



Final Comments

For decades the use of manipulatives has been supported through research and professional mathematics groups. Yet, the issues of making sequenced and deliberate connections among modalities (concrete, pictorial, and symbolic) must be given careful attention to ensure prolonged and effective use of such materials. **If schools desire to shift classroom instruction to an experience-based conceptual approach that makes connections among instructional modes, a long-term staff development plan needs to be formulated.** Knowledgeable staff development leaders who interact well with educators as well as parents need to guide teachers, administrators, and parents through a series of related experiences. Such experiences would coordinate the conceptual and developmentally sequenced delivery of mathematics content with varied resource materials as well as teacher-generated ideas. Changing beliefs, attitudes, and counterproductive behaviors in such a manner is a necessary prerequisite to curriculum and assessment revision.

References

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