Adolescent Development: What Do Our Students Need to Succeed?

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Important Areas of Adolescent Development

- Social

- Executive functioning

- Academic

- Personality

- Independence

# What Are Critical Periods and Why Are They Important?

- Critical periods occur during periods of rapid brain growth when a skill is most easily learned and retained

- Infants learn to hear and identify the specific sounds of native language

- Young children most easily acquire the language of sociality

- Language areas become mylenated during early adolescence

# What Are Critical Periods and Why Are They Important?

- Adolescence is a time of massive brain change, especially in the frontal lobes which control executive function

- Myelination increases 100% during adolescence

- Executive function includes working memory, impulse control, problem solving, and inhibition

- Social-emotional development during adolescence is critically determined by the unfolding of important brain functions, the experiences occurring at this time, and the interaction effect between the two

► **Myelination of PNS and CNS Axons**

Myelination in the Peripheral Nervous System

Axon
Nucleus
Schwann cell
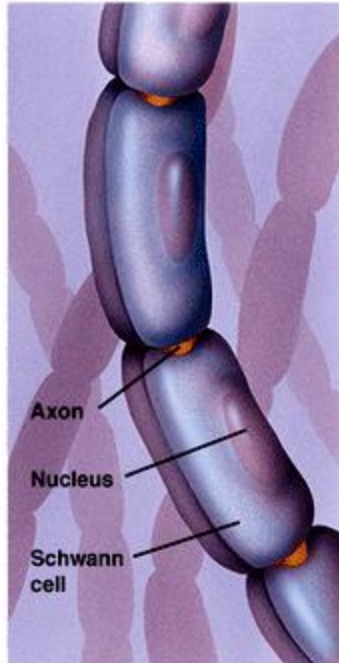
Myelination in the Central Nervous System

Nucleus
Axon
Oligodendroglia

Jacob L. Driesen
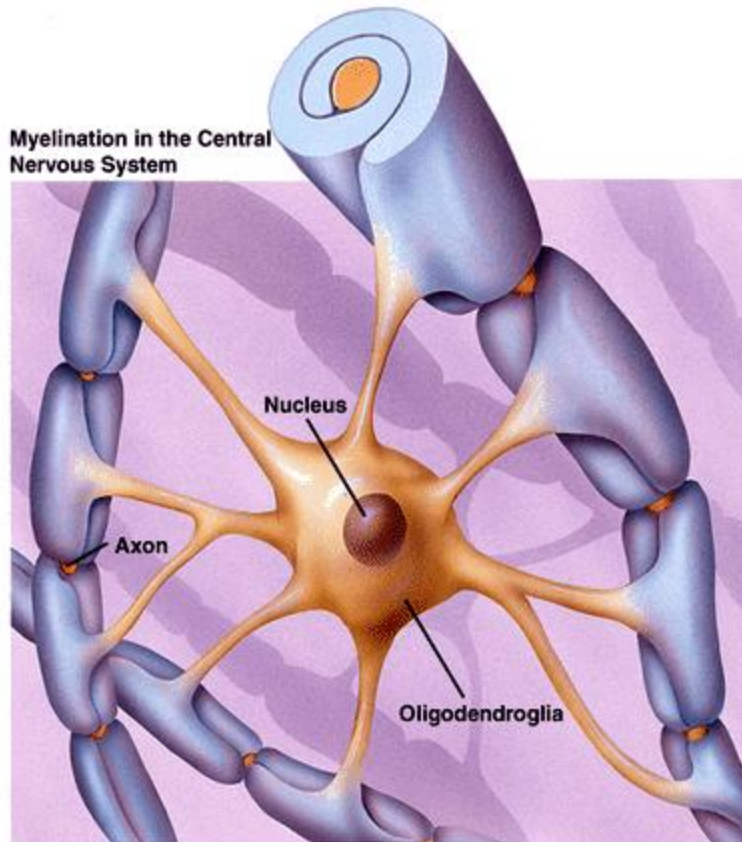
Executive Function

Executive function refers to a wide range of abilities including planning, organization, goal selection, flexibility, self regulation, inhibition, and set maintenance. They are called executive functions because they represent the organization and control mechanisms of the person. These cognitive processes are thought to be mediated by the frontal lobes.

Executive Function

- A significant effect of executive function deficits is often a pervasive problem in planning and organization that may be viewed as laziness, noncompliance, or willfulness.

