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THE NEURO-COGNITIVE MECHANISMS OF KITE FLYING:

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Yo'nalishi: Filologiya va tillarni o'qitish (roman german tillari) Bakalvr 1 bosqich

Synergy of Flow State and Panoramic Vision in Multi-Generational Education

"VARRAK UCHIRISHNING NEYRO-KOGNITIV MEXANIZMLARI:

Ko'p avlodli ta'limda Oqim holati va Panoramik nigoh sinergiyasi"

Sarlavhadagi asosiy ilmiy terminlar tahlili:

Neuro-Cognitive Mechanisms: Miyaning axborotni qabul qilish, qayta ishlash va idrok etish bilan bog'liq bo'lgan biologik jarayonlari.

Synergy (Sinergiya): Ikki yoki undan ortiq omillarning birgalikda ta'sir ko'rsatib, yakunda alohida olingan natijadan ko'ra kattaroq samaradorlikka erishishi.

Flow State (Oqim holati): Insonning biror faoliyatga butunlay sho'ng'ib ketishi, vaqt va makon hissini yo'qotib, maksimal darajada diqqat jamlashi (M. Csikszentmihalyi nazariyasi).

Panoramic Vision (Panoramik nigoh): Diqqatni bitta nuqtaga emas, balki butun borliqqa, cheksizlikka qaratish. Bu holat asab tizimini tinchlantirish va ijodiy g'oyalarni uyg'otish uchun kalit hisoblanadi.

Multi-Generational Education: Ta'limning faqat maktabda emas, balki avlodlar o'rtasida (ota-ona va bola) amaliy muloqot orqali amalga oshishi.

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Annotatsiya (Abstract): Ushbu maqola an'anaviy varrak uchirish jarayonining inson markaziy asab tizimi va kognitiv funksiyalariga ta'sirini neyropsixologik jihatdan tahlil qiladi. Tadqiqotda "Panoramik nigoh" (Panoramic vision) va "Oqim holati" (Flow state) tushunchalari orqali miyaning ijodiy salohiyati va muammolarni hal qilish (problem-solving) qobiliyati qanday faollashishi isbotlanadi. Ota-ona va farzandning diqqati bir nuqtaga yo'naltirilishi natijasida yuzaga keladigan "Birgalikdagi diqqat" (Joint attention) mexanizmining pedagogik samaradorligi ilmiy asoslanadi.

Abstract (English): This paper investigates the neuro-psychological impact of traditional kite flying on human cognitive functions. By analyzing the synergy between "Panoramic Vision" and the "Flow State," the research demonstrates how expansive visual stimuli enhance neural plasticity and creative problem-solving. Furthermore, it explores the pedagogical significance of "Joint Attention" between parents and children, proving that shared outdoor activities facilitate high-level cognitive synchronization and the emergence of heuristic insights.



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1. Kirish: Vertikal vizuallashuv va kognitiv kenglik

Zamonaviy kognitiv fanlarda inson diqqatining chegaralanganligi (tunnel vision) ko'plab psixologik tushkunliklarning asosi sifatida ko'riladi. Varrak uchirish jarayoni inson nigohini gorizontdan yuqoriga — vertikal va cheksiz fazoga yo'naltiradi. Bu harakat miyaning Prefrontal korteks qismidagi yuklamani kamaytirib, "Default Mode Network" (DMN) tizimini faollashtiradi. Natijada, miya "tor" fikrlashdan "keng" (expansive) tahlil rejimiga o'tadi.

2. Panoramik nigoh va Neyrobiologik tinchlanish

Varrak osmonning cheksizligida harakatlanar ekan, inson ko'zi "foveal vision" (bir nuqtaga tikilish) rejimidan "panoramic vision" (atrofni to'liq qamrash) rejimiga o'tadi.

