field of human development as the fate of the future generation is indeed dictated by the way the youth are educated and trained. Nurturing efforts in the earlier years of the youth will yield a hundred fold in the golden years of the educators if the safety and security of the fledglings is imparted as foremost from the well trained informants. From Kegan's (1983) point of view, "A human being who before had so much to do with me that I imagined his vantage point on the world was the same as mine is now seen to have a perspective of his own" (p. 138). If the youth feel safe and secure in their earlier years, the reciprocal effect will transpire to the golden years of the caretakers and educators who so carefully train the youth.

The guidance of the younger generation in their quest for self actualization hinges upon empirical knowledge in human development. The knowledge is formulated through decades of social science research and taught through a variety of theories and philosophies from theorists such as Bandura, Erikson, Freud, Gardner, Maslow, and Piaget. In choosing an individual identity, the need to march to the beat of one's own drum is vital. Understanding that marching to the beat of one's own drummer marks individuality as Henry David Thoreau (1854/1995) writes, "If a man does not keep pace with his companions, perhaps it is because he hears a different drummer. Let him step to the music in which he hears, however measured or far away"

(p. 210). If a society dictates that strife and discontent are the only paths from which to choose, then teaching the youth of today to march to the beat of their own drummer by going against dissension and forging a safer path is essential. Using the knowledge from the theories of human development as a base, the education of the future generation is at hand.

Two Favored Theories: Freud and Erikson

The belief that future decisions are strongly affected by the earlier years of development stands as a common denominator in the area of human development. Theories by two psychoanalysts, Sigmund Freud (1933) and Erik Erikson (1950), are based on such a belief system. The ideas and concepts developed by Freud are used as the main psychoanalytic theory on which other theorists have based findings, according to Santrock (1999) as expressed in his life span development research. Recognizing Freud's contributions of the influence that parents have in the infancy stages of a child, Erikson's theories were developed in contrast to Freud's theories. Heavily rooted in the belief that lifelong characteristics are formed from influences reliant upon the early development stages of life, Erikson's and Freud's ideas continue to affect newly developed theories of thought, whether conscious or unconscious.

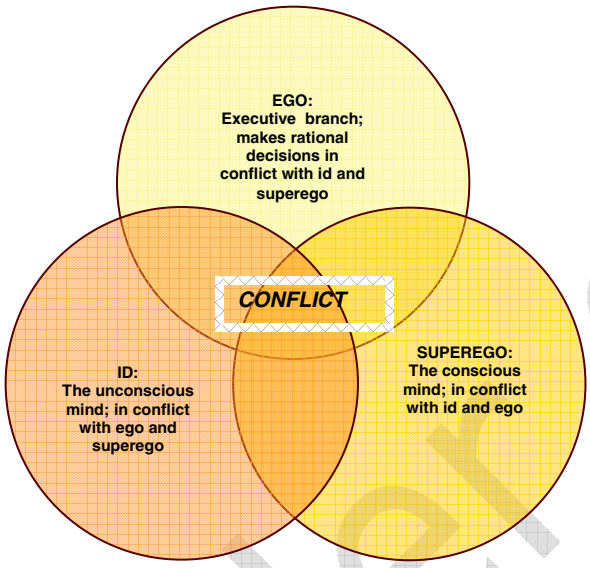
The importance of unconscious thought is stressed in psychoanalytic theories. A medical doctor who specialized in neurology, Freud studied mental patients, but was willing to use his own human experiences as examples of what had been considered *normal* or *abnormal* tendencies in the history of psychiatry at the time. He investigated dreams and how the significance of dreams link conscious and unconscious thoughts, as Jung (1939/1966) comments, "that anyone should have dared to investigate dreams at all" (pp. 44-45). Previous to and as a result of Freud's studies authors, poets, playwrights, storytellers, and philosophers allude to

connections between the conscious and unconscious mind in their works (Kilpatrick, 1992; Santrock, 1999).

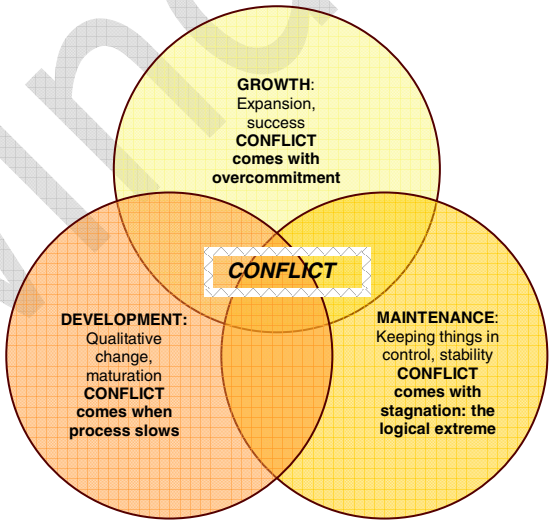
Freud was not the first and will certainly not be the last to study the conscious and the unconscious mind, but he is considered one of the first in his field to write the results of his studies, causing controversy along the way. Robert Coles (1997) tells us that it is Freud who first bravely provided, "formulations that very much illuminate how we think and act, how we manage with one another from childhood through our grown up life, and, not least, the nature of our sexual lives" (Introduction, p. *x*). The significance of Freud's work is widespread in the field of psychoanalysis.

Freud also believed there are three components of human personality. In Freud's view the *id* is totally unconscious, the *ego* is called the executive branch of personality because it makes rational decisions, and the *superego* is what often is referred to as the conscious mind. Freud's three components of personality, the id, ego, and superego all interact, sometimes in conflict with each other to develop more complexity in human beings (Freud, 1933).

As the complexity of human development takes place in stages, the ability to balance and control decisions, with restraints when necessary, also develops through stages of conflicts that take place within each human being. Freud's developmental theory consists of five psychosexual stages: oral, anal, phallic, latency, and genital, as described by Lucy Freeman (1980). At the core of human development there is a constant struggle within each stage to arrive at an acceptable place of human expression. Freud described the existence of conflict and complexity in his theory.



Erik Erikson (1950), in recognition of the conflict and complexity of humans, learned from Freud, and developed a theory consisting of eight psychosocial stages. Erikson, a child analyst who came to psychology through art (p. 13), emphasizes developmental changes throughout the human life span, whereas Freud argued that our basic personality is shaped in the first five years of life. Erickson's eight psychosocial stages of development came about in contrast to Freud's five psychosexual stages. Centering on conflict, Erickson's stages do not indicate that something is wrong, but indicate that something needs to be learned. "If we don't change, we don't grow. If we don't grow, we aren't really living," as Gail Sheehy (1977) tells us in her first book on adult development.



Considering that anything living needs growth, development, and maintenance, at times all three may be in conflict with each other. The interaction of all three exists with conflict at the heart. As conflict emerges within a stage, a natural evolution of learned experiences involving dissonance occurs. The conflict is resolved as the learned experiences are acquired and applied, propelling human development forward into the next stage of development.

Erikson describes the eight stages of conflict as challenges or crises that emerge sequentially and are generally age related. Each stage builds on a foundation of wisdom that leads to old age with positive resolutions. The movement toward the meaning of life is the ultimate goal for which humanity is searching throughout development, despite the controversy that Erikson's theory is flawed (Kegan, 1983, p. 87).

The psychosocial theory, according to Erikson's critics, represents a masculine model. By ignoring the feminine model, an aspect of humanity is ignored, according to the Carl Jung philosophy (as cited in Boeree, 1997). Jung (1939/1966) who collaborated with Freud early in his career stated that within each human being, male or female, is a masculine and a feminine drive, setting a distinction between the terms male/masculine and female/feminine. Male and female are terms used in reference to gender, but masculine and feminine are terms dictated by societal based standards towards certain tendencies. In the first half of life, dominant attitudes may surface as aggressive: masculine, or submissive: feminine. As the journey through the second half of life progresses, the less dominant attitude may be explored. Some women are as aggressive as any man and some men are sensitive, even more flexible than any woman.

Recognizing that an androgynous nature of humankind exists (Jung, 1939/1966; Sheehy, 1977) and is ignored in the psychosocial theory does not indicate that Erickson was incorrect, but simply incomplete, leading to a unique understanding about theories. Each theory has a part of

the truth, but not in its entirety, thus conflict exists even between similar theories such as the two developed by Freud and Erikson.

Freud and Erikson both suggest the strong influence that parents have on their children, and Erikson recognized the importance of the influence that parents have in the infancy of a child, theorized first by Freud. Parental guidance shapes the lives of their children. To develop properly infants require thorough nurturing and care, day and night, with their needs a priority. If raised in a caring loving environment in infancy, Freud's and Erikson's theories indicate that human beings are equipped to make meaning of life with skills so well developed that the instinct to do what is right requires very little thought, as if unconscious or innate. Well developed natural instincts compare to Kegan's (1983) description of sorting meaning out of life, "But so many of the eliciting situations seem to harken back to exigencies of this basic life motion, the activity of meaning and threat of not meaning" (p. 19). Skills to distinguish between what is meaningful and what may propose a threat in life are second nature if an early nurturing environment is provided.

Erikson (1950) developed eight psychosocial stages of personality. Based on his studies of healthy individuals, the most critical developmental period, the orientation stage of development, occurring between eight and eighteen months, states that infants view the world as either friend or foe. If boundaries are set early enough, the feeling of friend will develop and the attitudes toward life will be hopeful. Freud explained that the trust we experience from our mother in infancy sets the stage for a lifelong expectation that the world will be a good and pleasant place to be (Freeman, 1980, p. 120). As a person gets older, the established orientation stage grows stronger, and trust is strengthened. If trust is not established in the early stages of life, lifelong anxiety regarding trust issues will follow (Erikson, 1950; Freud, 1933).

The developmental crisis of trust is furthered defined in Erikson's first psychosocial stage: Trust vs. Mistrust and can remain an ongoing issue throughout life, not always resolved in the first eighteen months. Erikson and Freud's theories originally stated that one could never totally trust if raised in a mistrusting family situation. A loophole in the theories indicates that trust issues can be resolved. When hope and faith balance the negative crisis of mistrust and an established positive goal of trust in human development is ascertained, trust is established and the crisis stage is over. "A person's life depends (literally, in the first few years of life, and in every other way in all the years that follow) on whether he or she moves someone . . ." (Kegan, 1983, p. 17) to trust.

At Erikson's second stage: Autonomy vs. Shame and Doubt, the approximate age of the initial crisis is eighteen months to three years. Developing an independent sense and a willingness to take chances during what is often referred to as the terrible twos; toddlers follow a pathway to autonomy. Emotional support is instrumental in the dependency stage, but if a toddler becomes counter dependent due to mistrust as in the case of abandonment, the toddler is blocked from developing independence. If a disability surfaces, self doubt often emerges into the development process of the school age child (Gardner, 1993). Students who struggle academically or emotionally express self doubt until the negative crisis successfully balances with the positive goal of independence, establishing autonomy.

Accomplishing goals one at a time sets a successful premise for stage three: Initiative vs. Guilt. Reaching positive goals with curiosity at the approximate age of three to six years counters the negative crisis. Boys tend to take initiative first with mother figures and girls with father figures (Erikson, 1950; Freud, 1933), where the *bright ideas* of the toddlers are praised without bad feelings or guilt imposed. Erikson's first three stages are encountered before any

formal school training transpires and are foundational to what happens in future classroom settings (Dembo, 1994; Hatch, 2002).

Erikson's stage four: Industry vs. Inferiority beckons at the start of formal school age. Once competence is established in the school environment starting around age six all the way to age 23 or older, with inferiority complex issues resolved, the next stage is approached. If an individual is stuck in any stage, delays in development to the next stage can occur (Dembo, 1994; Santrock, 1999). Conflicts will exist and are a necessary step for growth in each stage (Erikson, 1950) and should not be confused with delays in development. A link may exist to an unsuccessful journey through Erikson's stages of development with ties to impulsivity and poor decision making skills in teenagers. More explanation to the possibility will follow in the Depth section.

At the approximate age of twelve to thirty, stage five: Identity vs. Identity Confusion, when self worth and responsibility become established, the positive goal balances the developmental crisis. Searching for individual identity in life begins somewhere during the late adolescent years. If trust has not been established from the infancy stage, then it comes as no surprise that teenagers struggle with finding an identity, often confused with unresolved issues stemming from crises in earlier stages of development. If the life necessity of trust is established in the earlier stages of development, then the identity search becomes less of a threat (Sheehy, 1977). In the first half of stage five an external desire to belong to a group exists. The second half shifts from the need to belong to a group to feeling alone, as an internal desire to become individual surfaces, causing confusion and a developmental crisis. Kegan's (1983) viewpoint is similar, "All developmental transitions are about a new form of 'ego autonomy'; all problematic

or arrested transitions threaten that autonomy" (p. 155). The trial and error of self worth begins and authority figures are often confused as the enemy (Dembo, 1994; Santrock, 1999).

In Erikson's stage six: Intimacy vs. Isolation, the search for a positive balance of love to overcome the crisis of the stage is the dominant factor, anywhere from the age of 24 to 35. Young adulthood is filled with the vulnerability of friendships and love which can often times lead to the crisis of the stage, loneliness (Dembo, 1994; Santrock, 1999; Sheehy, 1977). As relationships evolve, lessons are learned and the crisis subsides, leading into the next to the last stage. At stage seven: Generativity vs. Self Absorption, from age 35 to 65, the positive balance of purpose and concern to counterbalance the crisis of the stage is the goal. The narrow focus of parenting responsibilities shifts to a whole world perspective, with a concern for the next generation. If at this stage self absorption creeps in, stagnation takes over and the negative aspect of the stage takes over, blocking the natural progression to the last stage.

Once a wider lens focuses on others for a productive future, generativity is accomplished, leaving the last of the eight stages of crises: Integrity vs. Despair. Challenges and supports for the 65 and older generation becomes a teeter totter of wisdom filled with laughter to summarize the life cycle, accepting death. If despair sets in from a longing for what went wrong in life, but knowing that it is too late to fix it, the crisis of the stage blocks the wisdom of old age from flourishing. Reaching the balance of wisdom and meaning in life indicates that a strong healthy ego is established and that human development needs are met (Erikson, 1950; Freud, 1933; Kegan 1983).

Erikson's theory contends that we continue to develop after the age of 18 and is in direct contrast to Freud's last stage, the genital stage, which according to Freud continues on from puberty. "In basing his view of male/female differences in personality development on

anatomical differences, Freud ignored the enormous impact of culture and experience in determining the personalities of the male and female" (Cloninger, 1996; Nolen-Hoeksema, 1998; from Santrock 1999, p. 35). The experiences one gains in life in middle and late adulthood are described as being useful in Erikson's seventh and eighth psychosocial stages, thus carrying Freud's last psychosexual stage on to another level. Through work generativity, adults develop skills that are passed down to others, supporting Erikson's last psychosocial stage, assisting future generations. In assisting future generations, adults pave the way for their own comfortable golden year experiences.

Sigmund Freud and Erik Erikson, experts in psychoanalytic theories, each developed their own theories, which are continuously used in helping human beings to better understand themselves, each other, and how to work with other human beings. Through Erikson's theory, stability rather than confusion resonates, opposite of the confusion that Freud's theory often generates, leaving something for human beings on which to hang positive aspirations. Jung (1955/1961) supports the search of humankind to better themselves, "But those who have a higher conception of education will prize most the method of cultivating a tree so that it fulfills to perfection its own natural conditions of growth" (p. 197). Although there are many expert theories to study, not everything in human nature can be defined and explained, leaving room for prophecies of doom and gloom to cloud the human development search for meaning as challenges arise throughout the journey of life. "We yield too much to the ridiculous fear that we are at bottom quite impossible beings . . ." (Jung, 1961, p. 197).

Challenge and Support: Maslow

In the search for value and meaning in life as human beings develop, adults are able to generate challenge and support systems on their own as independence from other human beings

grows. In the early stages of human development and throughout childhood, challenge and support must come from outside sources as the skills to challenge and support have not yet been developed or acquired (Dembo, 1994; Santrock, 1999). Finding balance to create and establish challenge and support systems that protect the intrinsic goodness of humanity rests upon the caretakers during the first third of human life. Nevitt Sanford (1970), a noted psychologist in search of a path for growth and maturity, explored the idea that an unbalanced journey exists between the two. If there is too much challenge and not enough support, anxiety, worry, depression, or despair can result, creating a burnout in the development process, similar to the conflict/crises stages from theories developed by Erikson (1950) and Freud (1933). However, if there is too much support and not enough challenge, then a generation of slackers is created, not prepared to take on the responsibility of adulthood.

Conceptualizing human development as how someone thinks and feels, where joy and pain are experienced, the developmental process will zigzag until meaning and value in life is found (Dembo, 1994; Santrock, 1999). The degree of challenge is not always in balance with the degree of support, allowing negativity to surface. Perhaps teenagers who allow impulsive reactions to control decision making are not challenged enough by their caretakers, stalling the developmental process with negative results from poor decisions. As Kegan (1983) states, "Now the culture (family, school, friends) begins to make it known that it expects the adolescent to be able to take other people's feeling into account even when the adolescent is considering himself or herself . . ." (p. 168). The Depth section will delve into further discussion regarding teenage impulsivity.

Rather than accentuating the negative aspects of human development, as interpretations of Freud's (1933) theory dictated, Abraham Maslow (1968) found reason to believe in a positive

humanistic approach to the developmental process. "To oversimplify the matter somewhat, it is as if Freud supplied to us the sick half of psychology and we must now fill it out with the healthy half" (Maslow, 1968, p. 5). Following the concept that human beings are essentially good, he developed a philosophy to support positivism, opposite of the bleak picture that occasionally surfaces with doomsday prophecies that offer negative connotations. Claims that humanity is headed for self destruction provides something on which to cling, albeit negative, offering more stability than confusion. Maslow offered more than negative stability to dispel some of the confusion surrounding Freud's theories with a healthier, positive approach to the aspects of development. Human needs throughout development, defined and categorized by Maslow, became the focus of his studies.

Maslow spearheaded a belief that centers on encouragement regarding the goodness in human beings. Balancing the Freudian picture of the sickness in human nature with the healthier aspects of development will give "more possibilities for controlling and improving our lives making ourselves better people" (p. 4). Interestingly, Maslow (1968) took the idea and created his now famous Hierarchy of Needs by studying a small group of highly successful individuals. Beyond the basics of air, water, food, and sex, he defined five distinct layers of needs for healthy development: physiological, safety and security, love and belonging, esteem, and self actualization, in that order. In the study, he admits that his idea is not expected to solve all of the problems of human development, but is merely a beginning from which other scientists can build and continue to learn.

Similarities to Maslow's hierarchy of needs are found in the writings of Thoreau (1854/1995), "The necessaries of life for man in this climate may, accurately enough, be distributed under the several heads of Food, Shelter, Clothing, and Fuel; for not until we have secured these are we prepared to entertain the true problems of life with freedom and a prospect of success" (p. 7). Controversy surrounds new ideas as it was with Thoreau and his ideas, and so, too, with Maslow; previously seen with the theories of Erikson (1950) and Freud (1933). The development of a philosophical premise by Maslow brought controversy to his work in that biology was the main area of his concentrated study.

Using his background in biology, Maslow (1968) compared human needs to homeostasis, a balance within the systems of the human body to maintain health. The first four needs in his study: psychological, safety, social, and esteem, he calls deficit needs and defines *deficit needs*, or *D-needs* as "D-cognition (D= deficiency-need-motivation)" (Maslow, 1968, p. 116), the balance of needs required for healthy development. If the deficit needs have been met they are no longer essential for survival. As soon as the D-needs are satisfied, human development can progress to the next level of need, that of self actualization, a *being need,* or *B- need* "B-cognition (B=being)" (Maslow, 1968, p. 116).

For example, if there are unsatisfied D-needs like hunger, thirst, shelter, safety, or protection, then the path to developing being needs, or B-need is blocked. As soon as the lower needs are satisfied, the development of individual full potential, that of self actualization, can be pursued. Maslow's theory of self actualization supports the ideas of other theorists like Erikson (1950) and Freud (1933) who use the conflict/crises stages of human development.