- Often an individual who had been viewed as particularly bright as a young child is seen as less and less competent because of inability to organize and accomplish tasks less intelligent individuals do easily.

- Executive function demands increase substantially by 4th grade and increase every year thereafter

- Individuals with ASDs usually have executive function deficits.

Executive Function

- Difficulty holding information, particularly if it is presented orally

- Trouble following directions

- Keeping track of things

- Remembering what to do

- Following tasks through to completion

- Forgetting to bring needed items to school or work

Executive Function

- Lateness

- Reacting tearfully or aggressively to transitions

- Lack of readiness or general disorganization

- Poor planning or time management-cannot accomplish long term projects

- Often spending an inordinate amount of time on a small aspect of a task, running out of time for the rest

- Distractibility impeding sustained concentration

- Impulsivity, causing pursuit of more appealing activities

Executive Function

- Young adolescents who manifest these problems need
  - Evaluation of executive function difficulties
  - An explicit plan for remediation of those that may be impaired
  - A well delineated plan on the IEP that specifies what kind of remediation will be provided and what supports must be in place across teachers and classes

EXECUTIVE FUNCTIONS

- Inhibit: Control impulses; stop behavior
- Shift: Move freely from one activity/situation to another; transition; problem-solve flexibly
- Emotional Control: Modulate emotional responses appropriately
- Initiate: Begin activity; generate ideas
- Working Memory: Hold information in mind for purpose of completing a task
- Plan/Organize: Anticipate future events; set goals; develop steps; grasp main ideas
- Monitor: Check work; assess own performance
- Attention: Regulate and modify how much attention is needed and where

Disorganization and poor executive function

Executive function problems are an issue for many students.

The most important element in addressing difficulties is to specify just what is the interfering skill issue.
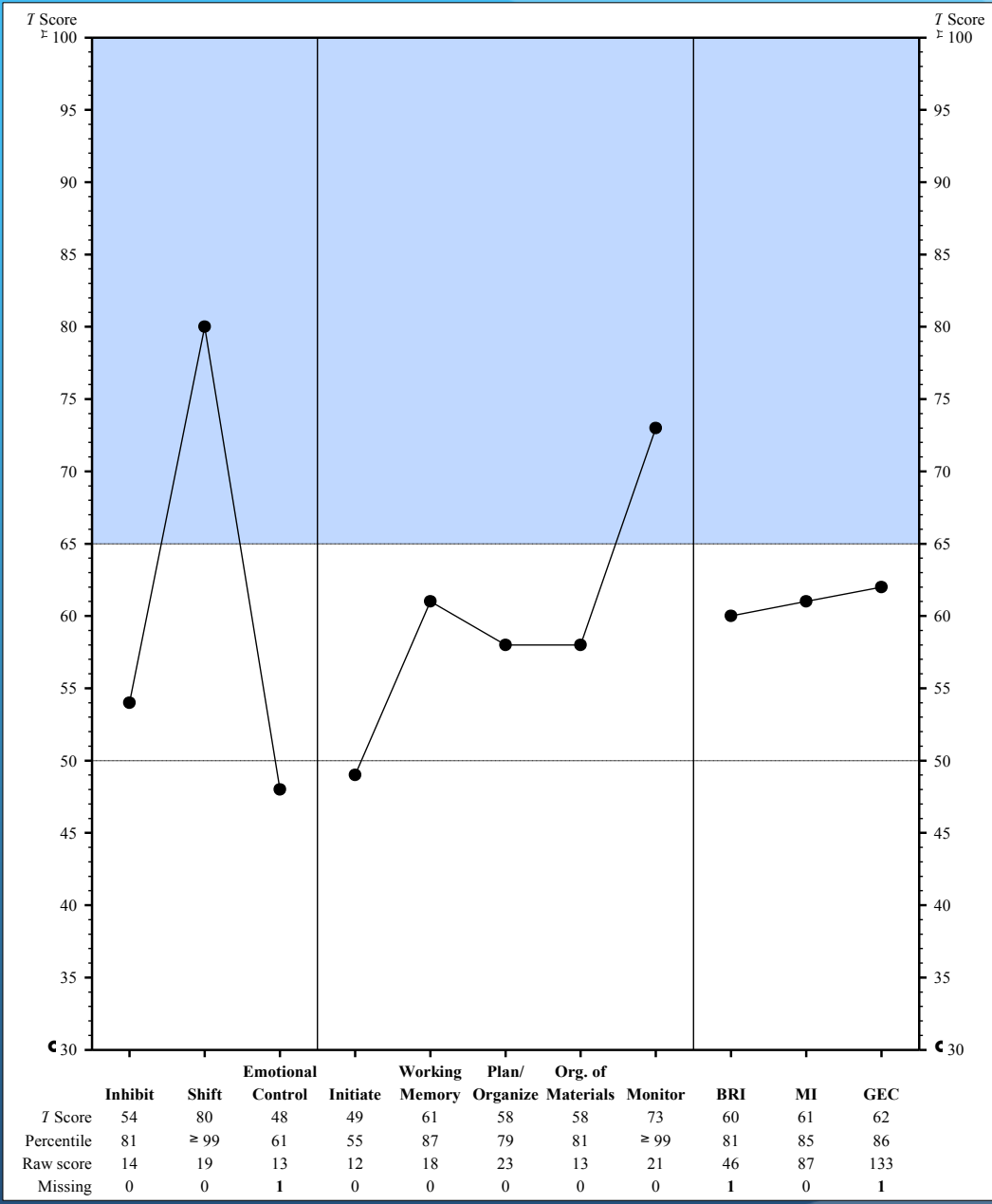
Neuropsychological evaluation versus identification of functional skill deficits.

