

The Double Spend Game

A card game and educational toolkit to educate students on the concepts of blockchains to increase financial and technical literacy

<https://github.com/thedoublespendgame>

Someone who is **financially literate** will not only **help their careers, salary, and overall quality of life**, but will also become active participants in their local, and even, global economy.

In a study conducted by Carlin and Robinson (2012) students who were given a 19-hour course based on the financial literacy curriculum **were more frugal, paid off debts faster, relied less on credit financing**, compared to their peers.

Financial literacy goes beyond the basic understanding of money. **By educating our young people in financial literacy** in the modern world, we create young people who become **intrinsically motivated to build strong financial foundations** through both their academic and personal pursuits.

What Does Financial Literacy Training Teach Us?

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Abstract

This paper uses a quasi natural experiment to explore how financial education changes savings, investment, and consumer behavior. We use data from a Junior Achievement Finance Park to measure the effect of a financial literacy program on students who are assigned fictitious life situations and asked to create household budgets for these roles. The treatment effects of the financial literacy program are strong. Students who experienced training were somewhat better at making current-cost/current-benefit tradeoff decisions (spending more today versus spending less today). But the tendency to try to save more today often led them to make poor choices when they faced tradeoffs between current-costs and future-benefits today (i.e., when spending more today is cheaper in present value terms). Most importantly, students who had attended training showed greater up-take of decision support that was offered in the park. This indicates that decision support and financial literacy training are complements, not substitutes.

I. Introduction

Financial literacy is defined as “the ability of people to make financial decisions in their own best short- and long-term interests” (Mandell, 2008). Unfortunately, this skill is in short supply in the United States. Many retirement-age adults lack the financial literacy to understand the basic features of their retirement plans (Lusardi and Mitchell, 2009). In a 2003 Survey by NASD, only 35% of respondents could answer better than 7 of 10 basic financial literacy questions—many respondents believed, for example, that stock market losses were insured (Associated Press, 2003). Around half of all high-school students surveyed by Jump\$tart.org thought that either the sales tax was set nationally at 6%, or that the government deducted it from one's paycheck. (In fact, neither are true.)

Indeed, consumer financial literacy has been at the center of current debate concerning the causes and catalysts of the recent financial crisis. Many home owners did not appreciate the

Bruce Ian Carlin & David T. Robinson, 2012. "What Does Financial Literacy Training Teach Us?," *The Journal of Economic Education*, Taylor & Francis Journals, vol. 43(3), pages 235-247, July.

Inspiration - Krypto 4 Kids

Interactive and real-world scenarios being led through enquiry, are often the most engaging and impactful lessons. Being able to easily access **pre-made lesson plans**, resources, tools, or further instructions is a vital tool for teachers to be able to learn this knowledge themselves and to **teach a complex and often intimidating topic**.



Inspiration - Twinkl

Through having these resources educators will be able to focus on the individual **differentiation** and **inclusion** of their classroom rather than focusing on the logistics of developing and planning such lessons. To **educate our young people**, we must first educate ourselves, with pre-made resources and **lesson plans**, teachers can have (and create) a **fun, engaging and positive learning experience** that can be easily adapted to begin erasing the lines between those that have financial literacy, and those that do not.

The screenshot displays the Twinkl website interface. At the top, a purple banner reads 'Twinkl Phonics! Weekly Lesson Packs' and 'Everything you need to make phonics fun! Ready To Download! Click Here!'. Below this is a navigation bar with a search bar, a 'Filter By Age' dropdown set to 'maths', and a 'Membership' button. A menu bar includes links for 'Home', 'Caribbean Islands', 'Early Childhood', 'Grades 1-3', 'Grades 4-6', 'Parents Hub', 'Twinkl Phonics', and 'Twinkl Go'. The main content area features a large preview of the 'Finding Factors Game' resource, which includes a grid for finding factors and a cartoon illustration of two detectives. A 'Unlimited Ultimate Downloads' badge is visible, stating 'from Bds\$5.90 per month'. Below the preview, the resource is titled 'Finding Factors Game' with a 4.8-star rating from 5 reviews. Social media sharing icons are present. The breadcrumb trail shows 'Number and Algebra > Number and Place Value > Factors and Multiples'. A section titled 'How can I use this game to teach factors?' includes a 'Recently Viewed' link and a description: 'Factors Game' is a fun way for students to identify the factors of a given number. Children need to identify the correct factors from the grid. To the right, a section titled 'What do members download after viewing this?' displays several related resources with star ratings: 'Who am I? Factor and Multiples Game' (5 stars), 'Factors and Multiples Revision Worksheet' (5 stars), 'Finding Factors and Multiples Game' (5 stars), 'Factors Memory Game' (5 stars), 'Factor Flowers Worksheet' (5 stars), and 'Factorpuz (Finding Factors) Worksheet' (5 stars). A chat bubble in the bottom right corner says 'Hi, How can we help?'.

The Games

The games use an intentionally low-tech approach of **pen and paper** in order to maximise the potential audience globally. They can also be translated to other languages and/or adapted to different cultural specifics.

The games involve **explaining and simulating** simplified versions of **common blockchains**, involving students interacting with each other and playing roles (e.g. **miner, banker, validator**). e.g. for PoW, each student is given a sudoku puzzle to solve, the first to solve it becomes the "miner" for that block. The other students then write transactions on cards and give them to the miner. For **XRP LCP**, a group of students are nominated to be a UNL and get to vote on transaction ordering.



Photo by [Jizhidexiaohailang](#) on [Unsplash](#)

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