Coinciding with Erikson's crisis theory and Freud's conflict theory, Maslow's philosophy states that although the search for fulfillment of human needs can sometimes cause grief and pain, the productivity of self actualization will grow once the basic needs are satisfied (Maslow, 1968). A necessary step for growth according to Freud, Erikson, and Maslow, is the experience of the painful transitions of the crisis/conflict, challenge/support, and need/fulfillment stages. Learning comes from mistakes, so constant protection from mistakes may stifle the future development of an individual. Finding balance between the stages will develop individual understanding so that the knowledge of when to allow or delay impulses is learned and developed as a skill. More detail will be provided in the Depth section regarding adolescent impulsivity and the need for teaching understanding, management, and balance without the fear or need for parental protection and intervention.

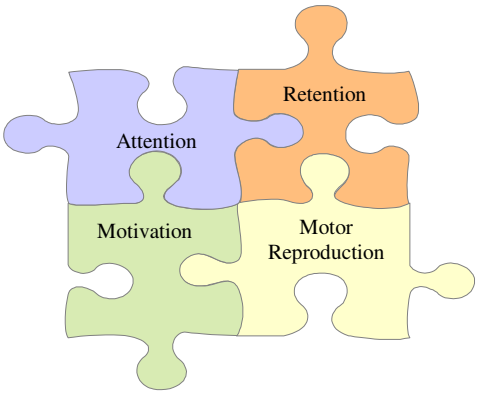
Cognitive Development Overview

Throughout the process of human development guidance is needed in the search for value and meaning in life. How human beings process information often comes into question during the search. The term cognitive, defined in the Merriam-Webster's dictionary (2003) as "the conscious intellectual activity of thinking, reasoning, or remembering" (p. 240), aids in the ability to understand the development of information processing in human beings. If cognitive functions are misunderstood or misinterpreted, management and balance as related to human

decision making skills may become confused, resulting in negative outcomes. A reasonable explanation to impulsive decision making requires background information developed by theorists concerning cognitive development. Albert Bandura (1977), Howard Gardner (1993), and Jean Piaget (1965) studied cognitive development, examined theories by Erikson (1950), Freud (1933), and Maslow (1968), and then devised new theories to support a better understanding of cognitive human development.

Social Cognitive Theory: Bandura

Armed with the vicarious experiences of his youth, a young Albert Bandura disagreed with the focus of a study that followed the Freudian learning theory (1933) promoting the trial and error process of performing tasks and suffering the consequences (as cited in Pajares, 2004). According to his predecessors Erikson (1950) and Freud (1933), the classical learning theory required overt action completed in step by step stages of development. Bandura (1977) believed that through observation of others, modeling can have as much of an impact as direct experience and is unrelated to the stage development process. Using the cognitive function of memory coupled with vicarious experiences, Bandura states, "The highest level of observational learning is achieved by first organizing and rehearsing the modeled behavior symbolically, and then enacting it overtly" (p. 27).



Following definitive testing, Bandura discovered that the processes of attention, retention, motor reproduction, and motivation work together in conjunction with the environment enabling learning to take place. Social Learning Theory, as it was first named (Bandura, 1977, p. 24) was later renamed Social Cognitive Theory in 1986 as the original label "had become increasingly misleading because it applied to several theories founded on dissimilar tenets" (as cited in Pajares, 2004). Bandura began his studies of human socialization at Stanford University in 1953 where he continues to study the interaction of environment in regards to human development, also studied by Erikson (1950) and Piaget (1965).

Using the power of example as a premise, Bandura's (1977) theory discusses the use of symbols as tools for communication, as "humans don't just respond to stimuli, they interpret them" (p. 59). By storing events in visual images and verbal codes, the learner often acts out a fantasy in the mind to reinforce the observation, remembering the event for future use. By symbolizing experiences and observations, human beings give meaning and structure to their lives, using the learned experiences to balance challenge and support for further growth in the development process (Bandura, 1977; Sanford, 1970). Whether the modeled event is interpreted as a positive or negative is unbeknownst, leaving the Social Cognitive Theory vulnerable to criticism.

Despite the criticism, Bandura (1977) continues to recognize the need for more study in the area of symbolism and as it relates to self efficacy when he stated, "Our theories of psychology should adapt to the new realities . . . We have a vast new world of images brought into our sitting rooms electronically" (as cited in Pajares, 2004). The nature of education is also changing with the advancement of technological images recognized by Bandura when he stated,

> Educational practices should be gauged not only by the skills and knowledge they impart for present use but also by what they do to children's beliefs about their capabilities, which affects how they approach the future. Students who develop a strong sense of self-efficacy are well equipped to educate themselves when they have to rely on their own initiative. (As cited in Pajares, 2004)

Environment, Cognition, and Children: Piaget

Recognizing that the environment is changing not only in homes, but also in schools, supports Bandura's (1977) past and current work, and interestingly relates to a developmental perspective studied by Jean Piaget (1965), based on how cognitive development in children is affected by the environment. Piaget was one of the first to recognize that the antics of children were not just cute, but a source of information to be studied and recorded. Einstein called it a discovery "so simple that only a genius could think of it" (cited in Papert, 1999); "a genius who exceeded himself and found more than he was looking for" (Kegan, 1982, p. 26).

The first intelligence test, a conjoined effort by Alfred Binet and Theophile Simon (Santrock, 1999, p. 156) recorded the correct answers in a laboratory study conducted in Paris in 1904. Piaget (1965) worked on the project, but found another use for the answers by studying the incorrect responses given by the children in the study. He reasoned that a true/false answer did not fully capture what was behind the thinking that went into the answer; it was based on the limited knowledge accumulated by the child. Adult standards dictated a specific answer, but from the child's way of knowing, although contradictory, the response was reasonable.

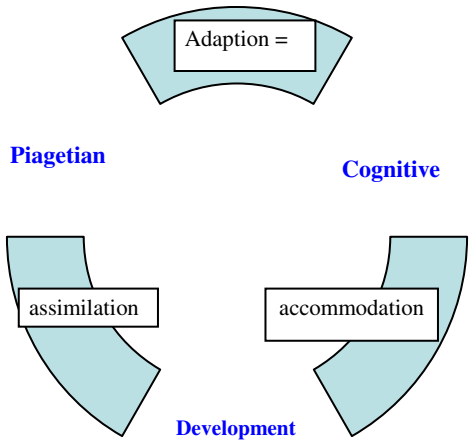
Earlier studies in Paris along with observations and recordings from the development of his own three children in Switzerland led Piaget to believe that children do not process information in the same manner as adults. Openly admitting that he was not an educator, Piaget (1965) stressed, "Children have a real understanding only of that which they invent themselves, and each time that we try to teach them something too quickly, we keep them from reinventing it themselves" (cited in Papert, 1999). The availability of Piaget's work did not reach the United States until the 1960's, despite the development of his work in the 1920's, due to insufficient availability of the translations.

According to Piaget's (1965) theory of cognitive development, children change with age, evolving and growing through stages. Bandura (1977), Erikson (1950), and Freud (1933) also promoted stage development theories, sharing similarities with the crises aspect, as Piaget espoused with his theory. Passing through the stages of thinking from infancy to adolescence requires the ability to adapt to the environment (Santrock, 1999), through what Piaget (1965) described as assimilation and accommodation, "A child's thinking process gradually shifts from concrete to abstract intellectual functioning" (Dembo, 1994, p. 354).

In regards to Piaget's theory, the brain functions in a specific way to process environmental experiences. The organizational function of the brain operates in a three stage information processing model to create schema, the internal knowledge structure. As new information is assimilated from the environment into the existing structure of the brain, the schema, it is compared to the old information that has been previously stored. The sensory registry process (Santrock, 1999) of the brain in the first stage, the *input* stage, picks up everything from seeing, hearing, feeling, smelling, and tasting external stimuli. New information links to old information as the human process of storing information develops the process of

learning (Dembo, 1994). In one to four seconds the new input of information created from external stimuli may decay or reach the second stage, *short term memory (STM),* if interesting or important. STM storage lasts close to 20 seconds depending on repetition and continuity using patterns. By chunking information in patterns, the brain then transfers STM of information from external stimuli into the third and final stage, *long term memory (LTM)*. The unlimited capacity of LTM, storage for long term use, is created by linkage of old and new information from external stimuli through the environment (Piaget, 1965).

All organisms must adapt to the environment, especially human beings, so by taking it all in, the assimilation process, and then using it, the accommodation process, the human organism adapts, thus progressing to higher levels of thinking skills: abstract reasoning (Dembo, 1994; Santrock, 1999). The sequence of the four stages of development in Piaget's theory is the same for all children, with cognitive performance and cognitive development dependant upon each other (Gardner, 1983, p. 19). Parts of the previous stage are incorporated into the successive stages with four influential factors: maturation, physical experience, social transmission, and equilibration, explained as the adaption process of assimilation and accommodation (Piaget, 1965).



The crisis of each stage, according to Piaget (1965), comes when there is no longer the comfort of equilibrium, creating a challenge to reach a higher level. Beginning with the *sensorimotor* stage, birth to two years, infants and toddlers think with their eyes, ears, hands, and other motor activities. As toddlers becomes comfortable with each new challenge through support of the caretakers, the development through experiences from the environment become part of the behavior patterns (Dembo, 1994; Santrock, 1999). Taking risks with new challenges, disequilibrium leads into the second stage, age two to seven years, called the *preoperational* thought stage, an egocentric period when the child sees the world from their own perspective. The *symbol systems*, adopted by the toddler in the preoperational stage, consist of words, gestures, and pictures that stand for real life objects (Gardner, 1983, p. 19). The development of *mental operations* takes place simultaneously, within the mind of the toddler, perhaps through imagery, according to Piaget (1965). The next stage of the Piagetian theory does not occur until after the age of six or seven, but critics offer empirical evidence to the contrary, "There is now evidence that children can conserve numbers, classify consistently, and abandon egocentrism as

early as the age of three-findings in no way predicted (or even allowed) by Piaget's theory (Gardner, 1993, p. 20).

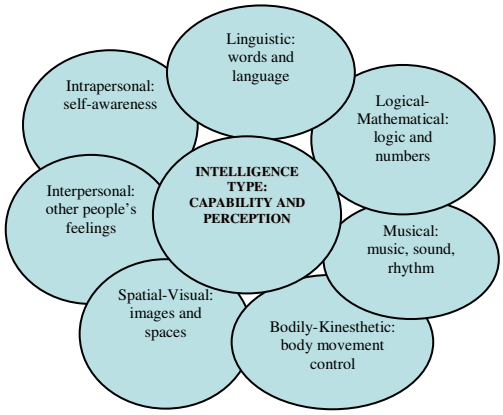
Children at the age of six/seven to eleven/twelve begin to take other perspectives into account, reaching the third stage of Piaget's theory, the *concrete operational* stage. When a child can do mentally what was done physically before in the preoperational stage (Santrock, 1999), then concrete operational thought processes are possible. Reversibility is an important step at the third stage of cognitive development, leading into the last stage beyond the age of eleven/twelve to adult. At the last stage, that of *formal operational* development, abstract thought processes are a capability (Dembo, 1994; Santrock, 1999). The critics of Piaget's theory attack the last stage with the argument, "Research has shown that Piaget may have overestimated the ability adolescents and adults to use formal operations thinking" (Dembo, 1994, p. 364).

Despite the arguments against specifics of the Piagetian theory of cognitive development, the broad perspectives and contributions to the thought processes of children and how they differ from adult processes remain valuable (Gardner, 1983, p. 20). Piaget's (1965) theory give social scientists like Howard Gardner (1983) reasons to continue to examine, test, and develop new theories in support or opposition of the classical theories. Social change challenges create avenues for growth and improvement, as the search for value and meaning in life continues.

Multiple Intelligences: Gardner

Under the tutorage of Erikson (1950), and influenced by the writings of Piaget (1965), Howard Gardner (1983) developed a love of the social sciences at Harvard University. Gardner thrived in the university setting, despite a childhood withdrawn from socialization due to color blindness, myopia, and a lack of interest in outdoor activities. Acquiring knowledge from every aspect of academia not limited to any one particular field of study, Gardner was asked to narrow

the focus of his study. Two distinct areas of interest were both symbol systems of words and music (Bandura, 1977; Gardner, 1983), with a love for writing and synthesizing, thus encouraging research tendencies. A psychological theory emerged combining two studies, one which explored the cognitive development of healthy and gifted children, and the other where he studied the breakdown of cognitive brain functions in adults (Gardner, 1983).



Gardner's theory on multiple intelligences was a contribution to psychology however education and teaching and training communities in industry soon embraced it. It took on unexpected implications in the education community, causing controversy along the way much like the controversy that surrounds any new theory upon initial development. Simply stated, Gardner's Theory of Multiple Intelligences (MI) claims that "seven 'core' forms of intelligences are an effort to lay out seven intellectual regions in which most human beings have the potential for solid advancement" (Gardner, 1983, p. 372).

Defining *intelligence* became the initial criteria for the development of the theory. According to Gardner (1983), previous to MI theory, intelligence focused on what works best for a law professor, using a combination of linguistic and logical intelligence, only two intellectual strengths. A working definition of *intelligence* developed and used by Gardner incorporates a more holistic approach, "the ability to solve problems, or create products, that are valued within one or more cultural settings-a definition that says nothing about either the sources of these abilities or the proper means of 'testing' them" (Introduction: 10th anniversary edition, p. x). Considering the strengths in more holistic human beings and not just the law professor types that use linguistic and logical intelligence, spatial, bodily kinesthetic, musical, interpersonal, and intrapersonal strengths present a more balanced view of human characteristics. "Human beings have evolved to exhibit several intelligences and not to draw variously on one flexible intelligence" (Gardner, 1983/1993, p. xii).

Through research that began in 1979 for the Project on Human Potential, Gardner (1983), a Harvard graduate student, focused his study of intelligence, "on two assumptions: first, that it is a single, general capacity that every human being possesses to a greater or lesser extent; and that, however defined, it can be measured by standardized verbal instruments, such as short answer, paper and pencil tests" (Gardner, 1993, p. x). Inspired by the work of the Soviet psychologist Lev Vygotsky (1978) who espoused learning to differences among the practices in cultures, Gardner recognized that various cultural experiences enhance the growing child. Working under the umbrella of a well funded, extensive project with teams of consultants in Egypt, India, Japan, Mexico, the People's Republic of China, and West Africa, the five year period of the project provided a plethora of cultural backgrounds for reference. "I have based MI theory upon neurological, evolutionary, and cross cultural evidence" (Gardner, 1983/1993, p. xii).

The work for the project was guided under the directive of the international nonprofit organization, The Bernard van Leer Foundation of The Hague, Netherlands, seeking to further the potential of disadvantaged children (Gardner, 1983). The availability of resources through the project provided a distinct advantage to Gardner's research. "Reviews of relevant literature in history, philosophy, and the natural and social sciences, a series of international workshops on conceptions of human development in diverse cultural traditions, and the commissioning of papers and books," (Gardner, 1983, p. xxxi), along with investigators in a variety of fields and interests were readily available for consultation.

Gardner's new intelligence theory took into consideration the effects from genetics and environment influenced by culture, a concept shared by Bandura (1977) and Piaget (1965), creating differences in intellectual profiles. The Binet IQ test once considered the norm for intelligence tests was again questioned, as it was questioned by Piaget (1965). Regarding the IQ test scores, Gardner writes, "It does predict one's ability to handle school subjects, though it foretells little of success in later life" (p. 3). Attempts to measure *raw* intelligence in the early development of the theory became impossible, reflecting a shift in the philosophy of assessment. Gardner (1993) admitted to his own confusion, as readers of the 1983 MI theory seemed confused, "leading to confusion among readers, and not infrequently within my own thinking" (p. xvi) that, "in 1983 I centered the multiple intelligences far more within the skull of the single individual than I would one decade later" (Gardner, 1993, p. xiv).

There was no direct educational implication in Gardner's psychological theory in 1983, but the implication for social change was imminent. Educational systems currently focus on learners who use only two intelligences, linguistic and logical. MI theory incorporates several types of learners, instilling a cry for a more balanced system of instruction that could benefit all

types of learners. The possible impact on education is huge, providing MI theory is accepted. Gardner's (1993) work continues to study MI theory and education, "Much of the work my colleagues and I have undertaken in the past decade has examined educational implications of MI theory" (p. xv). The didactical system of teaching previously accepted as the only approach in educational institutions could virtually be changed forever.

Conclusion

If society is to progress positively into the 21st century for the betterment of humankind, then support systems must meet the challenges through research and social change. Social change demands that challenge and support systems question past trends. Human development continues to improve with the education, research, and understanding of new theories as they appear. The classical theories of human development combined with the contemporary theories provide what is needed regarding human development to meet the demands faced by the next generation, as social change dictates. Every person is created as a unique being with a potential in need of actualization (Maslow, 1968). Although there are common patterns in human development, each human being develops in a unique way at an individual rate. It is up to caretakers, educators, and parents to discover and explore the uniqueness of each individual.

The process of human development is lifelong, and as physical and cognitive questions and answers are explored along the way, an integrated holistic human being with influences from heredity and environment emerges. Development takes place despite environment and heredity, positive or negative, factoring into the understanding of how and why mankind thinks and reacts in ways not always easy to decipher. There may be pain, struggles, frustration, and conflict along the path of development dependent upon the reluctance or adaptation to change. The environmental balance of challenge and support significantly influences the degree of

development, easing the process of change between the stages. As development advances through the stages of life, numerous endings and beginnings take place, enhancing the quality of human life along the way. The end result: a human being determines who they are and decides what to do with who they are, creating the ultimate goal for each individual seeking identity in the world as a member of society.

A child development researcher and author, Burton White (1985), academically inspired by the work of Maslow (1968) and Piaget (1965), raised awareness of the importance of early child development. "If every child lived the first three years getting all they need, we'd have a different society" (White, 1985, preface, p. ix). In conjunction with White's opinion, Thoreau (1854/1995) adds yet another dimension to development when he infers that our opinion of ourselves carries more weight than any other force in determining individual fate. He writes, "Public opinion is a weak tyrant compared with our own private opinion. What a man thinks of himself, that it is which determines, or rather indicates, his fate" (p. 4). The ideas suggested by Bandura, Erikson, Freud, Gardner, Maslow, Piaget, and the quotes from Thoreau raise awareness in human development, questioning the fate of humankind: if a human being truly can determine their own fate then the dissension, discontent, and strife in our society today could be contingent on what took place throughout the early development years (Santrock, 1999).

In order for a life span to develop productively there must be a stable, nurturing beginning as the theorists have taught. As individuals, it is necessary to choose a path for the future using the tools given by parents, teachers, and guardians. The *psychological moratorium* that Santrock (1999) and Dembo (1994) write about concerning lifespan development is the gap between the security of childhood and the autonomy of adulthood. Individuals must close that gap for themselves, which is not always an easy process. Gender, ethnicity, intelligence, and

self-esteem are but a few of the influential factors imposed as humanity muddles through the obstacles in life in search of an identity.

Sometime during adolescence, cognitive, physical, and psychosocial development comes together reaching a maturation point for the first time. If in the process of maturity an adolescent loses sight of the identity search, adolescent impulsivity may impede the search, and the autonomy of adulthood becomes stalled and possibly unattained. Childhood identity then continues to emerge as impulsivity and cannot be sorted through to form realistic goals for the future as a successful adult. Self esteem cannot emerge from talking about doing things, but from the actual process of doing things, so adolescents test what they learn by *doing things*. If taught process without content, the adolescent generation does not develop schema on which to attach the necessary tools to reach an autonomous adulthood. The KAM 2 Depth section will discuss teenage impulsivity and the pitfalls that may emerge in attempts to reach the autonomy of adulthood.

As one generation contributes to the shaping of the youth in helping tomorrow's human race be better, thus determines the fate of that generation. It is impossible to know all that there is to know, but as Thoreau (1854/1995) suggests, take what is known and use it to the best of one's ability. Establishing roots from what is learned through parents, guardians, and educators, it is up to individuals to soar, proving "public opinion is a weak tyrant compared with our own private opinion" (Thoreau, 1854/1995, p. 4).

Thoreau wrote about life at Walden Pond well over 100 years ago, yet his quotes have withstood the test of time in relating to the nature of humankind. His writings suggest that humanity was in too much of a hurry to succeed in what the world dictated to be important, and was not venturing forth in heartfelt visions. In choosing an identity, one does indeed need to

march to the beat of the drum that is heard. If society dictates that strife and discontent are the only paths from which to choose, then the youth must be taught to march to their own drummer, go against dissension, and forge a safer path. To proceed with confidence by arming with what is learned from the early development years supports that "public opinion is a weak tyrant compared with our own private opinion. What man thinks of himself, that it is which determines, or rather indicates his fate" (Thoreau, 1854/1995, p. 4).