Disorganization and poor executive function

Functional measures

- The BRIEF (Behavior Rating Inventory of Executive Functions)

- Barkley Deficits in Executive Function Scale

There are many evidence based approaches to supporting executive function in mainstream classes. They should be specified on the IEP.

	Inhibit	Shift	Emotional Control	Initiate	Working Memory	Plan/ Organize	Org. of Materials	Monitor	BRI	MI	GEC
T Score	83	77	91	76	73	72	55	78	90	74	82
Percentile	≥ 99	≥ 99	≥ 99	≥ 99	96	95	71	≥ 99	≥ 99	97	≥ 99
Raw score	27	19	30	22	26	32	13	23	76	116	192
Missing	0	0	0	0	0	0	0	0	0	0	0

Differences Individuals with ASDs May Have in the Development of Emotional Regulation

Possible biological differences

- Physical expression of emotion may be delayed or altered

- Feeling overwhelmed by overstimulation

- Coordination of socially relevant motor actions

- Perception of faces, nonverbal cues

- Slower processing speed

Differences Individuals with ASDs May Have in the Development of Emotional Regulation

- Less ability to differentiate among negative emotional states

- Poorly developed knowledge about one's own emotions

What May Happen for Individuals on the Spectrum?

- Individuals with ASDs may have various underlying biological differences that affect emotional regulation development.

- Individuals with ASDs often have limited social opportunities that would give them the necessary experiences to develop emotional regulation.

- Uneven development often sabotages interaction between biological and social elements in emotion regulation.

Critical Periods of Emotional Development

During infancy and early childhood, there is development of

- Perception of faces and emotional expression

- Recognition of one's own emotional state

- Understanding of the social rules that govern emotional expression

- Development of motivation to regulate emotional expression

- Understanding of social context

Critical Periods of Emotional Development

- During childhood and early adolescence emotional experience and cognitive processes are still not well integrated

- During adolescence and early adulthood sophisticated emotional intelligence develops that is crucial to navigating the adult social world

Critical Periods of Emotional Development

Critical changes during adolescence

- Increased capability in mature forms of behavior

- Improved impulse control

- Improved focus and attention skills

- Growth in social coordination, language capacity, and cognitive function

How are Emotional and Social Development Related?

- Developing social relationships depends on
  - Proximity
  - Familiarity
  - Similarity
  - Emotion matching
  - Self disclosure
  - Empathy

- Emotion display advertises an individual's emotional and interpersonal traits

Addressing Emotional Regulation and Social Development

- Availability of social partners

- Development of positive rather than negative outlooks to bolster energy for emotional regulation

- Minimization of negative environmental elements (e.g. bullying)

- Creative use of social coaching and supports

The Social Thinking Approach

Strategies

- How their own social minds work - why they and others react and respond the way they do

- How their behaviors affect the way others perceive and respond to them

- How this affects their own emotions, responses to and relationships with others across different social contexts (socialthinking.com, Michelle Garcia Winner)

The Social Thinking Approach

Goals

- Recognize that they and others have different perceptions and abilities to process social information

- Navigate their social thinking, social interaction and social communication toward more rewarding outcomes

