Graphic Medicine in Action . . .
Creating a Neurotransmitter Zine!

Learning Objectives

By the time you finish reading this poster, you should be able to:

1. Define the terms: Graphic Medicine, Adult Learning Theory, Emergent Curriculum, Constructivism, and zine;
2. Understand how a peer-instructed seminar format led to the creation of a “Neurotransmitter Zine”, and now, armed with our zine;
3. Imagine creative ways to use this zine module or something similar to meet educational goals and objectives in your respective training setting.

Setting the Zine...

Studying suggests that many aspects of the basic sciences taught before and during medical school are forgotten as one advances in medical training.1 At the same time, there is a positive correlation between retention of basic science concepts and one’s clinical understanding. Thus, taking time in graduate psychiatric training to revisit previously learned material can lead to improved understanding.

For this purpose, a creative and engaging format was developed as a peer-led seminar model to support the dissemination of neuroscience knowledge in a meaningful way. It is hoped that this format will serve as a foundation for clinical knowledge that prove fruitful. Further, honing the value of “making stuff” and of peer instruction in seminars can help learners restore and retain knowledge.

Defining our Terms

Adult Learning Theory: As outlined by Kaufman, this is a model of teaching/learning which is anchored in five basic principles: 1) adults are independent and self-directing; 2) they have accumulated a great deal of experience, which is a rich resource for learning; 3) they value learning that integrates with the demands of everyday life; 4) they are more interested in immediate, problem centered approaches than in subject centered ones; and 5) “they are more motivated to learn by internal drivers than by external ones.”

Constructivism: Anchored in the theories of Lev Vygotsky and Jean Piaget, contemporary psychiatric educators Kumar and colleagues state: “Constructivism is the dominant paradigm in contemporary educational theory, stating that knowledge cannot be ‘transmitted’ but requires the active construction of meaning by the learner.”

Emergent Curriculum: An educational philosophy emphasized in the Reggio Emilia early education model, an emergent curriculum avoids pedagogy rigidly set on particular themes and learning objectives and allows for children to pose questions that emerge out of their observations and for teachers to build learning exercises that stem from these emerging phenomena. Not to be confused with emergent learning, which accords meaning to a phenomena based on the learning group’s collective understanding

Graphic Medicine: Coined by physician Ian Williams, graphic medicine refers to the interface between comics and medicine, with an emphasis on the role sequential art “can play in the study and delivery of healthcare.”

Seminar: According to the Merriam-Webster dictionary this is “an advanced or graduate course often featuring informality and discussion.”

Zine: A zine is an independently, often self-published booklet dealing with a niche subject. The popularity of zines flourished in early punk rock or feminist culture. They allow for freedom of expression and purposely eschew glossy perfectionism. This particular format lends itself well to active student involvement, as the creators get to choose how they wish to present the material with few rules.

When we were wrestling with whether a review of the seven major neurotransmitter systems may be fruitful, some fellows identified feeling that in the past this has been “overwhelming,” “time consuming,” even “boring.” However, desiring to build a psychopharmacology concept map, we worked together to develop a peer-instructed module and then, over the next 2-3 sessions, we taught one another.

In this poster, the OHU Child and Adolescent Psychiatry fellows continue outlining how graphic medicine can play a role in training. We describe how we:

• Identified a need to better organize seemingly disparate clinical details about various psychotropic medications that we learned about over the first 3-5 years of psychiatry training;
• Developed a peer-instruction module, specifically developing a concept map of basic neurotransmitter properties/receptor types/functions;
• Delivered presentations to one another; and
• Collecting these writings, tables, drawings, and songs into a CAP Neurotransmitter Zine.

The purpose of this poster is to demonstrate the Neuroscience Zine module itself, but more importantly to emphasize how our training program honored the educational principles of emergent, constructivist, and active learning in a fellow-led seminar model to meet broader learning objectives.

Based on feedback from our seminar participants, we found that neurotransmitter review was highly engaging and facilitated meaningful learning.

References


2. Rezultz K, Claveria R, Keenon S, Claveria R, McLean L, McLean L, Shepherd MR, Czerwiec M, Shepherd MR, Webster J. Adult Learning Theory: As outlined by Kaufman, this is a model of teaching/learning which is anchored in five basic principles: 1) adults are independent and self-directing; 2) they have accumulated a great deal of experience, which is a rich resource for learning; 3) they value learning that integrates with the demands of everyday life; 4) they are more interested in immediate, problem centered approaches than in subject centered ones; and 5) “they are more motivated to learn by internal drivers than by external ones.”

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In our seminar, we believe that this approach provided a rich resource for learning; 3) they value learning that stem from these emerging phenomena. Not to be confused with emergent learning, which accords meaning to a phenomena based on the learning group’s collective understanding.

Based on our experience, we found that neurotransmitter review was highly engaging and facilitated meaningful learning.

In this seminar, we hope to share our insights with others interested in incorporating graphic medicine into their educational programming.