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Knowledge Area Module 2: Principles of Human Development

EDUC 8221: Current Research in Human Exceptionality

Depth Component

Depth Annotated References

Askenazy, F. (2002). Anxiety and impulsivity levels identify relevant subtypes in adolescents with at risk behavior. *Journal of Affective Disorders*, 74, 219-227.

The study conducted by the author examines the controversial relationship between anxiety and impulsivity in at risk adolescents between the ages of 12-18, admitted to a psychiatric unit for more than 48 hours. The need to predict serious risks of suicide and/or violence prompted interviews that were conducted upon admittance. The American Psychiatric Association (APA) disorders (DSM-IV) criteria was used as a trained and experienced psychiatrist interviewed each patient for degrees of anxiety and impulsivity. The interview results were compiled and Chi square tests were used to compare qualitative variables from the 69 inpatient interviews.

All patients exhibited conduct disorders, but not all resulted in anxiety and impulsivity. Only 30% of the patients were both anxious and impulsive. Three limitations of the study affect the findings, encouraging follow up studies to further confirm the results without hidden biases. The sample size was too small, the population does not represent the general population, and the lack of long term data does not allow for longitudinal stability of the results.

The value of the results to the general public is minimal other than pointing out the need for further study into the behavior of at risk adolescents. It became readily apparent that the admittance to a psychiatric unit constitutes concern prompting a need to monitor impulsivity in students that show signs of behavior outside the norm. Impulsivity in adolescents left out of control may lead to at risk behavior and at risk behavior may lead to harmful practices.

Aydin, B., & Oztutuncu, F. (2001). Examination of adolescents' negative thought, depressive mood, and family environment. *Adolescence, 36*(141), 77.

The authors conducted a study connecting the issues of adolescent depression, negativity, and the environment in which the adolescent lives. An adverse affect occurs when an environment in which the adolescent lives is discovered to be unhealthy, physically or emotionally. If the family life is found to be dysfunctional, the result for the adolescent may lead to depression and negative thought processing.

A combination of three tests was given to 311 high school students, 133 males and 178 females, from public and private schools. The students volunteered after receiving an explanation of the tests and the methods. Permission to test was obtained from the classroom teachers and the school administrators. The test results were reported statistically, using standard deviation and mean scores to report the findings.

As a result of this study, it was discovered that the cohesiveness of the family structure directly affected the adolescent developmental period. Families with close ties rely on each other, share problems and successes, thus leading to positive social and emotional adjustment. Inversely, families that lack togetherness tend to develop problems with adolescents leading to depression and negative thought processing.

Although the results produced informative data, both positive and negative according to the family cohesiveness, further study is needed. The negative data lacked details, giving no indication as to how the family could improve. Replication of the study would be difficult, but consideration of what goes on in the family may indicate an area for exploration for added support when dealing with negativity and depression in teenagers.

Bacchini, D., & Magliulo, F. (2003). Self-image and perceived self-efficacy during adolescence. *Journal of Youth and Adolescence,* 32, 337-350.

In this referred journal article, the authors report results from cross sectional research using two constructs of self image and self efficacy during adolescence to evaluate three objectives. The objectives considered (1) if changes exist in personal descriptions over time, (2) do the constructs overlap, and (3) an evaluative comparison of a study from seven years previous to the current research. Gender, age, residential zone, and kind of school are quantified in the results relating societal, peers, personal, and family issues as influential factors, using graphs and charts through a multivariate analysis.

Findings indicating that adolescent' perceptions of self are multidimensional offer valuable information to educators, youth counselors, parents, and interested researchers in the ways youth evaluate themselves and others. Previous research related to studies from Erikson, Maslow, and Bandura validates the work done by Bacchini and Magliulo revealing that youth generally have positive feelings, evolving through phases of development. As higher order thinking skills develop, the once negative early adolescent aspects change to a more positive integrated concept. Comparisons to classical theorists present valuable insight to adolescent development.

The authors restrict the consideration of self concepts from a phenomenological point of view, limiting the beliefs of the self assessments of individuals that result in a distance between the actual self and the ideal self. The multiple statistical conclusions lead to confusion. The questionnaire is named, but details are not disclosed. The comparison study is not longitudinal, where no subject from the first study could still be present in the second study, raising doubt as to why the studies were compared, and to the reliability of the study results.

Bednar, D., & Fisher, T. (2003). Peer referencing in adolescent decision making as a function of perceived parenting style. Adolescence, 38(152), 607-622.

The research question of whether the style of parenting influences the decisions of youths made in late adolescence was examined in the study. The perception of the style by the adolescents may differ from what the parents believe to be the style utilized. Four parenting styles are identified, authoritative, authoritarian, permissive, and neglecting/rejecting, through a questionnaire given to 262 general psychology students who live with parents and commute to college. Basing the choice to survey older adolescents on the premise that the decision making process rarely changes from early adolescence to late adolescents, the older group was chosen.

Statistical analyses using multiple regression with data collection showed that responsiveness, a dimension of parenting that encourages individuality and self regulation, significantly influences the choice of decision making assistance the adolescent seeks. Regardless of parenting style, the teen most likely chooses peers for making social decisions, but the choice is less clear when moral or informational decisions are formed, dependant on parenting style.

The data are skewed due to the overwhelming response of the authoritative style of parenting determined by the questionnaire, explaining why more moral and informational decisions are likely directed to authoritative parents over friends. Parents, adults outside of family, and peers are all listed as references for adolescents, but other adults are not mentioned in the study results.

Peer group association researchers seeking a focus can look to the results for help in choosing an area of need. Involving at risk adolescents under negative parental influence with a positive peer group could counteract the lack of direction necessary for proper decision making.

Carbone, E. (2003). Arranging the classroom with an eye (and ear) to students with ADHD. *Teaching Exceptional Children*, 34(2), 72-81.

Using suggestions from two noted organizations associated with Attention Deficit Hyperactive Disorder (ADHD) children, the author combines data from the National Information Center for Children and Youth with Disabilities (NICHCY) and the American Psychiatric Association, specifically the diagnostic procedures in the DSM-IV, to improve classroom environment. Four identifiable characteristics of school age youth labeled with ADHD symptoms, hyperactivity, impulsivity, inattention and distractibility, and disorganization are addressed, and necessary *antecedent* interventions for all general classrooms are suggested.

Classroom accommodations are easy to implement, practical, and require little time and effort, but the results can make a huge impact on the outcome of the behavioral and nonattending incidents in the school day. The success of the students with attention problems in the regular education setting requires multimodal approaches, and no one single approach can be applied to all students. Physical environmental changes support the strengths of the distractible students, enlisting the assistance of peers to provide positive feedback for positive interaction.

General classroom teachers are faced with an influx of students who do not always respond to the successful procedures used in the past, so the need to incorporate accommodations is urgent. Impulsivity, hyperactivity, disorganization, inattention and distractibility can be minimized and by concentrating on student strengths, self worth will prevail. Physically arranging the classroom for optimal learning benefits all of the students, not just the distractible ones, so why would any teacher not consider the suggestions for a more conducive teaching and learning climate?

Cheyne, J. (1999). Dialogue, difference, and the "Third Voice" in the zone of proximal development. *Theory and Psychology*, 9, 5-28.

A detailed examination of thinking and speech are outlined in this journal article, looking into ways in which parents, teachers, mentors, and tutors can more effectively assist learners. By comparing the concepts of Mikhail Bakhtin and Lev Vygotsky regarding the characteristics of speech and thought, the author considers a broader scope for the Zone of Proximal Development (ZPD) as it relates to individual socialization and cultural and historical change. Using examples from literature and history Cheyne quotes Tolstoy, relating scaffolding instruction to ZPD as explanation of how ZPD can be understood and used to further learning experiences.

Well documented with an extensive reference list, the article offers suggestions that may affect social change in ways that educators perceive learner capabilities. Classical theory is used to understand contemporary needs with a compare and contrast format. Empirical evidence is cited for easy reference. Technical psychological language and inferences require repetitive readings for clearer understanding of concepts, but are worth the time invested. Different dialogues are defined and perceived from a psychological point of view which may not be easily understood from a mainstream perspective, leaving the concepts open for criticism.

Technological advances suggesting a paradigm shift for the new millennium requiring workers to be self starters with abilities to think independently face educators. Dynamic ideas are needed to prepare learners for the individual socialization and cultural and historical changes ahead. The article suggests methods in speech and thought processing, internal and external, as alternatives to meet 21st century demands.

Darling, N. (2000). Relationships outside the family: unrelated adults. Department of Human Development; Cornell University, Ithaca, NY, written for *Blackwell Encyclopedia of Adolescence.*

Limited research conducted in the area of adolescent relationships with outside the family adults prompted the study to examine who the adults are and why it should matter. Three areas were considered: contextual-setting and conditions both in and outside of the United States, role focused-social (teacher, parent, friend) or functional roles (teach, advise, encourage), and person focused-asking the adolescent to identify an important non family adult or asking an adult who was an important non family member during their adolescent period.

Serendipitous results found that data considering non family adults in relationship to school situations were more important in Japan than in the United States. It was not surprising to hear that the reasoning relates to the fact that in Japan students are most responsible for their own learning, whereas in the United States the teacher is held more responsible. Germany and Japan also sponsor community clubs for sports and music outside of school, but in the United States both are considered school curriculum. Leading to the conclusion that teachers are generally not important adults to adolescents unless the teacher exudes a genuine care and concerns for their students, the results speak volumes. Meeting multiple classes per day, with upwards of 20-35 students per class, the explanation for the lack of close personal relationships between teachers and students is not surprising.

Interviews were conducted, but no distinct methodology was disclosed leaving credibility issues open to criticism. The frequent use of citations, the lengthy reference list, and the obviousness of numerous other studies conducted by the author lends validity and reliability to the data collected, despite a lack of methodology description.

Dreher, N. (2003). Anger: it can be frightening: you need to know how to recognize and deal with anger before it becomes rage. *Current Health 2, Weekly Reader*, 29 (8), 20-23.

The author outlines ways to recognize anger and offers healthy alternatives to the frightening emotion often encountered by adolescents in need of a clear understanding of what occurs naturally. Interviews were conducted from American Psychological Association (APA) spokespeople, and psychologists describing steps that can be taken to diffuse explosive situations when anger occurs, naturally or unnaturally. The need to recognize anger, understand that it is not an unusual emotion, and that everyone feels it, and how to keep it under control are examples described by Dreher in the article directed toward adolescents.

A list of references was not included in the article, but as it was cited the reference was documented within the article so that follow up research can be conducted. The author gives excellent suggestions for dealing with anger, offering several examples of reasons to avoid allowing anger to get out of control. An APA report website is included, "Controlling Anger--Before It Controls You," listing three main ways to handle angry feelings. The few sources that are cited are valid and reliable, but more sources are needed to negate possible hidden biases. The lack of cross referencing of sources leaves the reader with the so what question, wanting to hear from others on the subject of anger.

Adolescents, adults dealing with angry and aggressive youths, parents, and educators can glean pertinent information from the article. Self awareness is discussed as a necessary step in dealing with anger issues, so in the study of self awareness, the article can be used as a tool for future reference.

DuPaul, G. (1997). Teacher ratings of attention deficit hyperactivity disorder symptoms: factor and normative data. *Psychological Assessment*, 9 (4), 436-444.

The purpose of the journal article was to report on the findings of a study that combined the two core characteristics of Attention Deficit Hyperactivity Disorder (ADHD), inattention and hyperactivity-impulsivity. The development of a new rating scale was needed as the myriad of rating scales was not universally accepted due to data collections that differed in criteria. The American Psychological Association previously used the Diagnostic and Statistical Manual of Mental Disorders (3rd ed., rev.), (DSM-III-R), rating scale, but with the development of the DSM-IV a new rating scale was essential to the diagnostic procedure.

Teachers, parents, and educators use a behavior rating scale as the primary screening in the process of assessing children with problems of inattention and impulsivity. Exploratory and confirmatory factor analyses were used to collect and analyze information, examining sex, age, and ethnic group normative data. Two samples of children were used; a second the subset of the first, all kindergarten through grade 12. A total of 2,005 teachers participated. The study concluded that boys exhibited significantly more symptoms of ADHD across all age ranges.

Several limitations in the study existed, including a misrepresentation from all socioeconomic status groups, possible bias from teachers with mismatched ethnic backgrounds from the students they reported with the symptoms of inattentiveness and hyperactivity-impulsivity, and normative data that was a close match to the census data but underrepresented Native Americans and African Americans.

The newly developed rating scale for the DSM-IV continues to be useful to parents and educators, but the data from the results prove a need to carefully monitor validity and reliability.

Essau, C. (2004). Risk taking behavior among German adolescents. *Journal of Youth Studies*, 7 (4), 499-512.

Adolescents between the ages of 12-17 years take risks and the author conducted a study to examine the behavior of German youths in relation to risk taking, risk perception, and personality. The peer reviewed journal results regarding risk taking were reported through the assessment of the Adult Risk Questionnaire and the NEO Five Factor Inventory was used to assess personality traits. Frequency of risk taking was the study focus, and the results produced an inverse relationship between risk taking behavior and risk perception. If the perception of the risk is clouded for any reason and not considered to be too great, then the behavior tends to be riskier, leading to possible adverse consequences, according to the author.

Specific examples were not given indicating what types of risks were taken by the adolescents and how often the risks were taken, which was listed as the focus of the study. The reference list was too brief to be reliable, but the collection of qualitative data results was valid for future reference.

The data collection validity for the age group of German adolescent behavior is important for global comparisons and future research. The study indicates that not only one nation is at risk with the behavior of the youth, but adolescents in general are taking unnecessary risks. The article helps to illustrate the need for future studies and programs that instruct adolescents in the areas of risk perception and risk taking.

Feden, P. (2006). On balance: Fiction high school: where things have to make sense. *Educational Horizons*, 84, 79-85.

The author cleverly took the topic of classical and contemporary human learning and applied it to a fictional high school setting where the best case scenario of teaching and learning is applied to make sense of education. The premise incorporates five major areas of human learning: nature of intelligence, motivation of students, the way students learn, what students should learn, and how learning should be assessed. Each area compares current pedagogical practices vs. what should/could be done in education, based on the most current research. The end result is a guideline to follow for the ultimate educational experience for students if teachers collectively consider the ideas and use them, as students deserve no less.

The author bases the five major ideas on classical theories, citing Piaget, Vygotsky, and Gardner, but frequently quotes contemporary theorists, as well. The article is written from the point of view that current educators are not incorporating the best approach to teaching and learning, and the parodic endeavor may be too coarse for some educators. The qualitative analysis incorporates humor balanced with factual evidence, leaving no doubts as to the source of evidence.

High school is the last stage of education before the real world experience challenges many students. The article offers insight into what students may face in the real world, outside the sheltered walls of school life, and how educators need to rise to the challenge of preparing for the 21st century. Bridging the gap between school and the community by abandoning past practices for new innovative teaching takes courage. The article carefully designs a fictional situation, but strongly suggests educators pay attention to the concepts, bade on current research.

Fessler, D. (2001). Emotions and cost benefit assessment: the role of shame and self esteem in risk taking. *US: The MIT Press*, 191-214.

Approval seeking behavior is part of the environment in which humans evolve and that kind of behavior fosters risk taking. An ethnographic study was conducted by the author to determine the degree of the role of emotions in the scheme of risk taking behavior. Is it worth the risk, and at what cost? Emotions are never wrong, but what is done with the emotions can influence the outcome of an event, ultimately affecting self esteem. The study found that with strong self esteem the emotions of shame and pride are less frequently influential in the decision making process.

The article combines the background of human development with the natural occurrence of emotions to determine if self esteem is affected when risks are taken. Observations within the environment of the participants produce results indicating that cost-benefit assessment is a strong consideration. Along with emotions, the study suggests that the role of the neurotransmission of serotonin is a key factor in self esteem. The details of the role of serotonin are too brief leaving more questions than answers.

The benefit of the study with more questions than answers leaves an open door for future research into the serotonin effect on self esteem. What is serotonin and where it comes from needs to be researched before the study results can be considered valid or reliable with the mere mention of the neurotransmitter. Observational studies involving emotions can benefit from the results of the study, applicable to any age group as emotions fall into all age groups. Self esteem results fit more easily into an adolescent to adult age group.

Kaplan, Diane S., Kaplan, Howard B. & Liu, Xiaoru (2001). Influence of parent's self- feelings and expectations on children's academic performance. *Journal of Educational Research,* 94, 360. Retrieved May 11, 2004, from Academic Search Premier database (5032139).

Early adolescence can often times activate a stressful period with regards to relationships between parents and their children when discussing academic performance. Studies conducted from two points of view, the parent's and the child's, show how parental expectations may cause undue stress on their children. The results are from a sample size of 1, 864 pairs of parents over a defined period of time, encompassing two decades, which sufficiently support the authors' conclusions: parents naturally influence their children. The authors found that adolescent children tend to follow or adopt their parents' expectations, as if by osmosis. Parents with high self-esteem project high expectations, thus communicating a positive influence on their adolescent's academic performance. Families with adolescents face daily challenges as the child develops thought processes. Through parent education, increased communication between parent and child, and the elimination of negative self-feelings of the parents and the child, a positive outcome results with elevated academic performance.

The significance of the research comparing links between parent expectation and student achievement is substantiated by the justification of the results, the reciprocity of parent-adolescent relationships, and the methodology used to conduct the research. Additional support from the citations and list of references gives creditability to the information presented. Although the length of the 180 item questionnaire may be difficult to replicate and interpret, the process of personal interviews counterbalancing the questionnaire displays methodology adaptable for future research.

Kelley, T., & Stack, S. (2000). Thought recognition, locus of control, and adolescent well-being. *Adolescence*, 35, 531-550.

A well known psychological construct, locus of control (LOC), is examined in this article from the point of view of a newly designed psychological paradigm, Psychology of Mind/Health Recognition (POM/HR) focusing on thought recognition. The authors hypothesize that adolescent perceptions of happiness and success, contingent upon LOC, a way of perceiving the world, are often clouded with such superficial emotions as excitement and security. Data collection by the World Value Study Group (1991), an international association of social scientists, compiled information from 17 nations that distributed surveys to 1,892 at risk youths from the ages of 14-20. The findings were reported using statistical analysis, specifically ordinary least square regression on two variables: global happiness and global life satisfaction.

Multiple references, in text citations, limitations, and controls, all with copious examples included, give credibility and reliability to the data collections. Worldwide impact of the results for the adolescent population also lends authenticity to the research, as contemporary and classical theorists are quoted for reference.

The research indicates the belief exists that not only at risk adolescents falter, but sometime in life, all human beings are tempted and may cave into negative pressure from outside sources, or from within their own personal individual thought processes. Three distinct areas give value to the article for use with work in adolescent studies : (1) recognition of the intrinsic value of humanity born good and wholesome with the capacity to attain psychological health, (2) that two processes of thinking exist: process thinking (acquired ability) and free flowing thinking (innate source of profound human intelligence), and (3) stress and distress are functions of the abuse of process thinking, causing the innate thought processes to drift into an unhealthy pattern.

Wood, K. (1997). The relationship of impulsivity and extension of future time perspective in adolescents. *Sciences and Engineering*, 58 (5-B), 2707-2737.

Measuring impulsivity alone is difficult, so the study was conducted in correlation with the future time perspective of adolescents. Will the perspective of extension of future time change or shorten with an increase of impulsivity? The research question was considered with comparison studies from answers of runaway adolescents and non runaway high school students, using the Future Events Test and Impulsivity scale from the Offer Self Image Questionnaire. Statistical analyses include correlation coefficient, *t* test, and cross tabulations and were used to analyze the data. Conclusions reached confirm the hypothesis that the more impulsivity reported, the more constricted the perception of the extension of future time.

The questionnaire given to the runaways included 20 additional questions regarding demographics and information specific to runaways, giving rise to whether a preconceived answer was formed before the results were analyzed. The results may have been skewed with the changes in the questionnaires used, negating the reliability and validity of the results.

