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Ryan Andrew Nivens

East Tennessee State University, nivens@etsu.edu

Lori T. Meier

East Tennessee State University, meier@etsu.edu

Karin J. Keith

East Tennessee State University, keithkj@etsu.edu

Erin E. Doran

East Tennessee State University, dorane@etsu.edu

Edward J. Dwyer

East Tennessee State University, dwyer@etsu.edu

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Encouraging Literacy and Mathematics Achievement Through Study of Real Estate

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Encouraging Literacy and Mathematics Achievement Through Study of Real Estate

Ryan A. Nivens
Lori T. Meier
Karin J. Keith
Erin E. Doran
Edward J. Dwyer
*East Tennessee State University
Johnson City, Tennessee*

Introduction

The International Reading Association (IRA) (1999) strongly demonstrated that curriculum related to literacy learning is influenced, and almost entirely driven in some environments, by high-stakes testing. In this light, high-stakes testing “means that the consequences for good (high) or poor (low) performance on a test are substantial . . . such as promotion or retention, entrance into an educational institution, teacher salary, or a school district’s autonomy depend on a single test score” (p. 1). An outcome is that high-stakes tests tend to encourage a focus on classroom strategies purported to increase reading scores; consequently, great amounts of time are designated to such activities in the elementary school. The same can be said for the study of mathematics. Downgrading the importance of activities not perceived as contributing to learning that will be measured by tests is a natural outcome of high-stakes

testing. To counteract this, the authors propose that creative enterprises in the classroom based on integration of environmental text, language arts, mathematics, and the arts can be both aesthetically pleasing and academically sound. In addition, the authors propose that the building of classroom community is essential for learning. In this light, the authors propose that developing academic competencies through study of real estate can be both academically productive and highly enjoyable for teachers and students.

Educators and psychologists have demonstrated the importance of involving learners physically and emotionally, as well as academically, in their learning. Vygotsky (1978) was a pioneer in demonstrating the importance of socialization as a vital component of learning. Vygotsky proposed that there is a zone of proximal development in which the learner is ready to learn but must receive support in both social and academic contexts. Such support was described by Rasinski (2010) as scaffolding wherein the learner is led from dependence on the person in the role of leader/teacher to independence. In this light, Allyn (2013) determined that scaffolding must be systematic in that learning builds on learning and firm foundations must be established. Allyn concluded that Vygotsky’s emphasis on combining social and academic contexts in building instructional scaffolds is more important than ever given the strong emphasis on informational texts presented in the Common Core State Standards (CCSS) (National Governors Association Center for Best Practices [NGA Center] & Council of Chief State School Officers [CCSSO], 2010).

An extensive review of research led Cartwright (2009) to determine that going beyond domain specific study strategies by integrating a variety of complementary learning domains (i.e., mathematics, reading/writing, and the arts) encourages “cognitive flexibility” (p. 130), leading to more powerful learning experiences. In addition, Cartwright concluded

that study across domains fosters development of the “ability to conceptualize a task or situation in multiple ways” (p. 118), leading to greater comprehension and flexibility relative to new learning.

The strategies proposed herein encourage enjoyment of learning as well as strategically sound approaches. The authors agree wholeheartedly with Rome (2012) who concluded that reading instruction is as much about teaching children “to **want** to read as it is about **how** to read” (p. 12). In addition, implementing strategies presented herein provides what Weil (2011) described as “healthy variability” (p. 9) in providing experientially oriented classroom environments. However, routines associated with an emphasis on study strategies focused on enhancing scores on high-stakes tests can lead to school seeming more like a workplace than an adventure in learning.

Resources

Nearly all major real estate organizations produce comprehensive guides to real estate for sale or rent. Frequently, several real estate organizations combine efforts for advertising purposes. Often, the guides are in the form of colorful booklets demonstrating a wide variety of real estate purchase options from barren fields to spacious mansions. The booklets contain enticing photographs of properties that are on the market. In addition, accompanying each photograph is a description of the property such as **ONE-LEVEL CONDO 2BR 1BA** in beautiful . . . etc. The description usually concludes with the price of the property and a real estate code number. There is no cost for these colorful and professionally designed booklets as real estate agents offer them free to the public. Although online versions are usually available, we prefer the hard copy formats. The authors have found that at the end of a month, real estate agents usually have an abundance of booklets left over as they prepare to distribute a new issue for the following

month. They are happy to give them away, especially if they know the booklets will be used in a school setting. In addition, reading/writing and mathematics study strategies as presented herein complement the CCSS mentioned above.

