Questions

**In summary**

Math learning difficulties are common, significant, and worthy of serious instructional attention in both regular and special education classes. Students may respond to repeated failure with withdrawal of effort, lowered self-esteem, and avoidance behaviors. In addition, significant math deficits can have serious consequences on the management of everyday life as well as on job prospects and promotion.

Math learning problems range from mild to severe and manifest themselves in a variety of ways. Most common are difficulties with efficient recall of basic arithmetic facts and reliability in written computation. When these problems are accompanied by a strong conceptual grasp of mathematical and spatial relations, it is important not to bog the student down by focusing only on remediating computation. While important to work on, such efforts should not deny a full math education to otherwise capable students.

Language disabilities, even subtle ones, can interfere with math learning. In particular, many LD students have a tendency to avoid verbalizing in math activities, a tendency often exacerbated by the way math is typically taught in America. Developing their habits of verbalizing math examples and procedures can greatly help in removing obstacles to success in mainstream math settings.

Many children experience difficulty bridging informal math knowledge to formal school math. To build these connections takes time, experiences, and carefully guided instruction. The use of structured, concrete materials is important to securing these links, not only in the early elementary grades, but also during concept development stages of higher-level math. Some students need particular emphasis on the translating between different written forms, different ways of reading these, and various representations (with objects or drawings) of what they mean.

An extremely handicapping, though less common math disability, derives from significant visual-spatial-motor disorganization. The formation of foundation math concepts is impaired in this small subgroup of students. Methods to compensate include avoiding the use of pictures or graphics for conveying concepts, constructing verbal versions of math ideas, and using concrete materials as anchors. The organizational and social problems that accompany this math disability are also in need of long-term appropriate remedial attention in order to support successful life adjustment in adulthood.

In sum, as special educators, there is much we can and need to do in this area that calls for so much greater attention than we have typically provided.

1. Of the five areas of math disabilities mentioned in this week's readings, which do you think would be the most challenging to teach and why? Identify and describe two strategies, specific to your choice, to help students who struggle in this area.
2. With a technology-focused generation in the classroom, should we be teaching primarily using technology or is it better to teach math through pencil and paper? Support your argument with research.
3. Through your field experiences in this program, what strategies have you observed that have hindered or helped students to generate meaningful questions that develop their mathematical thinking? How will these observations affect your future practice?
4. Describe how to generate questions for students while addressing a variety of levels and capabilities of mathematical thinking in an inclusion setting. Explain your choices.
5. We must differentiate our mindset first and our lessons second.” (Dweck, 2012).What does this saying mean to you? In your own words, what is the difference between differentiation and tracking?
6. Describe an experience where you have seen monitoring and adjusting of instruction that met the needs of students. What worked in this situation and how can you apply what was learned in future practice?