Regardless of the bias, the results determine that the impulsivity level of individuals directly relates to extension of future time perspective. Considering A,B, and C as examples, if an impulsive students commits an act A without prior consideration of all of the results, the student with the shorter extension of future time will realize that B will occur, but never considers that C might happen.

The study results will be useful for a possible explanation to the actions of individuals who do not recognize that there will be consequences, sometimes serious and harmful, for committed actions without a well thought out plan.

Depth Component

Search for Individuality

Teenagers, often perceived by society as risk takers, tend to make impulsive decisions in the struggle to find individual identity during the complicated process of human development. Risky impulsive behavior, if left undirected or unattended, can end with harmful results (Askenazy, 2002). With direction and guidance, can unacceptable impulsive behavior be turned around to fulfill the urgent need in society to produce individuals capable of becoming tomorrow's leaders? The term impulsive, defined in the Merriam-Webster's dictionary (2003) as "having the power of or actually driving or impelling; acting momentarily" (p.627), aids in the ability to understand that impulsivity involves power and force backed by spontaneity. Teenagers need guidance to harness the driving force of impulsivity to use it in a beneficial way. With a better understanding of the decision making process in teenagers, the demands of the new millennium facing society can be met by guiding impulsive youth into well directed, impulsive adults who possess the ability to self start and think independently.

The Depth component of KAM 2 will examine key developments into where adolescent impulsivity is most prevalent in the process of human development and analyze factors affecting impulsivity relating to comprehension and the decision making process. Technological advances of the new millennium require fast paced impulsive reactions (Cheyne, 1999; Pajares, 2004), so how can the youth of today be taught to manage impulsivity to get positive and not negative results? Knowledge is power and to empower adolescents with understanding, management, and balance in the identity search to use strengths rather than concentrating on weaknesses educators, parents, and caretakers must acquire empirical knowledge from classical theorists and contemporary research.

Human development theories by Albert Bandura, Erik Erikson, Sigmund Freud, Howard Gardner, Abraham Maslow, and Jean Piaget, as discussed in the Breadth section, offer guidelines that provide a basic understanding of the adolescent development process. Contemporary research conducted by social scientists examines adolescent impulsivity using classical theories to substantiate the findings of where impulsivity is most prevalent. The youth of today need to understand impulsivity and management of the decision making process in order to develop skills for a healthy and successful path to adulthood. KAM 2 Depth will provide information affecting adolescent impulsivity relating to comprehension and the decision making process.

Overview of Adolescent Development

Sometime during adolescence cognitive, physical, and psychosocial development comes to a maturation point for the first time. If in the process of maturity an adolescent loses sight of the identity search, adolescent impulsivity may impede the search (Gerrard, Gibbons, Reis-Bergan, & Russell, 2000), and the autonomy of adulthood becomes stalled, possibly unattained while negative self feelings emerge. Discoveries in brain research, emotional development, motivation, and informational processing offer suggestions as to what may cause individuals to do what they do. If cognitive functions are misunderstood or misinterpreted, negative outcomes may result from impulsive decisions. Teaching management and balance of decision making skills is essential in the process of adolescent maturity (Maslow, 1968).

Empirical evidence is developed by theorists and tested by social scientists concerning cognitive development, providing reasonable explanations for impulsive decision making so that management and balance can be attained, "One has to see correctly before one can act correctly" (Kilpatrick, 1992, p.133). Albert Bandura (1977), Howard Gardner (1993), and Jean Piaget (1965) studied cognitive development, while examining theories by Eric Erikson (1950),

Sigmund Freud (1933/1980), and Abraham Maslow (1968), and then devised new theories to support a better understanding of human cognitive development. Recognizing the level of cognitive skills is an invaluable tool in teaching adolescent self reliance and management of impulsivity.

Theories are used as guidelines and provide general observations that predict behavior, but theories cannot establish criteria for every variable in the human development process. Gender, ethnicity, intelligence, and self-esteem are but a few of the influential factors imposed as teenagers try to muddle through the obstacles in life in search of individual identity (Santrock, 1999; Sheehy, 1977). Discovering where impulsivity fits in the schema of understanding adolescents requires an examination of details into adolescent cognitive, physical, and psychosocial development. Once identified, teaching management of impulsivity is critical to healthy adolescent development.

Physical Development and Environmental Factors

Skills to distinguish between what is meaningful and what may propose a threat in life develop as second nature if a nurturing environment is provided early in the physical development of a human being (Erikson, 1950; Freud, 1933/1980; Kegan, 1983). Abandonment or neglect thwarts the basic nurturing environment, blocking the development of trust between the mother and the infant (Freeman, 1980, p. 120). The lack of established trust links an unsuccessful journey through Erikson's stages of human development with ties to impulsivity and poor decision making skills.

The identity vs. identity confusion stage of human development (Erikson, 1950) occurs between the approximate ages of 12 to 30, when searching for identity in life begins. Somewhere during the late adolescent years if the trust that is of the utmost importance has not

been developed from as early as in the infancy stage, then it comes as no surprise that teenagers struggle with finding an identity because there is no trustworthy adult with whom to identify or seek advice. If the life necessity of trust is established in the earlier stages of development, then the identity search becomes less of a threat (Erikson, 1950; Sheehy, 1977).

Current research (Bacchini & Magliulo, 2003; Bednar & Fisher, 2003) indicates that decision making choices to reach individual identity and autonomy occur in three phases of adolescence, early, middle, and late, adding another dimension to the internal and external phases discussed in theories developed by Erikson (1950) and Freud (1933/1980). Another connection to internal and external discussions by Erikson and Freud is found in research conducted by Cheyne (1999), examining adolescent impulsivity that results in poor decisions. Cheyne offers suggestions for better comprehension through internal and external speech and thought process training that relates to the adolescent identity search.

In the first half of the search for identity, the early adolescence phase, research by Cheyne (1999) indicates an external desire to belong to a group exists. A shift occurs in the second half of the identity search, the middle adolescence phase, where an external desire for the need to belong to a group changes to an internal desire of feeling alone. When the internal desire of feeling alone is properly interpreted as the need to become individual, development continues naturally into the next stage (Erikson, 1950; Freud, 1933/1980). If confusion ensues, impulsive decisions manifest and a developmental crisis may result (Cheyne, 1999). The shift that occurs changes external desires to internal desires, reflecting the normal process of development that is necessary for growth and transition into the next stage, the autonomy of adulthood (Santrock, 1999; Sheehy, 1977).

Kegan (1983) shares the viewpoint regarding the crisis of the stage, "All developmental transitions are about a new form of 'ego autonomy'; all problematic or arrested transitions threaten that autonomy" (p. 155). Threats to the autonomy of adulthood come in many forms, and as studies indicate, adolescent depression, negativity, and environment are interrelated (Aydin & Oztutuncu, 2001). Environmental threats are seen throughout the early, middle, and late phases of adolescence, "when kids are heavily occupied with their peers" (Levine, 1995, p.1), where environmental distractions from the 21st century technological advances of cell phones, text messaging, or instant messaging never cease. Fenden (2006) discovered that technology, specifically the cell phone, I Pod, and BlackBerry can impose and threaten the balance of the search for individual autonomy if control is lacking from parental guidance for appropriate use.

As a result of the study by Aydin and Oztutuncu (2001), it was discovered that the cohesiveness of the family structure directly affects the adolescent developmental period. Families with close ties rely on each other, share problems and successes, thus leading to positive social and emotional adjustment. Inversely, families that lack togetherness tend to develop problems with adolescents leading to depression and negative thought processing. When an environment in which the adolescent lives is discovered to be unhealthy, physically or emotionally, a crisis exists in the developmental stage (Kegan, 1983), leaving the adolescent at risk. While crises occur naturally as an integral part of the development period, there is an urgent need for families that support adolescences so that the emergence into successful adulthood is a priority, dispelling risky behavior that may lead to unhealthy impulsivity.

Anxiety and impulsivity were studied in a group of at risk adolescents between the ages of 12-18, indicating that at risk behavior "may lead to harmful practices" (Askenazy, 2002),

often referred to as impulsivity. A survey revealed that behavior outside the norm is considered a conduct disorder if adolescents cannot function in a day to day setting at school or within the family structure (Lavoie, 2005). Impulsive decision making places not only the adolescent at risk, but also those in the immediate surroundings of the troubled youth, indicating a need to monitor impulsivity. Further study (Bacchini & Magliulo, 2003; Bednar & Fisher, 2003) indicates family issues as one of the several influential factors to unacceptable conduct. As impulsivity of at risk adolescents was monitored through observations and self assessment questionnaires, a serendipitous development emerged.

The findings reveal that adolescent self perceptions are multidimensional (Bacchini & Magliulo, 2003), as was studied by Freud (1933/1980) with his id, ego, and superego theory regarding personality. The adolescent's perception of actual self resulted in a distance between the observed behavior of the adolescents in the study by Bednar and Fisher (2003). Adolescent perception of self did not match what the observational studies revealed. Freud's (1933/1980) developmental theory states that the id, ego, and superego are all parts of human multidimensional personality interacting together, sometimes in conflict with each other. Bednar and Fisher (2003) in studying anxiety and impulsivity of at risks adolescents confirmed Freud's beliefs of the multidimensionality of personalities, and of the conflicts. Adolescent self perception is in conflict with observed perception.

Bacchini and Magliulo (2003) not only found results in the adolescent at risk study that point to negative behavior and impulsivity, but also found a correlation to classical theorists regarding adolescent self perception. Studies from Erikson (1950), Maslow (1968), and Gardner (1993) validate the work done by Bacchini and Magliulo (2003) revealing that youth generally have positive feelings of actual self, evolving through the phases of development. As higher

order thinking skills develop throughout the three phases of adolescence (Bandura 1977; Piaget 1965, found in Papert, 1999), the early adolescent experiences of frequent negativity and impulsivity change to a more positive thought based integrated self concept. Eventually accepting the role imposed by societal and cultural pressure, adolescents mature as Kegan (1983) relates, "Now the culture (family, school, friends) begins to make it known that it expects the adolescent to be able to take other people's feeling into account even when the adolescent is considering himself or herself . . ." (p. 168).

If adolescents, male or female, struggle with the balancing act of self and others, continuing to make impulsive decisions that are out of control, perhaps the higher order thinking skills that Bandura (1977) and Piaget (1965, found in Papert, 1999) discuss have not properly developed. Cheyne's (1999) research indicates that a broader scope of the Zone of Proximal Development (ZPD) first developed by Lev Vygotsky (1962) be considered. ZPD touts that social interaction plays a fundamental role in the development of cognition that backs up Cheyne's study. Characteristics of speech and thought are examined in the study, relating individual socialization of males and females with cultural and historical change to better perceive learner capabilities. "Young people place particular importance on the ability to rely on themselves, which is a decisive factor in the creation of their own personality" (Bacchini & Magliulo, 2003, p.5).

As teenagers are developing personalities through socialization with peers, gender stereotypes imposed by society continue to exist, although less emphasis is placed on gender roles from even fifty years ago (Santrock, 1999). Cheyne's (1999) study links the differences in cultural experience, family background, and history to cognitive capabilities and development in both male and female teenagers using ZPD as a basis for the study. Cheyne discovered with

research that once the potential to learn is understood by the adolescents, proper guidance to reach full cognitive potential blocks previous patterns of negativity and impulsivity. Knowledge is powerful, and adoption of positive peer influence blocks negative patterns from forming. Positive thought processes take over in the search for autonomy, indicating that higher order thinking skills are developing (Bandura, 1977; Piaget, 1965, found in Papert, 1999). "Humans don't just respond to stimuli, they interpret them" (Bandura, 1977, p. 59), as seen through positive peer influence.

In general, adolescents describe themselves in positive terms (Erikson, 1950; Gardner, 1993), but another factor to consider regarding impulsivity are the multifaceted levels of personalities that differ between males and females in society (Erikson, 1950; Freud, 1933/1980; Jung, 1931/1966; Sheehy, 1977). Erikson and Freud, rather than concentrate on the social aspects of male/female differences, examined the biological differences between males and females. The discovery in the 1920s of the existence of the human sex chromosomes substantiates the biological male and female sex differences, but beyond the biological differences a conflict continues to exists, stating, "too much emphasis altogether is placed on the male/female role in society" (Santrock, 1999, p. 320).

Society dictates the social dimension of being male or female as *gender* (Santrock, 1999), and "gender constitutes the factor that discriminates to the greatest extent" (Bacchini & Magliulo, 2003, p.11), which imposes a burden on adolescent decision making. Societal dictated *gender roles* are culturally defined by characteristics and expected to be fulfilled by men and women. The nature of development during the adolescence stage compels teenagers to test conformity and rebel against what society dictates, so conflicts over gender roles have existed for as long as gender has been defined (Dembo, 1994; Kegan, 1983; Santrock, 1999).

Society, the media, cultural backgrounds, parents, peers, teachers, and schools all play a role in influencing gender identification, and teenagers continue to test society with impulsive decisions when dealing with gender roles (Fessler, 2001). The search for individual identity is not an issue of gender, although masculinity or femininity can be defining factors in examining impulsivity in decision making because of societal pressures. Recognizing that it is not wrong for individuals to have both masculine and feminine characteristics can be helpful in the identity search (Bacchini, 2003; Erikson, 1950; Freud, 1933/1980; Jung, 1931/1966, Sheehy, 1977), adding knowledge to deescalate impulsivity in the negative decision making process. "To be meek, patient, tactful, modest, honorable, brave, is not to be either manly or womanly, it is to be humane," (Jane Harrison, English Writer, 20th century; found in Santrock, 1999, p. 320).

Psychosocial Development, Parental and Peer Influence

Whether male or female, peer pressure at this life stage of adolescence is stronger than at any other stage of development. Stuck between the gap of the security of childhood and the autonomy of adulthood, "adolescents flounder to find their way, then spread their wings and ready themselves to fly without the need for parental support" (Santrock, 1999, p. 372). The identity the adolescent so earnestly searches for does not end or begin in this life stage, but comes to a maturation point. Maturity allows the adolescent to sift through childhood peer pressure, deciding right from wrong when tempted to make impulsive decisions. "The strengthening of his social personality is one of the essential conditions for man's existence. Were it not so, humanity would cease to be" (Jung, 1961, found in Boeree, 1997, p. 197).

Teaching youth decision making skills to reach social maturity in human development, leading to the autonomy of adulthood, requires an understanding of the basic stages in human development. Human development entails passing through trials and errors, crises as described

by theorists Erikson (1950) and Freud (1933/1980), before individual identity is reached. Stage by stage the identity search for individuality progresses from childhood until adult identity is reached with independent thought processes, if a crisis does not completely block progress through the stages. A crisis occurs naturally (Erikson, 1950; Freud, 1933/1980) and may be misinterpreted by the adolescent leading to confusion or negative impulsivity. Chronological age and physical development continues to progress even if a crisis ensues, adding to confusion for the adolescent.

If a crisis in the stage is not resolved, childhood identity continues to emerge in the physical body of an adolescent with a chronological age seemingly prepared for adulthood. Confusion gives rise to immature impulsive behavior and may be seen as the result of a crisis not properly managed, blocking realistic goals from forming for the future as a successful adult. Adolescents need to be taught that crises are a natural evolution in the human development process, nothing to be feared (Lavoie, 2005). If the fear is reduced with knowledge and understanding, the teenage *acting out* (another term for teenage impulsivity) can be reduced or stopped completely, as discovered in a study done on anger management in adolescents (Dreher, 2003).

In the earliest stage of adolescent development a teenager strives to be like everyone else, working through to the middle stage where a series of crises are most often peer influenced. Adolescents and caretakers must remember that crises are necessary if growth is to transpire (Erikson, 1950; Freud, 1933/1980; Sheehy, 1977). The often misunderstood age group of adolescence tends to place more value on peer influence than any other age group in human development, ignoring parental influence at any cost or sacrifice due to “a relentless campaign to seem ‘cool’ . . . and to market themselves to peers” (Levine, 1995). If peer influence and

parental influence are constantly at war with each other, then teens will most likely choose peer influence (Bednar & Fisher, 2003), "as parental influence is associated with chores and rules, and peer influence is associated with fun" (p.2).

In late adolescence peer pressure no longer controls and influences every move and decision. Older teenagers strive for individuality without the need to please anyone else but self, as Levine's (1995) research reveals, "Maturing nervous systems are working overtime to define individuality" (p. 5). Teenagers are operating within a crisis mode where impulsive decisions may surface at any time to keep up with peers. If impulsivity leads one into harms way, then control is lacking.

Parents without control are low in monitoring or overly negative and push teens to either externalize impulsive behaviors or to associate with deviant peers. Bednar & Fisher (2003) also found that encouraging autonomy too soon, at too early of an age, can lead to impulsive decision making when maturity is not in place to cognitively handle the results (Piaget, 1965), often ending negatively. If cognitively prepared, decision making by adolescents is influenced more by whoever is considered to be more competent in terms of the subject. For example, parental influence is valued for long term, value based, ethical decisions, where short term social decisions are influenced more from peers (Dembo, 1994; Santrock, 1999).

Adult influence outside the family fits into the same category as parental influence, under the same scrutiny of competence for subject matter (Cheyne, 1999; Darling, 2000). If a particular adult is perceived by the adolescent to be the most informed on a subject matter, then the adolescent will choose the adult for information and advice. Teachers are generally not considered as important to adolescents due to overcrowding in classrooms according to studies by Carbone (2003), Darling (2000), and DuPaul (1997). Darling's study of relationships outside

of the family of unrelated adults indicates that "close personal relationships between teachers and students are rare because of overcrowded classrooms" (p. 8). The common teacher assignments in middle and high school are in excess of five periods a day with 20-30 students per period (Carbone, 2003), leaving little or no time for personal relationships with students.

The nature of the adolescent period of human development is to test self reliance after receiving guidance and direction from adults. If a teenager has minimal parental supervision and most secondary teachers have 150 students to reach and teach every day, then where do adolescents turn for advice and guidance? The scenario is too common, and often results in adolescent impulsivity leading to dangerous consequences because there is not enough adult support for youth to consider as competent role models (Darling, 2000; Kilpatrick, 1992). For the lucky ones, trust is established and development through the adolescent period progresses naturally, leading to autonomy. For the unlucky ones, left with no one to establish a trusting relationship, teenage delinquency, gangs, and drug abuse become alternatives because guidance and direction are not readily available through parents, teachers, or other adults (Essau, 2004; Fenden, 2006).

Teenagers feel the need to test self reliance to get through a crisis which means that human development is progressing naturally. Learning to work through crises requires an independent time period away from embedded parental protection to break through the strong parental bonds in seeking autonomy, the ultimate goal. The conflicts often occur with the very persons with whom trust has been ultimately established in the trust vs. mistrust stage of development (Erikson, 1950). During the period of adolescence authority figures are often confused as the enemy (Dembo, 1994; Santrock, 1999). "Autonomy, though feared, is valued above all; anyone interfering with it is the enemy" (Ginott, 1969, p. 20).

Parents teach decision making skills, and adolescents test the skills within peer related activities. Parental influence does no wane during this period of development, but the additional influence of peers becomes another variable for the adolescent to consider. Simply by observation, knowledge is acquired, "The capacity to learn by observation enables people to acquire large, integrated patterns of behavior without having to form them gradually by tedious trial and error" (Bandura, 1977, p. 12). A question for parents, teachers, and caretakers to consider is whether the quality of peer influence is high enough to teach positive and not negative behavior patterns. The study by Bednar and Fisher (2003) reflects upon how strongly peers influence the decisions made by others through an examination of parental style. A look into parenting styles provides an additional link into adolescent impulsivity and decision making skills and where they fits into the autonomy of adulthood.

Parental styles fit into four categories, according to a study conducted by Bednar and Fisher (2003). Parents are the earliest connection a human being has to reaching adulthood (Erikson, 1950; Freud, 1933/1980), playing a significant role in development, so serious consideration is given to how parents' parent. Four parenting styles, each with a two dimensional aspect of demandingness (claims made by parents for supervision, disciplinary efforts, and a willingness to confront a child who disobeys) and responsiveness (parents who intentionally foster individuality, self regulation, and self assertion), are identified: *authoritative, authoritarian, permissive*, and *neglecting/rejecting*. Basing the choice to survey older adolescents on the premise that the decision making process rarely changes from early adolescence to late adolescence, Bednar and Fisher (2003) chose the older group.