Simpatik va Parasimpatik tizim: Panoramik nigoh parasimpatik asab tizimini faollashtiradi. Bu holatda qon bosimi pasayadi va miya "xavf" rejimini o'chiradi.

Neyronal imkoniyatlar: Miya tinchlangan holatda, "Beta" to'lqinlaridan "Alpha" va "Theta" to'lqinlariga o'tadi. Aynan shu to'lqinlar oralig'ida insonning eng murakkab muammolarga eng qisqa va oson yechim topish (Insight/Evrika) qobiliyati ochiladi.

3. "Flow" (Oqim) holati va birgalikdagi diqqat (Joint Attention)

Mihaly Csikszentmihalyi tomonidan asoslangan "Oqim" (Flow) nazariyasiga ko'ra, varrakni boshqarish jarayoni insonni butunlay o'ziga yutib yuboradi.

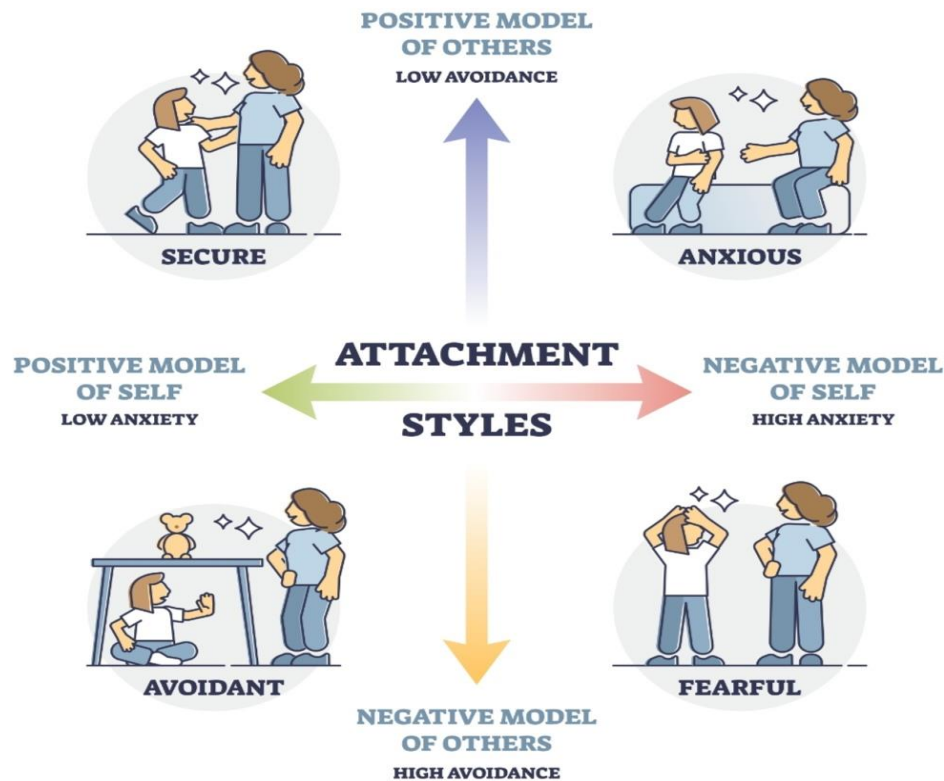
Vazifa va Mahorat muvozanati: Varrakni shamolga qarshi ushlab turish — bu murakkab vazifa, lekin uni boshqarish zavqi insonni charchatmaydi, aksincha quvvatlantiradi.

Interaktiv pedagogika: Ota-ona va farzandning nigohi osmondagi bitta nuqtaga (varrakka) qaratilishi — bu "Joint Attention" fenomenidir. Bu jarayonda avlodlar o'rtasida so'zsiz axborot almashinuvi (Non-verbal communication) sodir bo'ladi. Bola ota-onasining sabrini, qaror qabul qilish tezligini va tabiat bilan uyg'unligini ongsiz ravishda o'zlashtiradi.