Vocabulary

Of necessity, professional organizations specializing in areas such as real estate have a vocabulary essential for communication within their organization and to the general population they serve. The vocabulary of real estate is both intriguing and delightfully relevant for students, especially for children in the upper elementary and middle grades. In addition, the study of figurative language such as hyperbole, described by Van Zile, Napoli, and Ritholz (2012) as an “exaggerated statement used to heighten effect and to emphasize a point” (p. 96), meshes comfortably with real estate study. Such terminology as *Better than new*, *Golfers take notice*, *Great for large family*, *THE LIFESTYLE YOU ALWAYS WANTED*, and *Fashionable* abound in real estate booklets. However, real estate agents would likely take exception to having teachers present the concept of hyperbole while using their booklets as a primary resource! Exploring real estate booklets is an adventure in language usage. See Appendix A for a partial listing of real estate terms.

Comprehension Strategies

Real estate advertising offers opportunities for encouraging higher-order thinking. In this light, Kahn (2012) determined that too much time in schools is spent on tedious and uncreative learning while, on the other hand, discussion involving critical thinking and shared perspectives can foster “intuitive understanding of almost any concept” (p. 248) such as activities that encourage higher-order thinking while discouraging mundane and overly predictable classroom activities.

Working with real estate concepts and booklets offers opportunities for efficient and effective comprehension strategies with an emphasis on higher-order thinking—that is, questioning and discussion strategies that involve inferential responses. A model real estate booklet entry is presented below with typical discussion questions. The descriptions usually are accompanied with a photograph designed to make the residence as appealing as possible.

391 Maple Grove: Newly remodeled 2 bedroom. 1-1/2 bath home on a nice level lot. Make this your home today. Call Sandy for your showing today!

1. *Where is the home located? (Easy literal questions get discussions off to a good start.)*
2. *What is another way of saying a “1-1/2 half bath home”? (The ad is not clear but one could assume that there is one full bathroom, including shower, and a more limited bathroom in another part of the house.)*
3. *What is another way of saying “a nice level lot”?*
3. *Is having a “nice level lot” important. Why?*
4. *Who is Sandy?*
5. *Why do they refer to the real estate agent as “Sandy” and not Ms. or Mrs. Jones?*
6. *Would this be a good home for a pet dog? (Answers will vary. For example, there is no fenced-in yard. Where would a large dog stay?)*
7. *What is another way of saying “showing” the house?*
8. *What will Sandy do when she is “showing” the house?*
9. *Is Maple Grove a good name for an area where houses are located? Why or why not.*
10. *Are the names of streets and the name of the subdivision important when developers plan an area for building homes?*

Comprehension questions can generate lively discussions concerning specific real estate ads

while encouraging comprehension competencies in general as well as the social contexts of neighborhoods. The booklets are a resource for endless comprehension development possibilities. We have obtained real estate booklets from a variety of locations. For example, a rather unimpressive looking house in a popular beach vacation area was much more expensive than a very impressive house in another location. This opened the discussion of the importance of location relative to the value of property.

Art and Real Estate

We use large 18" × 12" white paper and invite students to make their own neighborhoods. We tear apart booklets and provide each student with a few pages of houses from the real estate booklets and black, green, and brown paper as well as other colorful paper scraps for constructing the neighborhood. The students have glue sticks, scissors, and crayons and/or markers. The creation of their own neighborhood is an enjoyable and engaging activity providing what Weil (2011) described earlier as “healthy variability” (p. 9). The students work intently and joyfully using their hands and minds to develop a neighborhood. The results are delightful expressions of art and awareness of concepts concerning neighborhoods. The black paper is good for roads, the green paper for grassy areas, and the brown paper for tree

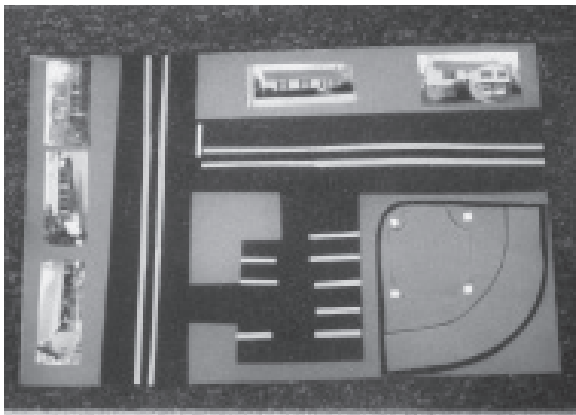
Photograph 1. Basic Materials for Neighborhoods



Photograph 2. Sample Neighborhood



Photograph 3. Sample Neighborhood



trunks. Students are very creative. We have seen vertically placed houses, ponds with fish, parks with swings, dogs, pictures of realtors beside homes presented as if they are the residents, and many more expressions of neighborhood life. (See Photographs 1, 2, and 3.)