An *authoritative* style of parenting studied through survey results (Bednar & Fisher, 2003) is found to be the most conducive environment for teenagers to achieve independence and

self regulation. A balance is achieved between demandingness and responsiveness of parent and adolescent relationships. Parents using an *authoritarian* style are demanding, without any balance of responsiveness. A *permissive* style of parenting reflects responsiveness, but lacks balance without making demands. A *neglecting/rejecting* style of parenting has neither demandingness nor responsiveness, leaving the adolescent with a sense of abandonment, with nothing on which to base decisions from a parental point of view (Bednar & Fisher, 2003).

Regardless of parenting style, the teen most likely chooses peers for making short term day to day social decisions because peers are associated with social life, a necessary choice in development according to Piaget (1965). "It means that social life is necessary if the individual is to become conscious of the functioning of his own mind . . ." (p. 400). The choice is less clear when moral or informational decisions are formed, dependant on parenting style. Moral and informational decisions are likely directed to authoritative parents over friends and peers because the necessary trust has been established (Erikson, 1950; Freud, 1933/1980). Responsiveness, a dimension of parenting that encourages individuality and self regulation (Bednar & Fisher, 2003), significantly influences the amount of decision making assistance the adolescent seeks.

Armed with parental guidance while searching for identity formation, teens seek to establish a sense of self separate from family. Testing decision making skills without adult supervision to monitor and control impulsivity is an important step in the development process (Bednar & Fisher, 2003; Maslow, 1968). "Emotional disengagement from the family and a transfer of attachment to peers" (Piaget, 1965, p. 401) takes place, leading from a state of disorganization to a higher level of organization with age, ending when feelings of self image and self esteem are achieved for themselves and others in the social context.

> The purpose of adolescence is to loosen personality. His personality is undergoing the required changes: From organization (childhood) through disorganization (adolescence) to reorganization (adulthood). Adolescence is a period of curative madness, in which every teenager has to free himself from childhood ties with parents, establish new identifications with peers, and find his own identities. (Ginott, 1969, p. 25)

The issue of self image and self esteem play a pivotal role into the process of adolescent maturity. Cross sectional research (Bacchini & Magliulo, 2003) was conducted regarding self image and self efficacy as separate concepts within the perception of self, confirming the multifaceted aspects of self esteem (Erikson, 1950; Freud, 1933/1980). Adolescents may often times present themselves in a variety of situations with powers, abilities, inclinations, and personal attributes of ideal self significantly different from actual self as perceived from peers, parents, and figures of authority. "The quality of the description of self, of one's relationship with others and one's own abilities, constitutes a valid indicator of the individual's level of adaption to the developmental tasks that characterize adolescence" (Bacchini & Magliulo, 2003, p. 2). If the level of adaption to adolescent challenges is not perceived by observations to be the same as the verbal presentation from the adolescent, then the adolescent is not yet cognitively prepared with higher order thinking skills necessary for autonomy. Impulsive decisions erupt without the necessary skills to meet the challenges.

For example, teenagers sometimes tend to believe in the invincibility of the Superman complex: nothing can harm me (Calvert, Conger, & Murray, 2004). If higher order thinking skills are underdeveloped then Superman, the comic book character, a mild mannered man of steel, becomes a hero figure for youth who want to emulate the Superman persona: nothing can harm me. When teenage impulsivity emerges without forethought, and the fictional steel barrier that protects Superman is falsely perceived, many young people can be lead into a path of danger. The need for heroes is so strong that the threat of danger or risk to health and well being

does not steer away from the temptation of impulsive decision making until higher order thinking skills develop (Kilpatrick, 1992).

A study (Gerrand, et al., 2000) concerning the health risk behaviors of adolescents, self esteem, and self serving cognitions reveals an interesting concept regarding the justification of risky behavior, called the *false consensus effect*: "the tendency for people who engage in a given behavior to believe that the behavior is more common than do people who do not engage in the behavior; a specific type of self justification, 'Everybody's doing it'" (p. 1178). Risk taking occurs "when an individual's self esteem has been threatened by a failure experience" (Gerrand, et al., 2000, p. 1180). The adolescent is overwhelmed with concerns of peer relations, employment, sex, school work, and the future. With so many areas for failures, seeking individual identity can be especially stressful sometimes leading to risky impulsive behavior in need of peer approval.

Approval seeking behavior is part of the environment in which humans evolve (Dobson, 1982; Erikson, 1950; Maslow, 1968) and that kind of behavior fosters risk taking. An ethnographic study by Fessler (2001) was conducted to determine the degree that emotions play in the scheme of risk taking behavior. Emotions are never wrong, but what is done with the emotions can influence the outcome of an event, ultimately affecting self esteem. The study by Fessler (2001) found that with strong self esteem the emotions of shame and pride are less frequently influential in the decision making process. Without a strong self esteem, more impulsivity may occur in the decision making process in order to impress peers, but how to track impulsivity can be difficult.

Measuring impulsivity alone is difficult, so a study (Wood, 1997) was conducted in correlation with the future time perspective of adolescents. The more impulsivity reported, the

more constricted the perception of the extension of future time. The results determine that the impulsivity level of individuals directly relates to extension of future time perspective. Considering A, B, and C as examples, if an impulsive adolescent commits an act A without prior consideration of all of the results, the adolescent with the shorter extension of future time realizes that B occurs, but never considers that C might happen (Woods, 1997).

Individuals who do not recognize that serious and harmful consequences for impulsive actions occur react without a well thought out plan. Without well developed higher order thinking skills of comprehension, the decision making process is in the immature stages of development (Bandura, 1977; Gardner, 1993; Piaget, 1965). Adolescents with or without learning disabilities make impulsive choices if higher order thinking is not fully developed, leaving an adolescent with a feeling of extreme embarrassment for poor decisions.

Extreme feeling of being different can create self esteem issues with all adolescents, especially if diagnosed with a learning disability (Lavoie, 2005). Erikson's (1950) second stage of human development: autonomy vs. shame and doubt is threatened when students who struggle academically or emotionally express self doubt. Until the negative crisis is successfully balanced with the positive goal of independence, establishing autonomy, the adolescent is in a developmental stall. "Every learning disability has a social component. A successful social life is immeasurably important to a child's happiness, health, and development" (Lavoie, 2005, book jacket). Maturity throughout the three phases of adolescence: early, middle, and late, requires confidence, and as higher order abstract thoughts develop and emerge, a more integrated theory of self results.

In search of finding individual identity, "having a positive self-image can affirm children's self-worth, a much needed concept in growing up" (Santrock, 1999, pg. 314). The

degree of challenge is not always in balance with the degree of support in the search for independence and autonomy, allowing a *negative attitude* to surface (Kelley & Stack, 2000). Without a healthy balance of challenge and support from parents, teachers, and caretakers, from where will schema build to create the necessary self confidence to find autonomy? Perhaps teenagers who allow impulsive reactions to control decision making are not challenged enough by their caretakers, stalling the developmental process with negativity, resulting from poor decisions. The *negative attitude* surfaces because teenage self esteem must be protected at all costs (Levine, 1995), so if an attitude disguises the real problem of immaturity or lack of cognitive ability, then the teenager feels exonerated. Unfortunately, "Avoidance of a problem lowers self-esteem due to denial or deception" (Santrock, 1999, pg. 315).

The developmental process is stalled if problems that have been created by impulsive reactions are avoided, as individual challenges are *fixed* by too much support (Dobson, 1982). Many times when asked why a particular behavior is exhibited, the adolescent response reverberates with confusion, with no clear explanation because the ability to work things out has been taken away by an adult. Part of the balance between challenge and support must include respect for the adolescent's opportunity to learn. Adults need to remember that adolescents respond faster to action than words (Gardner, 1993). An adolescent will push limits to the point where an action will occur. It is the responsibility of the adult to remain calm, take control of the situation, and to respond with the appropriate action. Enforcement should never be by punishment, sarcasm, or ridicule, so as to protect the child's self image (Dobson, 1982; Fessler, 2001).

Adults need to let teenagers make mistakes. A necessary step for growth according to Erikson (1950), Freud (1933/1980), and Maslow (1968), is the experience of the painful

transitions of the crisis/conflict, challenge/support, and need/fulfillment stages. Learning comes from mistakes, so constant protection from mistakes may stifle the future development of an individual. Finding balance between the stages will develop individual understanding so that the knowledge of when to allow or delay impulses is learned and developed as a skill (Gardner, 1993; Kelley & Stack, 2000). Impulsive decisions may come with consequences, but Dobson (1982) makes an interesting point by stating that the adolescent is more likely to make the right decisions if adults don't interfere, provided that the guidance and groundwork have been previously established. If the super-ego is well established, the adolescent can regulate and reward oneself while maintaining a healthy self-esteem (Freud, 1933/1980).

In support of the theory on letting teens make mistakes, Dobson (1982) conducted a study of a senior high school class that was looked at ten years later. Almost all of the students had drug or alcohol problems in which some led to conflicts with the law. Of the adults interviewed, each one said that they wished parents hadn't bailed them out of the problem. The adolescents were not able to learn from mistakes, a necessary step in the search for individual identity. A little problem that could have been solved, led to more serious consequences because self confidence was never allowed to develop.

To assist in building adolescent self confidence, a study was conducted by Kaplan, Kaplan, and Liu (2001) and found that adolescent children tend to follow or adopt their parents' expectations, as if by osmosis. Parents with high self-esteem project high expectations and parents naturally influence their children. Additional research (Kelley & Stack, 2000) indicates that not only at risk adolescents falter in the search for self confidence, but sometime in life, all human beings are tempted and may cave into negative pressure from outside sources, or from within their own personal individual thought processes.

Three distinct areas to consider from the Kelley and Stack (2000) study: (1) recognition of the intrinsic value of humanity born good and wholesome with the capacity to attain psychological health, (2) that two processes of thinking exist: process thinking (acquired ability) and free flowing thinking (innate source of profound human intelligence), and (3) stress and distress are functions of the abuse of process thinking, causing the innate thought processes to drift into an unhealthy pattern.

Intelligence, Cognition, and Neurotransmitters

Unhealthy thinking patterns affect the ability to learn and block the development of abstract cognition. Without higher level thinking skills to process decisions that lead into the healthy development of adulthood, teenage impulsivity may surface. The early, middle, and late stages of adolescence are the breeding grounds for abstract cognitive development leading to the autonomy of adulthood. If thinking patterns are adrift in a negative direction, then learning is unreachable. Learning, the apex of life according to the early Greeks, Plato, and Aristotle, also includes social development, "in the tradition that can be traced to Plato and Aristotle, humans are naturally social animals with a moral obligation to attend to justice and fairness" (Masters & Gruter, 1992, found in Masters & McGuire, 1994, p. 5). If learning, abstract cognition, and social development are interrelated, then the healthy development of all three is necessary to attend to the justice and fairness of human nature. Where does teenage impulsivity fit in the process of learning, abstract cognition, and the social development of justice and fairness?

Impulsive decisions can delay the development of intelligence and cognition which provides the avenue for justice and fairness needed for autonomy. Intelligence had been studied and measured by experts who point in several directions, recommending varied ways to view it. "An intelligence test should not be used as a sole indicator of mental retardation or giftedness"

(Santrock, 1999, p. 286). Recognizing individuality before using standardized tests results in measuring human competence should become a priority. Compassion cannot be scored on a test, yet we need to use compassion in our dealings with others, as human development demands justice and fairness (Masters & McGuire, 1994).

Gardner (1993) defines intelligence as "the capacity to solve problems or to fashion products that are valued in one or more cultural setting--a definition that says nothing about either the sources of these abilities or the proper means of 'testing' them" (Introduction: 10th anniversary ed, p. x). Gardner's new intelligence theory, Multiple Intelligences, takes into consideration the effects from genetics and environment influenced by culture, a concept shared by Bandura (1977) and Piaget (1965), creating differences in intellectual profiles. The Binet IQ test once considered the norm for intelligence tests is again questioned, as it was questioned by Piaget (1965).

Regarding the IQ test scores, Gardner writes, "does predict one's ability to handle school subjects, though it foretells little of success in later life" (Gardner, 1993, p. 3). The opportunity for success is not lost for adolescents who score low on the IQ test due to struggles with educational, emotional, financial, cultural, or familial difficulties. Exposure to solving the practical problems of the every day world offers another venue for success and happiness leading to the social development of comprehension and the decision making process, often outside of the school environment (Bandura, 1977; Gardner, 1993; Piaget, 1965).

If adolescent impulsivity blocks the social development of comprehension and the decision making process, inside or outside of the school environment, then the capacity to solve problems is interrupted, leading to a crisis (Erikson, 1950; Freud, 1933/1980; Maslow, 1968). The crisis involves intelligence, according to Gardner's (1993) definition of intelligence, "the

capacity to solve problems . . .” (Introduction: 10th anniversary ed., p. x), and the *Merriam-Webster’s Collegiate Dictionary Eleventh Edition* (2003) definition, “the ability to learn or understand or to deal with new or trying situations: reason” (p. 650). As adolescents encounter new or trying situations from the environment, the central nervous system attempts to process the crisis. An explanation of the functions of the central nervous system aids in understanding the relationship between adolescent impulsivity and the development of abstract cognition. Each plays a part in solving the developmental crisis so that learning, abstract cognition, and social development are no longer blocked, allowing problem solving skills to develop.

The perception of the central nervous system consisting of the brain and the spinal cord, functioning as a three component operation compares to two classical three point explanations in human development (MacLean, 1983, found in Masters & McGuire, 1994) . The id, superego, and ego of human personality theorized by Freud (1933/1980) is one, but long before Freud a philosophy by Plato professed that human nature has three parts of the soul. Both provide a *triune* view of human nature (Masters & McGuire, 1994, p. 6) similarly described in contemporary brain research. The midbrain and brain stem control elementary movements, the cortex--*gray matter, the locus of complex thought,* specializes in complex information

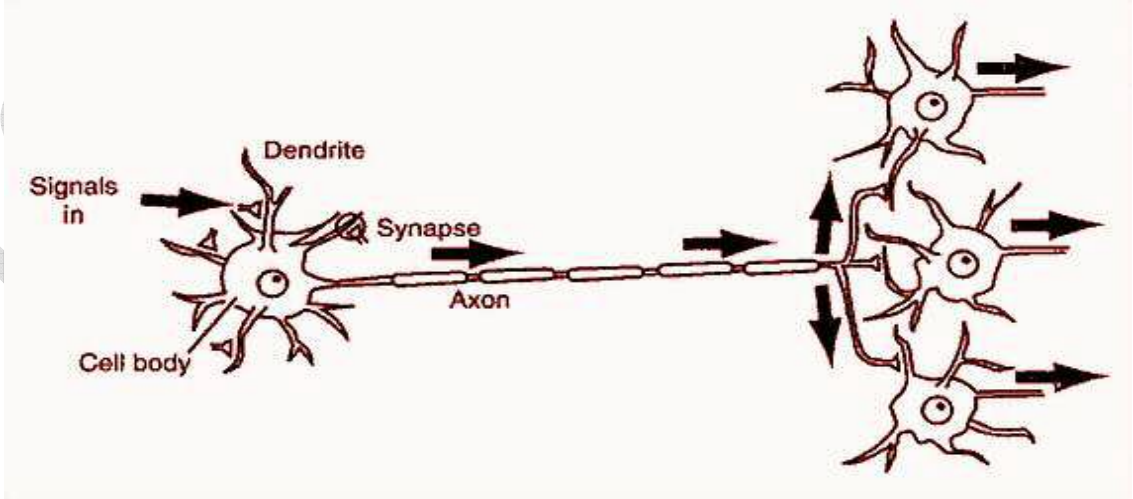
processing, and the limbic system consisting of structures between the midbrain and the cortex functions as the seat of emotions. Developments in the central nervous system coupled with specific brain research suggest that the three major structural components of the brain provide an explanation for how human beings "view the world, process that information, and act on it" (MacLean, 1983, found in Masters & McGuire, 1994, p. 6).

The functions of the brain are complicated and difficult for the layman to comprehend, but necessary in order to understand where adolescent impulsivity is found to be most prevalent in human development. The history of the development of neuroscience lays the groundwork for a better understanding of brain functions, but by no means claims to be the only explanation. "There is no one way to make a significant contribution in science" (Valenstein, 2005, p. 185), as one explanation leads to another and another while social scientists continue to gather and test data. The explosion of discoveries linking the biological functions of the brain to how the effects of the discoveries are influencing human development changes more rapidly than can be comprehended. "Our very existence today testifies to the fact that the evolving brain has mastered the task of changing or adapting rules to accommodate the demands of the ever changing environment . . ." (Masters & McGuire, 1994).

Structural brain research is pale in comparison to how neurobiology views the functions of the brain. Impulsivity is studied in more detail through the biological study of behavior: *ethology*, "neuroscience is discovering how the brain works—and chemistry is becoming one of the keys to these discoveries" (Masters & McGuire, 1994, Preface, p. xiii). As social scientists strive for a deeper understanding of the ever changing environment, risks must be taken to develop schema on which to attach new phenomenon. "Speculation and theorizing in science involve potential risks as well as gains" (Valenstein, 2005, p. 184). Keeping up with the most

current status of brain research creates challenges, so referencing basic scientific theories where schema exist aids in the understanding of the newest phenomena of neurobiology.

Starting with an understanding of the theory of the basic unit of life, the cell, "By the 1850's most biologists had accepted the theory that the cell was the basic unit of living tissue. The nerve cell and its fiber constitute the basic unit of the nervous system," (Valenstein, 2005, p. 2) as proposed in the neuron doctrine in 1891. Neurons are nerve cells that transmit chemical and electrical impulses that allow the brain to process information. The signal, processed information from the brain, travels from sensitive fibers called dendrites, to the cell body and along the axon. The action inside the cell is electrical, *sparks*, and the action between the cells is chemical, *soup,* called neurotransmitters (Valenstein, 2005). The axon is the sender of the information, while the dendrites and the cell body are the receivers of the information. The chemical and electrical impulses are transmitted to the dendrite of the next neuron across a tiny gap.

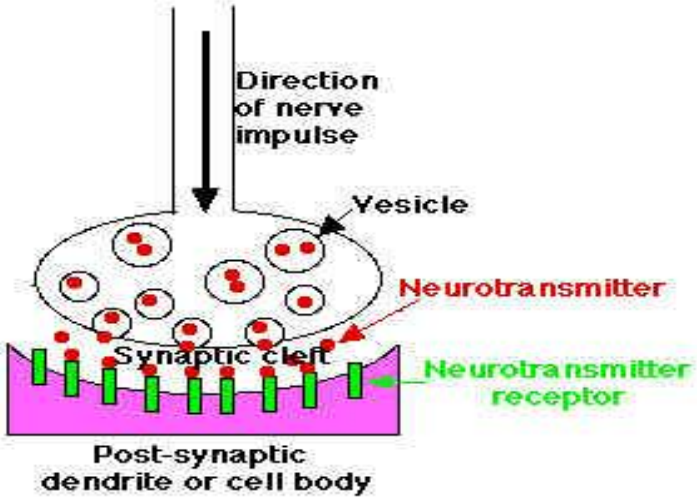


Not until the 1950's was a powerful enough microscope developed to actually see that a gap existed between the neurons. The gap came to be known and accepted as a synapse. To further explain the synapse, a delay in transmission between neurons was discovered and needed a name to continue the study of nerve impulses. The focus on the synapse led to the controversy of "whether nerve impulses are transmitted across the synapse electrically or chemically" (Valenstein, 2005, p.5). Despite early studies revealing that chemical neurotransmitters could possibly cause nerve impulses, a heated debate between physiologists and pharmacologists called the *War of the Soups and the Sparks* extended over two decades (Valenstein, 2005, p. 129).

Studies conducted as early as 1914 using adrenaline, a natural substance of the body, led directly to "the existence of chemical neurotransmitters" (Valenstein, 2005, p. 22), but the two sides continued to argue, claiming that electrical transmission was the only possible explanation for nerve synapses because a chemical transmission was too slow. "Later it was learned that chemical transmission of the nerve impulses takes only a few milliseconds, fast enough for any task known" (p. 185). Controversy at the turn of the 20th century blocked progress in the discovery and function of neurotransmitters, until now. At the turn of the 21st century the study of neurotransmitters has again reached the laboratories of scientists, studying the results of the action between the cells as possible explanations for adolescent impulsivity.