- Learn to better adapt and respond to the people and situations around them

The Social Thinking Approach

Social skills issues addressed and integrated

- Concept formation

- Theory of mind and perspective taking

- Executive function (cognitive organization, multi-processing, emotion naming and regulation)

- Social information processing

The Social Thinking Approach

Social skills issues addressed and integrated

- Social initiation and motivation

- Processing nonverbal cues

- Inferential language

- Coping with the unexpected and rigidity

- There are multiple manualized materials that can be effectively utilized with individuals or groups

Developmental Changes in Social Support

- Children share with mothers 93%, fathers 89%, sibs 48%, best friends 33%, peers 37%

- Adults share with partners 75%, family 30%, friends 20%

- Between 12 and 17 friends, best friends, and romantic friends replace parents and family as primary

- There is a dramatic change during this time from playing with others to the development of social roles as the dominant way of interaction

What can families do?

1. Be wise consumers of social skills groups. Ask about plans and generalization strategies.

2. Learn how to plan and execute contextually supported play dates and get-togethers. (Koegel et al. 2005)

children's
friendship
training

Fred Frankel and
Robert Myatt

What can families do?

3. Utilize strengths and interests

Children and teens are at their most typical when they are reciprocally engaged in activities of high interest

Demonstration of strengths creates social desirability

Personality Development Biopsychosocial Model

- Personality development is influenced and shaped by
  - Biological constitution
  - Psychological factors
  - Social context and experiences

- Personality traits arise from
  - Temperament and underlying neurodevelopmental processes
  - Social learning

Psychological Contributions

- Personality is shaped by the cumulative effects of many experiences.

- Quality of life is dramatically affected by personality.

- Chronic stress, rather than individual events have the greatest potential to amplify personality traits. (Monroe & Simons, 1991)

Social Contributions

Social learning is the mechanism by which culture shapes personality

- Peer groups influence child personality development (Rutter & Rutter, 1993)

- Authority figures, especially teachers, significantly affect development.

- Social context and community values influence personality development (Bronfenbrenner, 1979)

Social Contributions

- Social risk factors are characterized by lack of useful social roles

- Social protective factors are characterized adequate access to useful social roles.

- As children become teens, their social roles outside of home become more important in defining their identity and developing personality

The Social Devastation of Peer Rejection

- Peer relationships provide the context for social-emotional development and adjustment, profoundly influencing behavior, personality, and adaptation.

- Peer influence is complementary to parent contribution and eventually supersedes it.

- Peer environments are necessary to practice social skills, including playing fairly, taking perspective, negotiation, conflict resolution, controlling aggression, and experiencing intimacy.

Friendships

- Satisfy innate needs for affection, intimacy, and reliable companionship

- Foster feelings of self-worth, the development of empathy, and perspective-taking skills

- Serve as prototypes for later romantic and intimate relationships

- Peer rejection can be less harmful if there is one best friend (Parker & Asher, 1993b)

Social Competence

- Not simply a collection of discrete social skills

- Ability to organize social behavior in a way that elicits positive responses in a variety of different contexts and consistent with social convention

- Skills must be used flexibly in response to ongoing social feedback and includes multiple skills of social-cognitive and affect regulation to select and enact social behaviors that are responsive to unique, ever changing social situations (Bierman & Welsh, 2000; Sroufe, 1996)

Loss of Social Learning Opportunity

- Children with ASDs have social skill deficits and behavior problems that make it difficult for them to make friends and gain acceptance from peers.

- They may become entrapped in a negative developmental spiral in which the behavior leads to ostracism and/or victimization by peers, which deprives them of opportunity to learn positive social skills and contributes to feelings of loneliness, resentment, anxiety, depression, and alienation (Bierman, 2004) and helps create long-lasting personality styles.

Intervention Strategies

1. Need to focus on building social competence and reducing problem behaviors. The role of behavioral, cognitive, and affective components in fostering regulatory and organizational capacities associated with social competence must be recognized

Intervention Strategies

2. Interventions must account for the development of competent interpersonal processes, rather than only the child's inadequate characteristics

3. Interventions should seek social opportunities and focus of friendship building, as well as more general peer interaction skills

Intervention Strategies

4. By understanding underlying developmental processes, especially executive function, we can specify what particular interventions are individually necessary for best outcome in the areas of

- Social
- Academic
- Personality
- Self Advocacy and Independence