Literature and Homes

Mary Ann Hoberman's (1982) book, *A House Is a House for Me*, describes how many creatures (and things) have homes suitable for them; but for a child, a house is the best place to live. Eve Bunting's (1995) *Dandelions* elegantly captures the essence of moving from a familiar home to the Nebraska prairie in the late 1800s. Jane Yolen's (1992) *Letting Swift River Go* is the story of the coming of a giant reservoir and the people who saw their homes covered with water. We

made a powerful Readers' Theatre script out of *Letting Swift River Go*. In addition, we have found that songs concerning home provide much repeated reading practice and add enjoyment to that activity. *Take Me Home Country Roads* (Denver, 1997) and *Home on the Range* (Higley, 1872/2003) are among our favorites.

Mathematics and Real Estate Booklets

When considering the property for sale at 391 Maple Grove, there are many mathematical questions that can be very meaningful, befitting a lesson in mathematics:

1. How much does this house cost? (Easy literal questions get discussions off to a good start.)
2. What is another fraction that could be used to say a "1-1/2 bath home"? (Think improper fractions.)
3. If this is a 1-1/2 bath home, what is the unit, or whole, that this fraction refers to?
4. What is the slope of a line that would model "a nice level lot"?
5. If the lot the house is on is above sea level, write an equation to represent the line. For example, if you lived in Denver, Colorado, an equation such as $y = 5,280$ would be a likely answer. This requires using a cross-cut, or orthogonal viewpoint, to provide a mathematical perspective for this model.
6. Suppose you wanted to fence the yard for a pet dog. Create a diagram showing the part of the yard you wish to fence and show the measurements for the area and perimeter of your fence.
7. Use isometric dot paper to draw the house in a 3D format.

Many other mathematical topics fit easily into the context of real estate. Three dimensional models can be created from the information that is given, and floor plans can be drawn. Volume, area of floor space, surface area of the

house, roofing area, and other geometry topics are easily available. A topic not found in the CCSS is the use of isometric drawings of 3D objects using isometric dot paper. Drawing accurate diagrams of 3D objects on paper is essential to the Mathematical Practice “attend to precision.” For an introduction on how to use isometric paper as well as orthogonal views, see Nivens, Peters, and Nivens (2012). The Mathematical Practice “model with mathematics” can be applied in any of the above suggested mathematical questions.

Conclusions

Integrating real estate dynamics, vocabulary, mathematics, and creative expression can provide opportunities for learning that are both academically sound and highly enjoyable. In addition, strategies described herein can be modified to complement a wide variety of learning environments. In this light, an extensive international study of schools and other learning environments led Ripley (2013) to conclude that no matter where learning is undertaken, there must be enjoyment, excitement, curiosity, and a sense of community. We propose that the study of real estate complemented with art and musical activities provides the teacher with the opportunity of creating an atmosphere for learning similar to that presented by Ripley.

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Appendix A: Real Estate Terms

Acreage	Full basement	New roof 2012
Affiliate broker	Full in-law suite	One level living
Amazing value	Gated community	Open house
Apartment building	Gourmet kitchen	Partially wooded
Auction	Incredible offer	Pending
Bank owned	Inside city limits	Pool
Cathedral style	Investment	Ranch
City water access	Just completed	Realtors
Commercial	Lakefront luxury	Reasonably priced
Condo	Level lot	Reduced
Country living	Maintenance free	Remodeled
Cul-de-sac	Make an offer	Rustic style
Drastic reduction	Mature apple trees	Screened porch
Executive	Metro	Sold
Farm estates	Motivated seller	Spacious
Fenced backyard	Mountain views	Split foyer
Fixer upper	Nature lover's retreat	Subdivision
Foreclosure	New listing	True log home
Foyer	Newly remodeled	Updated condo

About the Authors

Ryan A. Nivens is an associate professor in the Department of Curriculum and Instruction (CUAI) in the Clemmer College of Education at East Tennessee State University (ETSU) in Johnson City. Ryan teaches classes in mathematics education and coordinates the Ready2Teach education program for K-6 licensure. He can be reached at Nivens@etsu.edu. Lori T. Meier is an associate professor in the CUAI department at ETSU and coordinates the Elementary Education Master of Education Program. Lori teaches courses in curriculum studies and social studies and can be reached at Meier@etsu.edu. Karin J. Keith is an assistant professor and coordinator of the reading education program in the CUAI department. Karin was the reading coordinator for the Johnson City schools before joining the ETSU faculty. She can be reached at KeithJ@etsu.edu. Erin E. Doran teaches 3rd graders at University School, the K-12 public laboratory school at ETSU. Her e-mail address is dorane@etsu.edu. Edward J. Dwyer is a professor in the CUAI department at ETSU and teaches classes in literacy development in the K-6 program. He can be reached at dwyer@etsu.edu. Ryan, Lori, Karin, Erin, and Ed all have a great interest in promoting affective considerations in all learning environments, especially those involving social studies, mathematics, and literacy instruction.