



Math: Percentages and Injustice

What if teaching percentages made students aware of injustice?

Natalie's class wondered why bananas were needed in a math lesson. Natalie explained that they were going to do "banana math" and learn about percentages.

"My class had been doing work on percentages, and this was the summary lesson. I wanted them to use real situations and see how facts and figures can make us think about important issues. I wanted them to see how relevant math is, as well as making them aware of issues of justice.

"I gave the class numbers about bananas (<http://www.greenamerica.org/programs/fairtrade/products/bananas.cfm>), and we looked at what percentage of what we pay for bananas goes to the grower and other people involved in the process. We sliced bananas to represent these percentages and labeled the slices with colored toothpicks.

"We then looked at the difference fair trade made to the percentages and the grower's life and cut the fair-trade bananas to reflect the different percentages. These too were labeled. We talked about how our buying choices could affect other people's lives a long way away, and how our choice could affect whether justice happens. The students invited their parents or others who came to pick them up to taste the fair-trade bananas."

What's going on here?

Natalie saw her math lesson as a time to explore values and relate math to big questions about justice that affect the wider world.

She engaged students in exploring how their math learning connected with big questions and focusing outward.

She reshaped her practice by changing her examples and using objects as a focus (percentages on fair-trade bananas, relating percentages to the growers).

What does this have to do with faith, hope, and love?

Sometimes learning can feel disconnected from people; handling data and working with numbers can seem a world away from everyday life. By connecting learning and life we can reflect the pattern of *faith*, which is personal and shapes how we live. Keeping learning abstract and disconnected from life can unintentionally reinforce a mind-set that does the same with faith. The Bible stresses the connections between people and their responsibility to each other. What we do in the one part of the world affects other people far away. Christian *love* means we can never talk about people in terms of just numbers. That does not mean we can never work with numbers on their own, just that sometimes we need reminders that the numbers represent real people with real lives.

What difference does it make?

Using examples that raise issues of justice makes the value of learning math rich and relevant to life. However, care needs to be taken that students do not end up just feeling guilty or overwhelmed. This is particularly true with young children who may have little choice or power. Their role might simply be to raise awareness in others.

Where could we go from here?

Students could use math with a range of important issues; math could begin to be seen as a tool for justice.

I think if I was going back now I would be choosing a different set of examples, not simply teaching percentages of profit and loss or earning — and if it was saving it might be for some overseas project rather than a new dress or a new bike. Ken Shorey, member of the Church of England general synod and former math teacher (in the Harborough Mail, July 13, 2011)

Digging deeper

Math is not value free. It is not a fenced-in area of life where Christian values do not apply; for Christians there is no such thing as neutral ground. All of life is God's, and Christian values affect everything. That means there is no part of the curriculum where values do not apply.

We need to explore different models from a Christian perspective of how we approach all the curriculum, not just RE [religious education]. Bishop Paul Butler, Southwell Nottinghamshire (in the Harborough Mail, July 13, 2011)

Faith is not an abstract set of beliefs that are practiced by individuals on their own; it is about translating a relationship with God into a way of life lived in community, and that community is worldwide. Issues of justice for banana growers in South America are relevant to Christians wherever they live, and Christianity is a worldwide family.

Natalie put the emphasis on justice for banana growers. God calls people to follow "justice and only justice" (Deuteronomy 16:20). God's justice shows itself in acting on behalf of the powerless (Psalm 72, 7, 12), often represented as the orphan, the widow, and the stranger—those with no one to defend them and who are often treated unfairly. God expects his people to make justice and righting wrongs their aim (Isaiah 1:13-17).

Charity is no substitute for justice withheld. St. Augustine

In the moral sphere, every act of justice or charity involves putting ourselves in the other person's place and thus transcending our own competitive particularity. C. S. Lewis

The Bible describes God as a God of justice. The prophet Amos thundered against the injustices of his day, when the vulnerable were oppressed and the rich just got richer. He called for justice to roll like a river (Amos 2:24). People seem to have an innate sense of justice and are rightly outraged at the injustice they see in the world (Malachi 2:17).



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