The *War of the Soups and the Sparks* was interpreted by the 2001 Nobel Prize in Physiology or Medicine winner, Arvid Carlsson, with clarification that the first chemical discoveries were "foreshadowing the paradigm shift from electrical to chemical signaling between nerve cells in the brain" (Valenstein, 2005, p. 163). As modern techniques advanced the necessary proof to accept that the transmission of nerve impulses as chemical over the

synapse became overwhelming. Chemical transmission became universally accepted; electrical transmission became the exception.



Valenstein (2005) shared a view of differences in personalities as a possible reason for the *War of the Soups and Sparks* that played a significant role in the development of neuroscience, "how differences in personalities influenced the way this history evolved" (p. 182). Interestingly, the evolution of neurotransmitters directly affected by the human behavior of personality differences is understood to play a significant role in the use of drugs such as Ritalin, Prozac, and others (Valenstein, 2005, book jacket), which directly affect human behavior. How does contemporary research on neurotransmitters relate to our understanding of human behavior? "Discoveries concerning the effects of neurotransmitters on human behavior obligate us to reexamine established ways of thought" (Masters & McGuire, 1994, p. 3), taking risks that challenge previous schools of thought regarding adolescent impulsivity.

In 1960 serotonin, "another interesting chemical substance found in the brain," was "not accepted as neurotransmitters," (Valenstein, 2005, p. 160), but had a role in brain function. Along with the study of emotions that affect impulsive behavior and self esteem (Dreher, 2003; Fessler, 2001), suggestions infer that the role of the neurotransmission of serotonin is a key factor in self esteem. Further development of the study on neurotransmitters, specifically serotonin, indicate how adolescent impulsivity and decision making are affected by the relationship between serotonin and synapse function (Masters & McGuire, 1994; Valenstein, 2005). A psychological theory emerged in 1983 combining two studies, one which explored the cognitive development of healthy and gifted children, and the other which studied the breakdown of cognitive brain functions in adults (Gardner, 1993). Gardner argues, "Neurobiology research indicates that learning is an outcome of the modifications in the synaptic connections between cells. Various types of learning results in synaptic connections in different areas of the brain" (Introduction, p. x). The interesting chemical substance found in the brain in 1960 called serotonin has since found a relationship with neurotransmission, synapse connection, self esteem, and adolescent impulsivity and decision making.

Inactivity in the brain was studied (Askenazy, 2000) and associated with attention, concentration, planning, and organization directly relating to decision making skills and impulsive reactions. Neurotransmitters that lack the ability to send complete chemical messages across synapses indicate less activity in the brain. "Mean platelet serotonin concentration was positively correlated with the intensity of impulsivity" (Askenazy, 2000, p. 26). "Neurotransmitters like serotonin vary from one individual to another for many reasons, including the individual's life experiences, social status, and diet. Genes may influence neurochemistry . . . so does behavior, culture, and the social environment" (Masters & McGuire,

1994, Preface, p. xiv). Serotonin studies continue to develop new theories that relate to impulsivity and the decision making process of adolescence.

Contemporary neuroscientists discover how we perceive, feel, and think, and recent discoveries attest to human abilities to control outcomes with varying results. A study (Retz, Retz-Junginger, Rosler, Supprian, Thome, 2004) relating serotonin function and impulsivity reveals, "There is evidence that disturbances in central serotonin (5-HT) function have a role in impulsive aggression" (p. 415). Another study (Kish, 2000) indicates that drug abuse from the dance drug ecstasy lowers "the brain's supply of serotonin, a neurotransmitter linked to mood swings. Ecstasy is thought to produce euphoria by releasing a rush of serotonin, but the brain has trouble replenishing the supply" (Kish, 2000, p. 23). Human behavior, specifically impulsive decision making in adolescents, and the study of serotonin are not yet conclusive, but continue to provide information worthy of further study, "The specific discoveries concerning the connections between serotonin and such behaviors as suicide, seasonal depression, alcoholism, impulsive homicide and arson, and social dominance are thus important but not conclusive" (Masters & McGuire, 1994, Preface, p. xiv).

Global Perspective

Adolescents in need of direction and guidance for out of control impulsive decisions seek adult advice in order to reach the autonomy of adulthood, Erikson's identity vs. identity confusion stage of development (Erikson, 1950). Adults are seeking emergence from Erikson's (1950) generativity vs. self absorption stage as knowledge and guidance are imparted to adolescents. Unfortunately, according to a study conducted in 2000 by Darling, adults are not always available in an environment where the opportunity to seek and impart advice is most needed. Students and teachers are not readily connected on campuses in the United States.

Conditions inside and outside of the United States were studied by Darling (2000), looking at American, German, and Japanese adolescent relationships with adults outside of the family. The assumption that American students form close relationship with teachers, seeking adult guidance was disproved. Serendipitous results indicate that the Japanese student/teacher relationships were the closest of the three countries (Darling, 2000). The collected results show that in Japan students are more responsible for their own learning, whereas in the United States the responsibility of learning falls upon the teacher and not the student. The German adolescent relationships outside of family come from after school community clubs for sports and music outside of school, similarly found in Japan.

In the United States, sports and music are embedded into the school curriculum. The overcrowded classroom crisis in American schools does not foster close personal relationships between students and teachers. Without the opportunity to build relationships with teachers, adolescents in the United States rely more on family members or peers for guidance and direction to sort through periods of confusion and duress. If teachers exude a genuine care and concern for their students, then the results speak volumes for the adolescent seeking guidance (Darling, 2000). Adolescents need adult guidance outside of the curriculum from teachers, but without the availability to build close personal relationships, unnecessary impulsive risks are taken.

A study (Essau, 2004) was conducted to examine the behavior of German youths in relation to risk taking, risk perception, and personality. Frequency of risk taking was the study focus, and the results produced an inverse relationship between risk taking behavior and risk perception. If the perception of the risk is clouded for any reason and not considered to be too great, then the behavior tends to be riskier, leading to possible adverse consequences, according

to Essau (2004). The data collection for German adolescent behavior is important for global comparisons and future research. The study indicates that not only one nation is at risk with the behavior of the youth, but adolescents in general are taking unnecessary risks. The Darling (2000) and Essau (2004) studies help to illustrate the need for future studies and programs that instruct adolescents in the areas of risk perception and risk taking in relationship to the control of impulsivity.

Conclusion

Comparisons to classical theorists present valuable insight to where in the adolescent development process impulsivity appears most prevalent, as indicated by contemporary social scientific research. Psychosocial development, parental and peer influence, emotional development, motivation, and self-esteem are interrelated in the decision making process of adolescence, specifically in relationship to impulsivity. Indications from research show that adolescents are cognitively unprepared when impulsive urges surface. The lack of knowledge that a developmental crisis is part of the normal process of maturity to adulthood may lead to teenage impulsive decision making leading to at risk and harmful behavior.

Using brain research and informational processing examples of intelligence, cognition, and neurotransmitter research, serotonin is under considerable scrutiny as a possible connection to the signals in the brain across synapses that affect adolescent impulsive decision making. Contemporary social scientists consider gender, ethnicity, intelligence, and self-esteem as influential factors in adolescence related to impulsive decision making. Necessary background from current research is provided to link serotonin levels to reasonable explanations for impulsivity in the decision making process of teenagers, indicating a need for further research.

Despite the criticism, Bandura (1977) continued to recognize the need for more study when he states, "Our theories of psychology should adapt to the new realities. . . We have a vast new world of images brought into our sitting rooms electronically" (as cited in Pajares, 2004). The nature of education, recognized by Bandura (1977) as changing, is as true today as it was almost thirty years ago when he states,

> Educational practices should be gauged not only by the skills and knowledge they impart for present use but also by what they do to children's beliefs about their capabilities, which affects how they approach the future. Students who develop a strong sense of self-efficacy are well equipped to educate themselves when they have to rely on their own initiative. (as cited in Pajares, 2004)

High school is the last stage of formal education before the experiences of the real world challenge many students. Not all students attend college. What students face in the real world, outside the sheltered walls of school life does not appear on an IQ test. Educators need to rise to the challenge of preparing for the 21st century by bridging the gap between school, the community, and the real world outside of school by abandoning past practices for new innovative teaching. It takes courage to compare classical theories in the five major areas of human learning: nature of intelligence, motivation of students, the way students learn, what students should learn, and how learning should be assessed as described in a study by Feden (2006). Classical theories by Piaget (1965), Vygotsky (1962, as cited in Cheyne, 1999), and Gardner (1993) outline human development traits, but contemporary research needs to continue research to adapt to the new millennium environment.

By adapting the new realities to how adolescents approach the future, as Bandura (1977) suggests, empowers youth to educate themselves beyond what is offered in classrooms. Teachers, parents, and educators must teach that impulsivity is within the normal realm of human development and that it can be managed with a deeper understanding of self. "It is only by

knowing our individual nature with its limitations as well as its resources that we grow capable of coming out of ourselves and collaborating with other individual natures" (Piaget, 1965, p. 394). Understanding that impulsive urges are normal empowers youth to take control of future decisions.

If human development took place in a perfect utopian society such as the one created by author Lois Lowry (1993) in *The Giver*, teenage angst would not exist and irresponsible impulsive behavior would not lead to risk taking decisions that so often threaten adolescent autonomy. Well adjusted adolescents grow and prosper with trust, relying on responsible parenting and adult guidance to emit the right balance of support and challenge so that normal stages of crises are met and overcome with success (Erikson, 1950; Freud, 1933/1980). Taking flight into the autonomy of adulthood does not emerge without problems in need of societal support as social utopia does not exist in the real world. A necessary step in development, "A successful social life is immeasurably important to a child's happiness, health, and development" (Lavoie, 2005, book jacket).

KAM 2 Application section includes a thirty page 2002 case study with an introduction describing a group of high school students who share the need for support seeking ways how to handle impulsive decisions, asking for guidance in a quest for self esteem. The need and the desire to adjust in the world of adolescent challenges are expressed by the adolescents in the case study. Suggestions for future decision making that places impulsivity in proper balance with societal demands for the 21st century are revealed.

"There may be as many as one hundred different chemicals that act as neurotransmitters in the nervous system" (Masters & McGuire, 1994, p. 186), which may affect ideas for future studies as discussed in the case study. KAM 2 Application indicates that with proper guidance,

as teenagers seek peer approval in search of individual identity, they are willing to learn to control impulsivity and risk taking behavior. Control and balance paves the way for acceptance of the responsibilities necessary for passage into adulthood.

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Knowledge Area Module 2: Principles of Human Development

EDUC 8231: Professional Practice and Human Exceptionality

Application Component

Application Component

Introduction

The Application of KAM 2 is a demonstration of the intrinsic value of human beings specifically through a 2002 case study examining adolescent desires to control impulsivity without taking prescribed medication. A ten page report previews the forty five page case study involving a group of high school special education students demonstrating the need to protect self esteem before impulsive urges get out of control ending in negative consequences. The Application component combines the human development analysis of the Breadth section based on classical theories from Albert Bandura, Erik Erikson, Sigmund Freud, Howard Gardner, Abraham Maslow, and Jean Piaget with contemporary Depth research focusing on adolescent impulsivity. The case study fulfilled requirements for a Masters' thesis project completed in 2002 at Azusa Pacific University in Azusa, California.

Research (Kelley & Stack, 2000) indicates that not only special education adolescents falter in the search for self confidence, but sometime in life all human beings are tempted and may cave into negative pressure from outside sources (Bandura, 1977), or from within their own personal individual thought processes. Skills can be taught to all levels of learners to control impulsive decision making as Gardner's theory of multiple intelligences recognizes that there are seven areas in which learning can take place (Gardner, 1993). Outside of the educational setting, the labels of special education no longer exist and the once labeled adolescents often thrive and prosper in the real world without the labels imposed from the school system.

Control of impulsive urges and healthy decision making skills play a critical role in the human development process. Keeping in mind that teenagers are *just kids* who want to learn but

do not always know how, providing positive direction and guidance for adolescents is paramount for healthy development in society. The guidance of adolescence in their search for autonomy is one of the necessary stages of Erikson's (1950) Psychosocial Development Theory, stage seven: generativity vs. self absorption where a concern for the next generation is a priority.

The 2002 case study in Appendix A demonstrates that the emotions, concerns, and desires of special education adolescents to be like everyone else in society deserve consideration (Erikson, 1950; Gardner, 1993; Lavoie, 2005). Assigning an acronym frequently associated with special education individuals: Attention Deficit Disorder (ADD), Attention Deficit with Hyperactivity Disorder (ADHD), or Learning Disabled (LD) is a quick fix method to label the adolescent with symptoms, but often fails to recognize the student as an individual human being. In the case study, the participants fall under the scrutiny of the resource program in an educational setting on a high school campus in Arcadia, California. Appendix A offers details of the demographics of the study, available on page 35. A description of the resource room, resource specialist, and resource students, the case study participants, will aid in the understanding of their struggles with impulsivity and negative decision making concerning prescription drug use.

All student interviews were conducted in the resource room which is "a room separate from the regular classroom in which children with disabilities can receive specialized assistance to reinforce and supplement the regular class instruction" (Dictionary: For Parents of Children with Disabilities, 2006, p. 109). The amount of time that students spend each day in the resource room varies according to individual needs identified in an Individual Educational Plan (IEP),

usually a minimum of one 55 minute study skills period. The remainder of the day is spent in the regular classrooms, referred to as the mainstream or general classrooms in the case study.

Modified courses support resource students who require no more than 49% of their day to be spent receiving special education services. In modified subject area classes, the work is more individualized. There are typically 12-20 students with one teacher and one Instructional Assistant, which allows for individual attention. A Resource Specialist (RSP) resource teacher is "a specialist who works with children with disabilities and acts as a consultant to other teachers, providing materials and methods to help children who are having difficulty within the regular classroom. The resource teacher may work from a centralized resource room within a school where appropriate materials are housed" (Dictionary: For Parents of Children with Disabilities, 2006, p. 109). RSP teachers work towards teaching the state content standards while continuing to attend to individual learning needs. Although the pace is slower, core curriculum from regular education classes is taught (Curriculum Guide, 2006).

Students with IEPs have the opportunity once a year to meet with the school counselor, Resource Specialist, parents, and other invited guests, to discuss their yearly progress. Often times, parents do not attend, so feelings of self-worth are in jeopardy (Bednar & Fisher, 2003; Erikson, 1950). The feeling of being important at school, if only for one hour once a year is recognized from theorists Gardner (1993), Maslow (1968), and Piaget (1965) as a necessary step to attain the self esteem needed for growth from childhood to adulthood. The case study interviews and observations demonstrate the need for individual recognition to improve self esteem. Minimizing negativity which in turn eliminates risky impulsive decisions in the development process of adolescence is also examined in the study.

A key to success in teaching and learning with teenagers is to recognize each child's most developed intelligence (Gardner, 1993). Understanding that different types of learning disabilities exist by making connections between developed and underdeveloped intelligences challenges educators in every classroom. Laws to include special education students in the mainstream classes are mandated by the least restricted environment clause (Individuals with Disabilities Education Improvement Act [IDEA], 1965/2004), making it difficult to teach one set curriculum because students who learn in a variety of ways require accommodations.

The two styles of learning traditionally found in most facets of education, that of linguistic and logical intelligence (Gardner, 1993), no longer suffice in general education classrooms. Students identified with disabilities do not respond solely on linguistic and logical intelligence. Special education students are multi-talented outside the linguistic and logical intelligence styles in the areas of art, design, drafting, poetry writing, or music, but rarely have an opportunity to demonstrate their individual talent in a didactical setting. Frustration builds when creativity is stifled day after day, impulsive urges interrupt thought processes, and negativity results unless teachers keep in mind that adolescents are *just kids* who want to learn, but do not always know how to reach their full potential.

The students identified in the case study are special education resource students that are evaluated with a process that involves individualized and standardized testing, resulting in average to above average intelligence. The Binet IQ intelligence test that has been criticized by theorists Gardner (1993) and Piaget (1965) for its limitations is included in the battery of tests. Finding a way to recognize the best in adolescents outside of standardized tests warrants further study.

Evaluations should not be clouded by skin color, spiked hair styles of green or purple, cultural differences, language disabilities, pierced body parts, or even *attitudes,* "learning disabled (LD) children tend to have poorly developed problem-solving skills and, as a result, they tend to resolve conflicts by using aggression rather than negotiation" (Lavoie, 2005, p. 3). Limitations due to placement in the special education program with IEP requirements place an additional spotlight on resource students in the mainstream classroom environment. Desperately wanting to fit into a peer approved group (Erikson, 1950; Lavoie, 2005; Maslow, 1968), adolescents act without thinking so as to blend in with their peers. Negative consequences result, as the case study records indicate.

Teenagers demonstrating impulsivity and poor decision making skills are not always identified as learning disabled, but often possess a variety of reasons that cause traditional (linguistic and logical) methods of teaching too difficult to process (Kelley & Stack, 2000). Negativity as a result of weak or underdeveloped decision making skills involving impulsive urges may lead adolescents into harms way. Long term illnesses, drug rehabilitation programs, suspensions, or expulsions can create learning gaps. Rather than be recognized for gaps in learning, adolescents choose to attract negative attention for impulsive actions and reactions which deters the attention away from a learning gap. The need to be accepted by peers is the ultimate goal in adolescent autonomy (Erikson, 1950; Lavoie, 2005), so taking impulsive risks outweighs the negative consequences for the adolescent.

Adolescents who are not easy to place due to psychological problems require placement in classes on special request from school psychologists (Askenazy, 2002), adding to the student population mix that general education classroom teachers face on a daily basis. Students do not

come prepackaged, and are not always ready to respond to one single successful procedure, so the need to incorporate accommodations is urgent to combat negativity in schools. Impulsivity, hyperactivity, disorganization, inattention, and distractibility can be minimized by concentrating on student strengths. Self worth will prevail (Carbone, 2003; Gardner, 1993; Lavoie, 2005). Inversely, adolescent impulsivity left out of control may lead to at risk behavior and at risk behavior may lead to harmful practices.

One room special education classrooms no longer exist separate from the mainstream environment as a result of the need to recognize self esteem in all human beings. A paradigm shift in special education in 1965 (IDEA, 2004) altered the program placement of mildly or moderately disabled students. In support of the change, classical theories in human development combined with contemporary research from social scientists reveal the need for positive peer influence, especially throughout the adolescent development period (Bandura, 1977; Bednar & Fisher, 2003).

The autonomy of adulthood is threatened by adolescent impulsivity, indicating a need to teach decision making skills to all levels of learners, despite areas of difficulty that may block cognitive comprehension. The 2002 case study examines adolescent self esteem desires that balance the need to reach autonomy through standards to control impulsivity without the use of prescribed medication.

Case Study Introduction

Through positive peer, parental, and adult influence, the ultimate goal in human development is attainable for adolescence. Crises occur, but as theorists Erikson (1950), Freud (1933/1980), and Maslow (1968), indicate, without crisis human development growth is not

possible (Sheehy, 1977). To bridge the gap between childhood and adulthood, teenagers must challenge, question, and test adults to demonstrate growth and maturity. If challenges, questions, and tests are not met with adequate positive attention, adolescents often times participate in risky impulsive behavior. Serious questions arise as demonstrated in the 2002 case study focus of adolescents who question prescription medication use for the control of hyperactivity and impulsive decision making.

Why is it that adolescents who have taken prescription drugs for several years to control impulsivity, reading disorders, and/or behavioral problems, do not understand the impact of the misuse of the prescribed drugs? What choices, if any, are available if young adults choose not to take medication for control of impulsivity? Why do teenagers sometimes choose to discontinue the use of prescribed medications? The impulsivity of poor choices often leaves students wondering what went wrong, asking why no one was available with answers to help.

Background

Given the opportunity for expression without fear of a demeaning lecture, young people will prove time and time again that they are ready and willing to accept the responsibility for their own well-being. In general, adolescents want to succeed and describe themselves in positive terms (Erikson, 1950; Gardner, 1993). Endless conversations with students in tears with the plea "it changes who I really am" indicated a desire to discontinue prescription drug use. The opportunity to research alternative approaches to control impulsivity coupled with the growing frustration that methods other than prescription drugs must exist prompted the need for a research study.