4 Avlodlararo muloqot inqirozi: "Raqamli begonalashuv" va "Birgalikdagi faoliyat" (Joint Activity) tanqisligi

Zamonaviy oila modelida ota-ona va farzand o'rtasidagi muloqotning sifat ko'rsatkichi (Quality Time) keskin pasayib bormoqda. Tadqiqotlar shuni ko'rsatadiki, hozirgi ota-onalar farzandlarining bo'sh vaqtini band qilish uchun "Passive Parenting" (Passiv ota-onalik) modelini tanlamoqdalar. Bu modelda ota-ona bolaga gadjet berish yoki "o'zing o'yna" deyish orqali emotsional mas'uliyatni texnologiyalar zimmasiga yuklaydi.





4.1. Qaror qabul qilish mexanizmlarining buzilishi.

Bola yoshligidan ota-onasi bilan birgalikda muammolarni hal qilish (masalan, varrakning shamolga qarshi muvozanatini topish) tajribasiga ega bo'lmasa, unda "Isolated Decision-Making" (Yakkalangan qaror qabul qilish) algoritmi shakllanadi.

Oqibat: Kelajakda farzand hayotiy muhim qarorlar (kasb tanlash, ilmiy yo'nalish, oila qurish) qabul qilishda ota-ona bilan maslahatlashishni mantiqsiz deb hisoblaydi. Chunki neyronal darajada ota-ona bilan "birgalikda yechim topish" xotirasi (Neural imprint) mavjud emas.

Evristik g'oyalar va "Qisqa yo'l" algoritmi

Cheksizlikka qarash miyaning "kognitiv xaritasi"ni kengaytiradi. Inson kundalik hayotda yechimini topa olmayotgan ilmiy yoki maishiy masalalar varrak uchirish paytida o'z-o'zidan oydinlashadi.

Nega bunday bo'ladi? Miya cheksiz bo'shliqni vizuallashtirganda, u murakkab yo'llardan voz kechib, eng samarali va "minimalistik" strategiyalarni (Heuristics) tanlay boshlaydi. Bu ilmiy tilda "The Law of Parsimony" (Tejamkorlik qonuni) deb ataladi. Ya'ni, varrak uchirayotgan olim yoki tadqiqotchi o'z maqsadi (PhD yoki loyiha) sari eng qisqa va oson yo'lni o'sha "cheksizlik" ichidan topib oladi.

5. Xulosa va Tavsilyalar (Conclusion)

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Xulosa (O'zbek tilida):

Varrak uchirish — bu shunchaki jismoniy harakat emas, balki miyaning yuqori kognitiv funksiyalarini "qayta yuklash" (reboot) jarayonidir. Panoramik nigoh orqali asab tizimining tinchlanishi, "Oqim" holatiga kirish va birgalikdagi diqqat mexanizmlari insonning ijodiy va intellektual salohiyatini ochib beradi. Maqola shuni isbotlaydiki, tabiat va cheksizlik bilan muloqot qilish miyaga eng murakkab masalalarning eng sodda va samarali yechimlarini (optimallashtirish algoritmlarini) taqdim etadi. Bu uslub zamonaviy ta'lim va ilmiy tadqiqotchilikda "Mental Clarity" (ong tiniqligi) uchun eng samarali instrument sifatida tavsiya etiladi.

Conclusion (English):

The research concludes that kite flying serves as a high-level cognitive "rebooting" mechanism for the human brain. Through the activation of panoramic vision, the nervous system achieves a state of equilibrium, allowing the individual to enter the "Flow State." This process facilitates the emergence of heuristic insights—simplified yet optimal strategies for achieving complex goals. By engaging in shared attention, parents and children synchronize their cognitive frequencies, fostering an environment where deep learning and creative breakthroughs occur. Thus, kite flying is scientifically validated as an essential cognitive exercise for enhancing intellectual productivity and mental clarity in the modern age.



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