Translating Neuroscience into Education: A Neuroscience-based Health Curriculum for North Carolina ninth Grade Students



Dorothy Alexis¹, Zoe Bakker², Persis Bhadha³, Gabrielle Graham⁴, Allison Kam⁵, Nidesh Lamichhane⁶

Bass Connections in Education & Human Development

¹Chemistry (A.B), ²French (A.B.), ³Neuroscience (B.S.), ⁴Neuroscience (A.B.), ⁵Neuroscience (B.S.), ⁶Psychology (B.S.)

Background

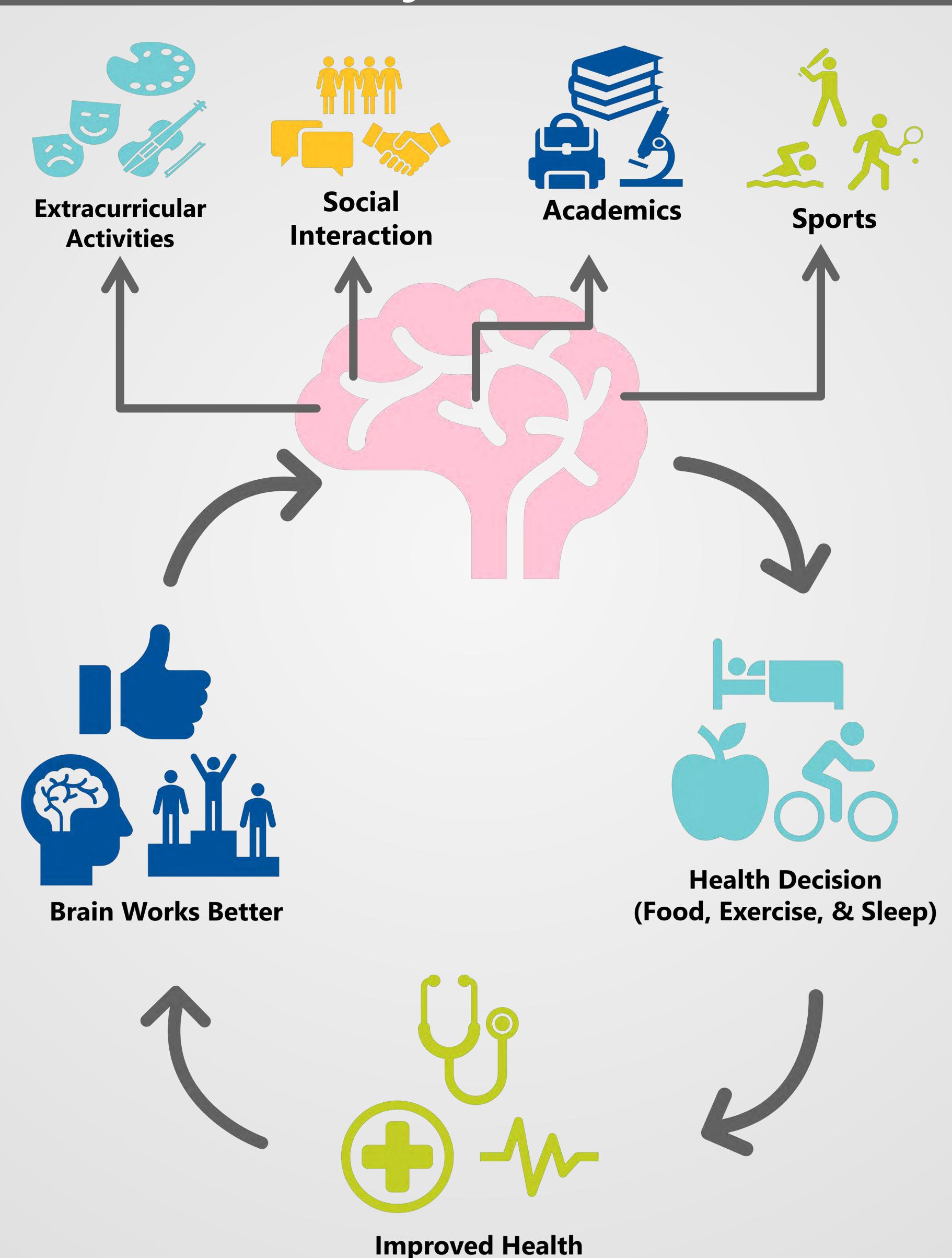
- The North Carolina Healthful Living Course¹ is designed to teach students behaviors that contribute to a healthy lifestyle and improve overall quality of life.
- Unfortunately, these classes are usually undervalued and lack critical details regarding brain health and function.
- When teenagers understand what is happening in the brain, it can be the first step to having the power to make healthier choices.

We bring teenagers to school to use their brain but we never teach them about the brain.

Problem Statement

- A major impediment to student success is the lack of opportunity for teachers to receive adequate training in STEM disciplines.
- Previous work revamped standard health curriculum into an Honors version of the 9th grade Healthful Living course in Wake County, NC.
- However, the teachers (often coaches with little science background) were uncomfortable teaching this new health curricula.
- The goal is to create a community in which the teachers feel supported and confident to teach this material.
- We aimed to create an online platform where health teachers can learn the new honors health class curriculum and engage in open discourse with each other alongside a neuroscientist from Duke.

Lifestyle Choices



There is a reciprocal relationship in learning how to make healthful living decisions.

Teacher Training Modules

- The training platform resembles a virtual school course where teachers can work through the modules, watch informational videos, and engage in open discourse with a neuroscience expert.
- Each online module includes:
 - an introductory quiz which debunks myths about the brain
 - a series of instructional videos
 - comprehension questions
 - an exam
 - additional materials are included for further reading
 - a community section where teachers can communicate with other teachers or professors from Duke to ask questions.

Conclusion

- The connections between decision making and the consequences to your body is missing from the current NC Healthful Living course.
- We created an **online training platform** for teachers that makes the neuroscience content understandable and accessible to NC Healthful Living teachers. The training is supported by an **online community** that includes support from other teachers and neuroscience experts.

References

¹Public Schools of North Carolina. (n.d.). Healthful Living: Essential Standards . Retrieved from K-12 Standards, Curriculum and Instruction: http://www.dpi.state.nc.us/curriculum/healthfulliving/scos