A close up semi case study involving qualitative data with a selected group of students asked the following research question:

What can I learn and better understand in a case study type of approach about the problems and successes of a select group of high school students with special needs, concerning:

- their attitudes toward medication
- various strategies they have used that help
- problems they continue to experience on medication
- problems they continue to experience off of medication
- what awareness do they have about their own learning styles

Design

The selected group of eight high school resource students, four male and four female, range in age from 15-17. All with special needs, the students' disabilities range from reading, math, and emotional difficulties to the physical limitations of ADD or ADHD.

Methods of Data Collection

- individual questionnaire
- one on one interview
- work sample: 5 Senses Poem
- informal notes of student presentations of favorite music choice with lyrics
- informal classroom observations

Findings and Analyses

When asked about taking prescribed medications to control ADD or ADHD, and how it may sometimes feel, six different responses in regards to feelings were discovered.

Physical--"I feel like smashing someone's face in."
Mental--"My mind gets foggy."
Emotional--"It makes me feel sad."
Parent related--"If I don't take it, my parents will hate me."
Teacher related--"I do not want to get into it if he knows I do not take it."
Law related--"I get crazy and mean without it, so I could get in a fight and get hurt."

One of the student participants shared a hobby of photography with the researcher when asked why all the writing was necessary, explaining that sometimes a photograph can capture what words cannot express The need for informal observations prompted a student demonstration of what it felt like on and off of medication. The camera captured the responses and photographs were submitted with the original case study, but the photographs are omitted from the Application component of KAM 2 to protect the privacy of the participants.

Discussion of Results

In casual conversations, students willingly shared their uneasy feelings about taking the prescribed medications recommended to assist their special needs when it came to learning disabilities, ADD, ADHD, or impulsivity. In the explanation stages of the research project, an observation of obvious discomfort in some of the students emerged through agitation, nervousness, and fidgeting.

Going on record with feelings suddenly changed the once trusting and comfortable relationship that existed before the study transpired. It became a huge challenge to ease their fears, but through each step of the research, the relationship grew closer and the trust became even stronger than first imagined. Laughing and crying together strengthened the bond of trust, turning potential problems into successes for the students and for the researcher (Erikson, 1950).

As a result of the research, the students indicate that they respond to Gardner s Theory of Intelligences (1993). The need to incorporate a variety of styles to reach all levels of learners, and to blend new styles into daily teaching curriculum is urgent. Student responses indicate that oral presentations, skits, and musical interpretations heighten the process of teaching, learning, evaluation, and assessment because written language is difficult for them, and kinesthetic

presentations are an easier form of communication. The students revealed that on or off of medication, oral presentations are always easier to communicate their knowledge acquired from any particular course; preferred over written accounts due to learning disabilities with written composition.

Case Study Conclusion

The 2002 case study provides qualitative data regarding teenage impulsive decision making and the need to redirect impulsivity before resulting in negative consequences. The adolescents shared fears and insecurities about learning and together potential problems were eliminated with the discovery of new styles of learning that better suited their expressed areas of need. The serendipitous results indicate that more knowledge is needed about individual learning styles, which in turn empowers individuals to make healthy choices.

Adolescents can became more successful simply by asking, Am I a visual, auditory, or tactual learner? After individual learning styles were discovered and put into practice, the students understood more about why taking medication may or may not be appropriate. Finding ways to develop new strategies regarding prescription drug usage naturally evolved along with skills to interact with peer pressure when drug usage is questioned. Empowered with knowledge, the adolescent participants in the case study developed new social skills regarding their own learning, indicating that higher order thinking skills were developing (Bandura, 1977; Piaget, 1965, found in Papert, 1999). A social life is a necessary step in development according to Piaget (1965). "It means that social life is necessary if the individual is to become conscious of the functioning of his own mind . . ." (Piaget, 1965, p. 400).

Conclusion

The information contained in the 2002 case study is a mere stepping stone for adolescents who seek alternative solutions to becoming more successful in their social lives with control and direction of impulsive urges. Interviews and observations confirm basic beliefs of how teenagers feel about themselves, which in general, adolescents describe themselves in positive terms (Erikson, 1950; Gardner, 1993). Through positive peer, parental, and adult influence, good habits are instilled for decision making, giving command and control. Preceding good habits are thoughts, words, and actions, and "Aristotle said that a man becomes virtuous by performing virtuous acts; he becomes kind by performing kind acts; he becomes brave by doing brave acts" (Kilpatrick, 1992, p. 97). Keeping thoughts and actions under control in the interactions with peers can be confusing and misleading without a strong foundation on which to base every day decisions.

Role models and heroes are needed for positive influence and guidance, as internal and external thought processes develop. A strong foundation built on positive influence wards off negative impulsivity, leading to "a successful social life . . . immeasurably important to a child's happiness, health, and development" (Lavoie, 2005, book jacket). Unfortunately, in society today adolescents are often left without role models and heroes, seeking solutions to impulsivity on their own before higher level thinking skills are developed (Bandura, 1977; Piaget, 1965, found in Papert, 1999). If a lack of physical heroes exists in society for individuals, then traditional ideas and beliefs can be emulated to ward off risky behavior to "properly balance between process and content" (Kilpatrick, 1992, p. 116) through history, legends, myths, stories, and literature.

Genuine human fulfillment can be found in stories, so story telling in society can substitute for the absence of adult leadership because "the Ph.D. needs the story 'part' just as much as the peasant," (p. 135) or as the case study examples demonstrate, the adolescents need the stories. Colleagues in education can be reminded to use the idea of story telling to reach adolescents to impart necessary guidance and positive influence in the ardent search for autonomy if adult influence is absent from their lives. The Application results reveal a need to protect adolescent self esteem when addressing adolescent impulsivity and decision making, so why not use story telling as an agent to reach the sometimes unreachable age group? Powerful, yet subtle messages come from stories, and can protect anonymity if necessary.

Unacceptable impulsive behavior can be turned around to fulfill the urgent need in society to produce individuals capable of becoming tomorrow's leaders with time, patience, guidance, and social change. The youth of today can be taught to manage impulsivity to get positive and not negative results with knowledge used as power. Empowering adolescents with knowledge to understand, manage, and balance life crises in the identity search, to use strengths rather than concentrating on weaknesses, takes precious time. When educators, parents, and caretakers take time to reach adolescents a stronger grip on the future of society is gained if social change is embraced.

Today's youth hold the future of society in their hands, worthy of whatever time necessitates for a healthy passage from childhood into adulthood. Social scientists take a risk with acquired learning, as Kegan (1983) states, "at helping us to see better what it is that people are doing, what the eye sees better the heart feels more deeply" (p. 16). Through the generation of social change, society must recognize that adolescents are in need of direction and guidance.

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Appendix A

Masters Thesis*

Turning Problems into Successes for Special Needs Students

Marsha Swindler
February 2, 2002
Azusa Pacific University
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*Research conducted in accordance with requirements for Masters Thesis Program.

Introduction

As the panel assembled for the expulsion hearing, Adam, a high school sophomore, arrived ducking his head, trying to hide his tear-stained cheeks and red-streaked eyes. Two weeks previous, Adam made some poor choices and was suspended from school, pending an expulsion hearing. The dean of students, the campus police officer, the special education district director, Adam's case carrier, his homeroom teacher, Adam, and his parents were all present as the hearing proceeded to unravel the circumstances leading towards Adam's offenses.

Adam did not understand the severity of the impulsive decision he made even after his longtime friend and classmate was taken to the hospital in an ambulance. Adam had taken the prescription drug Ritalin from the time he was in the third grade, so it did not seem unnatural to share it with someone else. It sometimes made him feel funny, but how could that have caused his friend to almost die? She was a petite girl, 15 years old, less than one hundred pounds, and had asked him several times to give her some of his Ritalin. She told him that she heard it could "give me a rush."

One morning on the way to school Adam shoved his Ritalin in his pocket because he knew he had to eat before taking it. If he did not eat, he knew he would be sick to his stomach, and he was already too late for school to stop to eat. During the first hour of school, he impulsively slipped her his medication. An hour later, he saw the ambulance arrive.

Why is it that students like Adam, who has taken prescription drugs for several years to control impulsivity, and/or behavioral problems, do not understand the impact of the misuse of the drugs that they take? What choices, if any, are available if young adults choose not to take their medication anymore? Why do teenage students sometimes choose to discontinue the use of

their prescribed medications? What can I do to learn more about how to assist my students who are struggling with the need to achieve in school, but do not want to take medication to accomplish their goals? These questions began to haunt me as I listened helplessly to the stories told by my students.

My special needs students often require medication or behavioral modifications to assist them in achieving their highest potential both academically and emotionally. They begin to balk at continuing to take drugs because of the "strange" side effects caused by them. I began to wonder what I could do as a study skills teacher for these students. Were there any alternatives for students like Adam and his friend who desired to cease taking legally prescribed drugs? Could I find these alternatives?

After working as an assistant teacher for several years, I wanted to find some alternatives, so if students asked, I might have some answers. Thus, I became a teacher researcher after my first year as a credentialed teacher, with a quest to assist my students before the impulsivity of poor choices left them wondering what went wrong and why no one tried to help, before they shamefully ducked into a room ready for an expulsion hearing, and before they attended a funeral of a friend because they did not know that prescribed drugs can kill. My quest to try to find some alternatives to medication, if any, began. I wanted to find out what the needs of my students were and how I could better serve them.

Background: Personal Context for Study

I am of the firm belief that given the opportunity for expression, without fear of a demeaning lecture, young people will prove time and time again that they are ready and willing to accept the responsibility for their own well-being. My experience working with young adults spans twenty years, having worked as:

- an instructional assistant with special needs high school students
- a high school teacher of regular education and special needs students
- a teacher of Confirmation classes for at risk students
- a mentor for two of my four brothers with special needs
- a counselor/instructor for religious medals for Boy Scouts of America
- a mother of two sons and a daughter (one diagnosed with ADD; one with ADHD)

The ability to listen to young people, without sitting in judgment, is a gift that I possess. I care about young people and their concerns, worries, disappointments, joys and wishes, which are mine as well. Knowing that they may share anything with me without judgment has allowed me to accumulate the background knowledge to form the basis of my teacher research study.

For many years I have heard the concerns of my high school students in the Study Skills Resource classroom as we work together through their struggles with academics, family, relationships and peer pressure. One common chord that has repeatedly been struck throughout my years of working with these young adults is the one that I have not had answers for until I began my teacher research. My students have asked repeatedly for an alternative to taking the prescribed drugs that are given to them, so that they can concentrate enough to achieve their highest potential in academics. I have had endless conversations with students in tears because they do not want to take medication anymore because "it changes who I really am." They know of no other way to succeed, and I become frustrated right along with them because I do not have any answers to help them. In my heart I knew some other way must exist, but the opportunity to explore the issue for the answers they so desperately wanted and needed was not yet available to me.

My curiosity to find out if any other teachers had had similar experiences with their students encouraged me to bring up conversations with my colleagues. In many lunchtime discussions teachers, deans, counselors, and school nurses all shared their personal stories of students who asked for answers to, "how do I get off of prescription drugs and still do my best in school?" The conclusions were the same: we did not have any quick answers for the solution to their heartfelt pleas. So many professionals, who shared similar stories, with no direction as to how to begin to seek the much needed solutions in order to better serve their students, felt extreme frustration.

When students tell me stories of how drug abuse begins, many times the common denominator is the fact that they were prescribed drugs for hyperactivity or learning disabilities

some time during their childhood. The feeling that a pill will fix everything planted the seed. For many reasons, my students have shared that they felt, "if I took pills to learn, then I can take pills to cure whatever I want them to cure." At times, what they were trying to cure was what all teenagers normally experience: the growing up pains of becoming adults being asked to make responsible adult decisions (Erikson, 1950). Teenagers do not always understand that growing up, making responsible decisions on the way to adulthood, is often confusing, and even painful at times. When normal decision-making became confusing or difficult, my special needs students often turned to drugs because when school was too confusing, drugs were available when no one else was there to ask how to solve the problems.

Too many stories, like Adam's, end in tragedy with a trip to the emergency room of the hospital. My teacher research platform began as a constant frustration that necessitated urgency for answers: how can I better serve my special needs students who are seeking ways to succeed without the use of drugs? What can I do to learn more about alternatives to prescription drugs for controlling hyperactivity and behavior modification in high school age students? My students needed answers and I wanted to find the answers for them, so I decided to begin a teacher research study.

Review of Literature

In the beginning I was as confused as my students as to what type of alternatives, besides drugs, were available for ADD/ADHD students to control impulsivity and allow focus. I looked first to the medical profession, finding several professionals who had conducted similar research and written articles addressing my topic of concern.

My high school students were looking for ways to control their hyperactive impulses, without taking mind altering drugs, so that they could concentrate in school. According to Dr. Ben Feingold (1975), who served as Chief of Pediatrics at Cedars of Lebanon Hospital and Children's Hospital, there was a solution to their problems. As a Kaiser Permanente pediatrician, specializing in childhood allergies, Dr. Feingold became the Director of The Institute of Medical Entomology in 1951. He began a study on the correlation between allergy relief and subsequent calming affects of his elimination diet.

Dr. Feingold's elimination diet "provides the opportunity for your child's true self to emerge and develop without the use of drugs" (Feingold, 1975, p.2). As I further researched, I found that there is a national organization called Feingold Association of Southern California that promotes The Feingold Nutrition Program which "has helped thousands of children to control their activity level, adjust to school situations, and become cooperating members of the family without the use of medication" (Feingold Newsletter, 1980, cover page). Today we know that not only do children benefit from the Feingold program, but adults with ADD/ADHD benefit, as well.

Feingold Nutrition Program Information:

The child growing up in the U.S. in the 1940's got:	The child growing up in the U.S. today gets:
White toothpaste	Multi-colored toothpaste, perhaps with sparkles
Oatmeal	Sea Treasures Instant Oatmeal (turns milk blue)
Corn flakes	Fruity Pebbles
Toast & butter, jam	Pop Tarts
Cocoa made with natural ingredients	Cocoa made with artificial flavoring, & some with dyes.
Whipped cream	Cool Whip
No vitamins (or perhaps cod liver oil)	Flintstone vitamins
White powder or bad-tasting liquid medicine	Bright pink, bubble-gum flavored chewable or liquid medicine
Sample school lunch: Meat loaf, freshly made mashed potatoes, vegetable. Milk, cupcake made from scratch.	**Sample school lunch:** Highly processed foods loaded with synthetic additives, no vegetable. Chocolate milk with artificial flavor.
Sample school beverage: Water from the drinking fountain	**Sample school beverage:** Soft drink with artificial color, flavor, caffeine, aspartame, etc.
Candy in the classroom a few times a year at class parties.	Candy (with synthetic additives) given frequently.

The following list was developed by Dr. Feingold to assist parents and professionals in identifying possible symptoms of hyperactivity.

Marked Hyperactivity

- Constant motion
- Running instead of walking
- Inability to sit still
- Inappropriate wiggling of legs/hands

Impulsive Actions

- Disruptive behavior / disturbs others
- Unresponsiveness to discipline
- Unkindness to pets
- Poor self-control
- Destructive behaviors: throws, breaks things
- Little or no recognition of danger to self
- Inappropriate noises
- Excessive talking
- Loud talking
- Interrupts often
- Abusive behavior
- Unpredictable behavior

Emotional Concerns

- Low frustration tolerance
- Depression
- Frequent crying
- Demands immediate attention
- Irritability
- Overreaction to touch, pain, sound, lights
- Panics easily
- Nervousness
- Low self-esteem
- Mood swings
- Suicidal thoughts

Compulsive Actions

- Aggression
- Perseveration/repeating of an activity
- Touching things or people excessively
- Workaholic habits
- Chewing on clothing, other objects
- Scratching, biting & picking at skin

As a teacher researcher, I began to feel that there were more answers for my special needs students, so I went again to the medical profession for answers. I began to search for clarification of the term ADHD and found the ADHD web sight, Alternative Treatment Approaches for ADHD. A wealth of information was opened up to me from definitions to treatment suggestions to more information about diet and nutrition. There are pages of books, videos, and additional web sights available through the ADHD web sight, so I began to explore further.

The web sight provided me with the following useful information:

> ADHD is generally considered to be a neurobiological disorder. Researchers believe that chemicals in the brain not working properly cause the symptoms of ADHD. It is characterized by the inability to sustain focused attention, impulsivity and hyperactivity. There are 3 types, based on the latest diagnostic criteria: ADHD with the combined characteristics of hyperactivity, impulsivity, and inattention; ADHD with inattention as the primary characteristic, and ADHD with hyperactivity and impulsivity as primary characteristics.
>
> The first and third types are most often and easily identified because these children tend to have symptoms that are highly noticeable. These are the ADHD children who are loud, always on the go, take risks, engage in dangerous behavior, and talk back to adults. The second group, which is often where our female ADHDers are found, is the quiet daydreamers. They lose personal belongings, can't work alone, don't finish tasks, and are often lost in their own thoughts.
>
> Researchers estimate that ADHD occurs in as few as 1% and as many as 20% of children fewer than 18 years of age. The most accepted estimate is 3-5%. That translates into one to three children in any classroom of thirty students. Although ADHD is considered a disorder, it is not all bad. Many people with ADHD attribute their creativity, energy, and exciting unpredictability directly to the ADHD. [Accessed: 9-22-01]

I could see by the related web sight suggestions that there were many avenues that I could explore for my students, so my Internet search continued and I found a web sight that affirmed the values of The Feingold Association and the ADHD web sight. The belief that hyperactivity, impulsivity, and learning disabilities can be controlled without medication is also expressed by The Drake Institute of Behavioral Medicine (2001). Rather than use only diet and nutrition, the Drake Institute uses EEG neurofeedback, more commonly known as biofeedback, to assist those who seek alternatives to drugs to control impulsivity that can lead to learning disabilities.

The inactivity of the brain of ADD and ADHD patients can be complicated and difficult to describe, so the Drake Institute uses a simile to make it easier to understand. "We like to compare the brain to a car that is stuck in first gear; no matter how much the driver steps on the gas pedal the car will never be able to go beyond a certain speed, no matter how capable or powerful its engine is" (Drake Institute, 2001). This definition was helpful to me as I thought back to my special needs students' behavior: many times it seemed stuck. The students easily understood the simile because driving is important to them. The information from the Drake Institute enabled me to answer some of the many questions that my special needs students have about their disabilities.

I realized at this point in my research that I needed more information about exactly what having a learning disability entailed. I turned to a video created by Richard D. Lavoie, M.A. Ed. (1972). In cooperation with the Eagle Hill Outreach Program and PBS Video, a department of the Public Broadcasting Service, Richard Lavoie, a nationally known expert on learning disabilities, recreates the "... frustration, anxiety and tension felt by a learning disabled student in a classroom experience" (Lavoie, 1972). The video reveals some of the classroom strategies necessary for working with learning disabled children. As I viewed the video I realized that many of Dr. Lavoie's ideas are applicable to my own students' classroom needs.

The availability of classroom strategies was not difficult to find in my teacher research study and did not take much time to ascertain. Previously I had used the same excuse as other parents and educators: not enough time. We do not always want to make the time to find the

alternatives. The quick fix to a problem is often easier for us, but not really for our students, as evidenced by their desire to stop taking prescription drugs.

The article, "Mother's Little Helper," by LynNell Hancock (1996) quotes a Cedar Rapids, Iowa pediatrician, "It takes time for parents to sit down and talk to kids. . . it takes less time to get a child a pill" (Sharon Collins, 1996). Hancock goes on to say in the article that we are living "in an impatient culture that feeds on deadlines, due dates, sound bites and megabytes" (Hancock, 1996).

The fact that parents do not have time, or do not take the time to talk to their children is obvious to me by the way some of my students pour their hearts out in conversations at school. I always encourage them to talk to their parents, but the common response is that if they live with both parents, the parents are not home from work until after the students are in bed, and gone before they get up in the morning. Often times they are shuffled between two households due to divorce or separation. The time for simple conversation or serious discussion is even further limited because parents often mistake quality time for a trip somewhere, rather than a stay-at-home heart-to-heart talk. We have lost the ability to talk to our children, or to value simple conversation with each other. Students need our time.

Not only do students need our time, they need advice and counseling from their number one educators, their parents, throughout childhood and more importantly throughout their teenage years (Erikson, 1950). More can be accomplished in a one afternoon conversation during a concert in the park (especially if a child is a musical learner), than can be accomplished in a classroom lecture.

In 1983 Howard Gardner concluded that we all learn in a variety of ways, rather than just from the traditional lecture-take notes format. According to Gardner (1989) there are at least seven intelligences, with current research that there may be up to nine intelligences. If we as educators and as parents discover the best learning styles of our children, then maybe the need for drugs can be eliminated. By addressing the learning styles to which each student responds, we can eliminate the boredom, hyperactivity, and lack of motivation that occurs by not challenging our students. When a medical doctor hears that a student is not attentive in class, rather than interview the student and possibly the teacher about how the student learns best, conclusions are hastily reached with trial and error prescriptions to drugs.

Hancock's (1996) article, "Mother'S Little Helper," lists some of the choices that doctors have when prescribing medications for ADD and ADHD patients. I realize that it is important for my teacher research study to know and understand some of the medications and their possible side effects so that I am able to more readily understand what my students are referring to in my interviews. The side effects that the students often refer to are confirmed in The Medicine Cabinet list, taken from L. Albers' *The Handbook on Psychiatric Drugs* (2001).

It is important to include it so that if a student cites reference to a particular drug, the list can be checked for accuracy.

THE MEDICINE CABINET

Stimulants: Ritalin, Dexedrine, Cylert

Possible side effects: insomnia, weight loss, irritability, nausea, dizziness, headaches

Antidepressants: Tofranil, Norpramin, Elavil

Possible side effects: Dizziness, drowsiness, dry mouth, excessive sweating, weight gain, fatigue; may also affect blood pressure and heart rate. Avoid if there is family history of seizures or heart attack.

From the "need to know" definitions and side effects of prescribed medications, to the need to know more about the nature of human beings, I continued my research. Another reference I found to be helpful goes back to a discovery called The Zone of Proximal Development (Vygotsky, 1978, found in Dembo, 1994). Vygotsky, a child psychologist, discovered that despite the surroundings and circumstances, if a child has the inherent ability to learn and achieve to a certain potential, then that child will indeed learn and develop. Even if the education system fails to teach the child, Vygotsky believes the child will learn from surroundings, from peers, and from any and every source available.

Knowing that learning continues to take place outside of school, we have to encourage our parents and students to take advantage of all learning situations. A "quick fix learning pill" needs to be eliminated. More time needs to be allotted to educate our youth outside the classroom. I will continue my teacher research study by interviewing special needs students to find and compare my results with the background information that I researched.

Terms Defined

ADD-Attention Deficit Disorder is a term used to describe a complex neurological disorder showing signs of "paying too much attention to too many things at one time," thus impairing the ability to focus and learn in school.

ADHD-Attention Deficit Hyperactivity Disorder is ADD with symptoms of hyperactivity--lack of ability to hold still for any length of time.

Special Needs Students-Any student who requires added attention/support beyond average classroom instruction to facilitate learning: deaf, blind, physically handicapped, ill, etc.

Resource Students-Students with average to above average intelligence, identified with specialized testing, who need to receive extra support services to facilitate learning.

Resource Specialist-Teacher specifically trained to work with students having special needs.

At Risk Students-Students not able to succeed with regular classroom instruction due to home environment issues, needing specialized instructions to succeed academically.

Mainstream classes-Classes without a Resource teacher or Instructional Assistant.

Meds/medication-Prescription drugs used to control behavior to facilitate learning.

Ritalin-Most popular prescription drug recommended for ADD and ADHD.

Learning Disability-An area (cognitive or psychological) in an educational setting, identified by specialized testing, that prohibits regular classroom learning to take place.

The Seven Intelligences identified by Howard Gardner:

Linguistic-Verbal-The ability to use words and language to think and to express ideas.

Logical-Mathematical-The ability to solve problems by using measurement, logic, and calculations.

Visual-Spatial-The ability to visualize images and to create design with color, shape, and size.

Body-Kinesthetic-The ability to control bodily movement and to handle objects skillfully.

Musical-Rhythmic-The ability to hear, appreciate, and produce rhythms and melodies.

Interpersonal-The ability to understand other people's feelings, values, and needs and to communicate effectively.

Intrapersonal-The ability to objectively reflect on, evaluate, understand, and change our actions and feelings.

Assumptions and Beliefs

My plan is to get to know my students personally, and build caring, lasting relationships, especially with the difficult ones. I want to create an educational environment where students want to be where they can succeed, and where they can learn that conflict is not to be feared. We must embrace conflict as an opportunity in disguise: then we will have a more effective learning process. If I succeed, I will create a feeling of self-worth in my students that will affect how they succeed now and in the future. If I fail, I will learn from my mistakes and strive for a better way to serve my students. Children never forget what happens to them in school, so I want what happens to them to be profoundly positive. How students feel about themselves will stay with them forever. It is not the curriculum that they will remember, but the emotionally caring environment in which we teach them that will remain in their hearts. Understanding goes a lot further than discipline. "Since thou hast closed their minds to understanding, therefore thou wilt not let them triumph" Job 17:4. Punishing is not always the best way to handle things because students do not care if you discipline them, just if you care about them. In Erik Erickson's (1950) Theory of Psychosocial Development, he calls this trust.

Many students arrive at school with their emotional and physical needs unmet. Strangers are caring for them, or they are being left alone for most of their waking hours. These strangers provide minimum supervision in most cases, and the values of life are never taught. We, as teachers, are the strangers that are with these children for the largest part of the day, so it is up to us to make them feel loved and valued while we are teaching them love and values. If we do not

make our students feel loved and respected while we are trying to teach them the skills for a productive future, then our students will go elsewhere to find that fulfillment.

Research Question and Approach

After spending many hours researching the opinions of the experts, I realize that I have uncovered some of the answers to some of the questions that my special needs students have asked of me in the past. I decided at this point of my research to do a close up quasi-case study involving qualitative data with a selected group of students by asking myself:

What Can I Learn and Better Understand In A Case Study Type of Approach About The Problems and Successes of A Select Group of High School Students with Special Needs, concerning:

- attitudes toward medication
- various strategies they have used that help
- problems they continue to experience on medication
- problems they continue to experience off of medication
- what awareness do they have about their own learning styles

Study Design: Participants Selected

I selected a group of eight high school students, male and female, ages 15, 16, and 17 years old, all with special needs that range from reading disabilities and emotional difficulties to physical disabilities of having ADD or ADHD. I held interviews with them during their study skills classes. In the interview process, I discovered the current needs of my high school students by discussing their problems and successes.

Setting for Study

My study took place in a casual setting in which I saw the students at the same time every day to ensure their comfort and ease with the interview and questionnaire process. They came into a study skills classroom for a 55 minute period, every day at 10:30 a.m. The students brought the work from their mainstream classes and they received any assistance that they needed. A mainstream class is any class in which the student is enrolled that is not taught by a resource specialist, or does not have an instructional assistant in the class every day. The special needs students are mainstreamed as much as possible.

Activity for Participants

The initial activity for my select group of high school students will be a casual interview. We will simply have a discussion of how things are going in their life and I will explain my teacher research study to them. These types of conversations are everyday occurrences in the study skills room. If I sensed any anxiety in my student participants, I did my best to ease any stress concerning the interview.

A simple questionnaire with no more that 8 to 10 questions that has a fill-in-the-blank format was used next. After our initial individual interview, I asked the students to fill out the questionnaire individually, reassuring them that no one will know their names or who they are in any way.

An assignment format is a comfortable way for students to express feelings and emotions when it is sometimes difficult to express them. I asked the students to do a 5 Senses Poem that can incorporate how they feel on and off their medication.

I asked the students to bring in a sample of their favorite kind of music with the lyrics so that they can explain what the lyrics mean and why they like that kind of music. We played their music and discussed it as a group, while I took notes.

Methods of Data Collection

- individual questionnaire
- one on one interview
- work sample: 5 Senses Poem
- informal notes of student presentations of favorite music choice with lyrics
- informal classroom observations

I read and reread the data collected from each student and looked for problems and solutions that my special needs students expressed. I examined the data for any similarities and differences by using a coding system to keep track of the information.

Findings and Analysis

Feeling overwhelmed at first and not knowing exactly where to begin, I reviewed my class notes and then read and reread the process guide. Step by step I began to make sense out of my findings, realizing that some of the answers that I was looking for did not come out as clearly as I thought they would. Yet, I found some other avenues that I may be able to pursue. Until I sorted through the findings, over and over again, it did not become clear that I would need to abandon the use of some the results and use other resources that I had available.

Insights from Individual Questionnaire

My students did not respond well to the questionnaire and they readily expressed their feelings. Some expressed that it felt too much like a required English assignment, while others were embarrassed because of their lack of skills in spelling and grammar. We discussed it as a group, but even after the reassurance that spelling and grammar did not count, when it came down to doing it, most were reluctant.

Amazingly, my hobby as a photographer filled up the lack of questionnaire results, as I reviewed the pictures that I took throughout my research project. (See permission for use of student photographs in Appendix B.) The body language projected in figures 4, 5 and 6 showed me how stressful the questionnaire must have been for them. My students like to talk, not write, and this was an added insight to my research that I was not originally looking to discover.

Insights from Individual Interview

I did not use a set format for my interviews due to the sensitive nature of the topic and the individuality of the different prescribed drugs that the students are given. When my students see questions being read, they tend to get uptight and are less likely to share their sincerity. I was able to categorize their answers through feelings that I perceived from casual conversations and from memory after the interviews.

When asked about taking prescribed medications to control ADD or ADHD, and how it may sometimes feel, I discovered six different responses in regards to feelings.

They are:

Physical--" I feel like smashing someone"s face in."
Mental--"My mind gets foggy."
Emotional--"It makes me feel sad."
Parent related--"If I don"t take it, my parents will hate me."
Teacher related--"I do not want to get into it if he knows I do not take it."
Law related--"I get too crazy and mean without it, so I could get in a fight and hurt someone."

Insights from Work Samples

Included in Appendix A-1 and A-2, please find samples of the 5 Senses Poem worksheets. My reasoning for using them is based on Gardner"s Intelligences: they are simple and easy to understand, colorful and special needs students usually enjoy poetry. I gave the students some choices regarding the poetry assignment. They could:

1. Do the assignments twice: on medication and off of medication (some had confided in me that they forget to take it).
2. Illustrate poems: on and off of medication

My analysis of the data collected from their poetry worksheets allows me to infer that Ritalin, and other prescribed drugs makes the students feel different than they want to feel, but without any alternatives, they are fearful of what consequences may result if they abandon its usage. Some expressed fear of the law, parent disappointment, and teacher disapproval due to lack of assignment quality. It was obvious from the poetry done off of medication that quality of work deteriorated. It was difficult to read, appeared rushed, and neatness was not a priority.

Insights from Informal Notes: Music Assignment

In general, high school students enjoy music, so I used the assignment as part of my teacher research project to allow my results to have more triangulation. I gave them the same choices that I used when they did the poetry:

1. Do the assignment twice: on and off of medication.
2. Illustrate it: on and off of medication

Out of my observable note-taking data I found three categories of feelings experienced by the students that added to the problems of how they felt taking prescribed medication. They were physical, mental, or emotional feelings. Most of the students expressed that music did not need an illustration, but that they did feel differently listening to it, depending on whether they were on or off of their medication. The samples of the music and lyrics that they shared were indicative of the feelings they expressed and revealed the extreme differences that some felt whether on or off of medication.

Insights: Informal Classroom Observations

One of my students shares my love of photography, so when asked one day what I was writing, I shared that I was making informal observations. She indicated to me what it felt like on and off of her medication, so I grabbed my camera. Pictures omitted to protect participants.

Overall Insights

In order to validate my findings and ensure the reliability of the data, I compiled my results and reflected upon what benefits might emerge for my students as a result of my research. I read and reread my notes from interviews, work samples, informal observations, and from the music

presentations. I began by reviewing my written notes, but I felt that I was missing something. I took out the photographs of the students that I took throughout my research and suddenly the pieces began to take shape.

The expressions and body language visible in Figures 4-9 depict what students are feeling more than the words they expressed. One example that I found as I looked at my pictures was that the students expressed concerns and/or confidences by the way they sat in their seats. A withdrawn student tends to slouch, whereas a student ready to face the day with confidence sits erect with eye contact. I captured in print what some of my students were unable to disclose in verbal or written form.

The triangulation of my data substantiated my findings. I found out that the feelings that emerged concerning the use of prescribed drugs to control ADD or ADHD were apparent in each and every method of data collection. My students felt physical, mental, or emotional anguish when discussing their medication concerns. I learned that by eliminating the questionnaire, my students discovered that they could complete what I was asking them to do in another way. Together we grew and turned certain problems into successes, learning that research can be fun despite needs to compromise.

Discussion of Results

Establishing trusting relationships with students over my years in education comes naturally, but testing the relationships by focusing attention on a particular research topic was a new kind of challenge for this teacher researcher. My students became reluctant to share openly when they knew I might be using their work as samples for my research. The reluctance to complete one of my methods of collection, the questionnaire, gave me new insights into how I needed to make changes in my teaching so as to continue to reach my students successfully.

As I discovered that I needed to make some changes to reestablish connections with my students, I also realized some new insights into my student's behavior patterns that I had not seen before my teacher research began. In previous casual conversations, my students willingly shared their uneasy feelings about taking the prescribed medications recommended to assist their special needs when it came to learning disabilities, ADD, or ADHD. As I began to explain the research project, I noted uncomfortableness in some of my students.

Going "on record" with their feelings suddenly changed our relationship. It became a huge challenge to ease their fears, but as we reached each step of the research, we grew closer and the trust became even stronger than I imagined that it would. We laughed, we cried, and we turned potential problems into successes for them and for me, as well. For example, as they spoke frankly I learned that they were embarrassed to put things down in writing, but talking about it was easier. I promised not to put any of their work in print, and they in turn promised to be completely honest in their responses. Specific examples of their work are not photocopied and included, but conclusions of the results of what they did for my research can be trusted.

Changes in Curriculum

As a result of conducting my teacher research project, I realize that I need to be more sensitive to my student's feelings and suggestions. They enjoyed having their pictures taken, and I had not originally planned to use as much photography in my research. I intended to use more student work samples, but I did not realize how sensitive the issue was to them. I found that if I remained open-minded to a change of my original format for how I wanted to conduct the research the students were more willing to be openly honest in their responses. Abandoning the questionnaire resulted.

Many pictures are included because I found that it was more productive to snap pictures than it was to ask for a written response. My students showed me that they indeed respond to Gardner's Intelligences and I plan to incorporate more of a variety in my teaching as a result of this research. In the future, I will ask for more oral presentations, skits, and musical interpretations. My students revealed to me that on or off of medication, oral presentations are

always better ways for them to communicate their knowledge of a particular topic than written ones. Becoming more sensitive to their learning styles is something that we all learned as a result of this research project. The end result as educators is to teach our students; so adapting to their learning styles was not a hindrance to my teacher research, but an added plus to the results that I obtained.

Applications

In the future, I would like to take what we learned in the study skills room out into the mainstream classes. My students shared that the environment we created in our research group made them forget the feelings and pressures of whether they remembered to take their medication or not. They felt respected for what was shared in the oral discussions, in the poetry assignments, in the music presentations and with the lyrics they chose to share. "It feels like what I care about and what I have to say really matters. In my mainstream classes, I just feel like I always need to be careful about making mistakes. When I have to be so careful about every thought or word, then I worry about if my medication will make me a zombie, unable to think clearly."

The heartfelt responses that my students shared during our research project will remain with me always, as I will strive to recreate the environment they need to succeed. If the opportunity to share this information arises, I feel passing it along will benefit all students. As a result of my teacher research, not just the students with special needs will have an opportunity to become more successful, but all students will reap the benefits. In the future, I plan to be more

vocal in discussions with colleagues as to how the use of Gardner's Intelligences came into play in my research.

Limitations

Due to the nature of the sensitivity of the issues of prescribed medications, limits are naturally going to arise. Generalities were necessary when more specific reactions to drugs or the abuse of them came up in conversations with the students. If I was asked to keep confidences, I did.

When the research began, some of my original students left school due to unforeseen circumstances, so changes in my student samples created some roadblocks. Remaining flexible at all times throughout the research was a necessary component. The most significant limitation was that of the type of skills in which my students excelled. Nevertheless, where they lacked written skills, they more than overwhelmed me with their heartfelt verbal responses and actions.

Conclusion

In the hierarchy of basic survival needs, feeling safe is a priority. When students feel that it is safe enough to share why school is not an easy place to succeed, then we as educators have provided an environment that meets their basic safety needs. Students with special needs, more often than not, experience problems understanding how to find solutions for basic survival skills. Adam, my special needs student, and his friend did not understand how to survive in a world where prescribed drugs were the only recommended solutions to his ADHD. I could not help

Adam then, but I can now because my teacher research provided answers to my quest for alternatives.

As I stepped through the door of their world of special needs, empowered with newfound information from the experts, my eyes were opened wider than ever before. My students shared their fears and insecurities about learning, and then together we took potential problems away with the discovery of new styles of learning that better suited their area of need. When we realized that we needed to know more about how to learn, we became more successful simply by asking, Am I a visual, auditory or tactual learner? After individual learning styles were discovered and put into practice, my students understood more about why taking medication may or may not be appropriate. Finding ways to develop new strategies regarding it s usage naturally evolved.

The information contained in this research project is a mere stepping stone for my special needs students who seek alternative solutions in their lives. As I shared what I learned with them, they confirmed my basic beliefs of how students feel about themselves. It is not the curriculum that they will remember, but the emotionally caring environment in which we teach them that will remain in their hearts. In the words of Dr. Haim Ginott (1969), As a teacher I possess tremendous power . . . I can humiliate or humor, hurt or heal . . . It is my response that decides . . .” (Ginott, 1969).

Appendices

Appendix A-1: Poetry Explanation

ANGER IS . . .

When Eddie Hall gets mad, his fists do the talking.
Most people would agree that there are better ways to deal with anger.
One good way is to write about what you are feeling.
That's just what we have done in the poems below.
They are *called five senses poems*. Which one feels right to you?
Think about it,
and then write a poem of your own using the worksheet provided.

ANGER
Anger is the color of fire.
It sounds like fingernails on a chalkboard.
It tastes like hot chili.
It smells like rotten eggs.
Anger looks like an elephant jumping up and down.
It makes you feel tired.

ANGER
Anger is Coke-can red.
It sounds like a swarm of bees.
It tastes like sour milk.
And smells like burning rubber.
Anger looks like witch's hair.
It makes you feel ugly.

ANGER
Anger is dark as an alley.
It sounds like a lion locked in a bathroom.
It tastes like an old, dusty book.
And smells like unbrushed teeth.
Anger looks like a howling baby.
It makes you feel alone.

Appendix A-2: Poetry Assignment

5 Senses Poem

Choose an emotion.

Example: fear, love, happiness, pride, disappointment, joy, sorrow, contentment, anger, frustration

Line 1: Tell what color the emotion is.

_____ is the color _____.

Line 2: Tell what the emotion sounds like.

It sounds like _____.

Line 3: Tell what it tastes like.

It tastes like _____.

Line 4: Tell what it smells like.

And smells like _____.

Line 5: Tell what the emotion looks like.

_____ looks like _____.

Line 6: Tell how it makes you feel.

It makes me feel _____.

Appendix B: Permission for Use of Student Photographs

I give my permission for Mrs. Swindler to use my student's photographs for class projects and for Internet projects regarding the 2002 Case Study.

Student Name _____

Parent or Guardian_____

Date _____

Appendix C: Questionnaire

1. What do you like to do in your free time outside of school?

2. If you could change something about your school, what would you change and why? What would you change about your family? What would you change about the world?

3. What makes a good teacher? What makes a bad teacher?

4. Where do you see yourself in 5 years? In 10 years? Any plans for marriage or children?

5. Do you know CPR? First Aid?

6. Have you had any chronic illnesses in you life? Have you had to take medication on a regular basis? Please explain.

7. What is a pediatrician? An optometrist? A cardiologist?

8. If your best friend asked you to copy your homework, would you let them? What about copying a test?

9. What are you like as a person? Circle all that apply:

complicated	flirtatious	extrovert	introvert	good friend	honest
easy to please	picky	humorous	reliable	dishonest	selfish
hard working	studious	self conscious	neat	immature	messy
sympathetic	worrier	fun-loving	easy going		

10. Is there anything you would like to say? Please feel free to add any comments or ask any questions.

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