



harmoningos  
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# Mutual Learning

prof. Bernardas Lietaeras

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**XXI amžiaus renesansas: inovatyvios mokymosi ir bendradarbiavimo formos.**

**Bendruomeninės valiutos projektai**

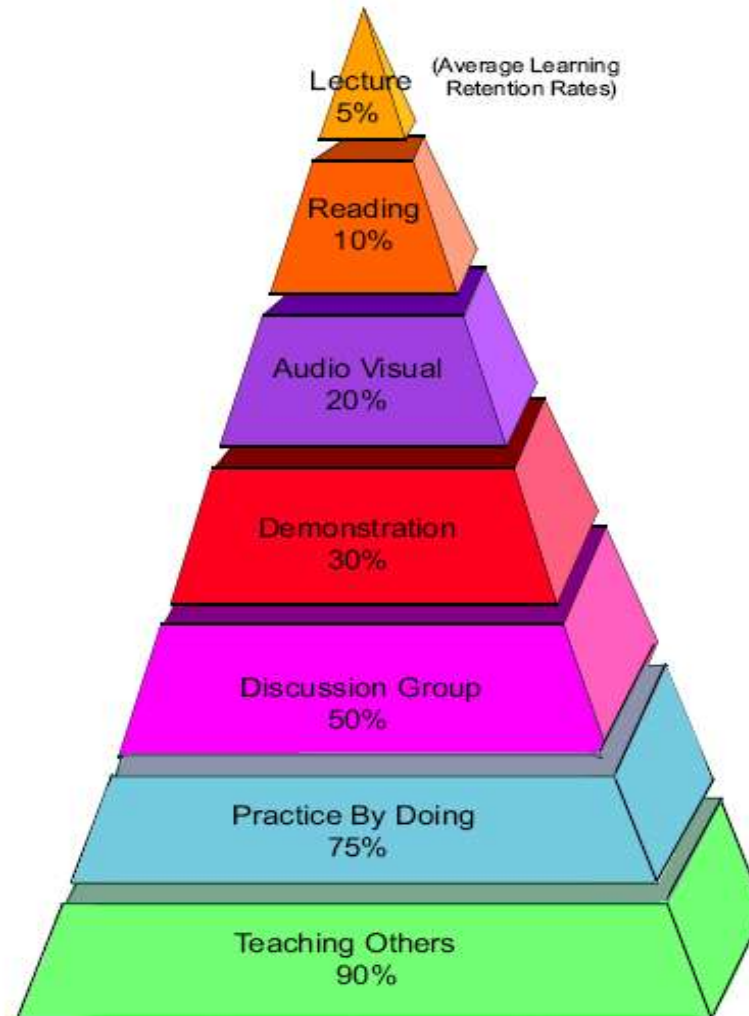
Daugiau informacijos: [info@hai.lt](mailto:info@hai.lt), tel.: 8 5 262 8622, 8 610 61272



# Forms of Capital

- What I will be talking about:
  - **Human Capital** = stock of skills accumulated, allowing someone to receive a flow of income (Becker)
  - **Social Capital** = collective value of all social networks and the non-commercial exchanges that they enable with each other (Putnam)

# Learning Pyramid



(National Training Laboratories, Bethel, Maine)

# Relevance

- The learning pyramid is valid independently of the domain involved, or the age of the participants.
- The examples given all relate to youth, but could be adapted appropriately to participants of any age, including:
  - Adult to adult
  - Youth to adult
  - Adult to youth

# Plan

1. Historical Precedent: France's *Ecole Mutuelle*
2. Brazil's *Saber*
3. Belgian *Wispos*
4. Ghent's *Torekes*

# Historical Precedents

- 1795: Andrew Bell, a Scotsman living in Madras, observes and describes the concept for the first time
- 1800: Joseph Lancaster creates a school in London
- 1815: Initiative of *Ecoles Mutuelles* in France
  - Largest ever experiment of mutual learning

# France's *Ecoles Mutuelles*

- 1802: Napoleon introduces first time universal education, using 2 models:
  - for elite: religious order schools with teachers, top down teaching, individual books.
  - for lower social classes: *Ecoles Mutuelles* with moniteurs, reciprocal learning, shared books
    - 1815: 165.000 students
    - 1820: 1.123.000 students
    - 1830: 2.000 *Ecoles Mutuelles* operational all over France

# Comparative Results of *Ecole Mutuelle* vs. Conventional Schools

- 4 Results:
  - 6 Year secondary school program completed in 3 years!
  - Children from *Ecole Mutuelle* want to continue learning
  - More creativity by students
  - Authority is earned, not based on hierarchy
- 2 Problems:
  - What to do with a million 15-year-olds from modest background who want to go to university?
  - All leaders from the « Revolutionary Party » of 1848 came from *Ecoles Mutuelles...*
- 1848: Napoleon III eliminates this « too efficient pedagogy »
  - Priority given to social control over actual learning...
  - Teacher unions lock in hierarchical system forever...



# Mutual Learning Today

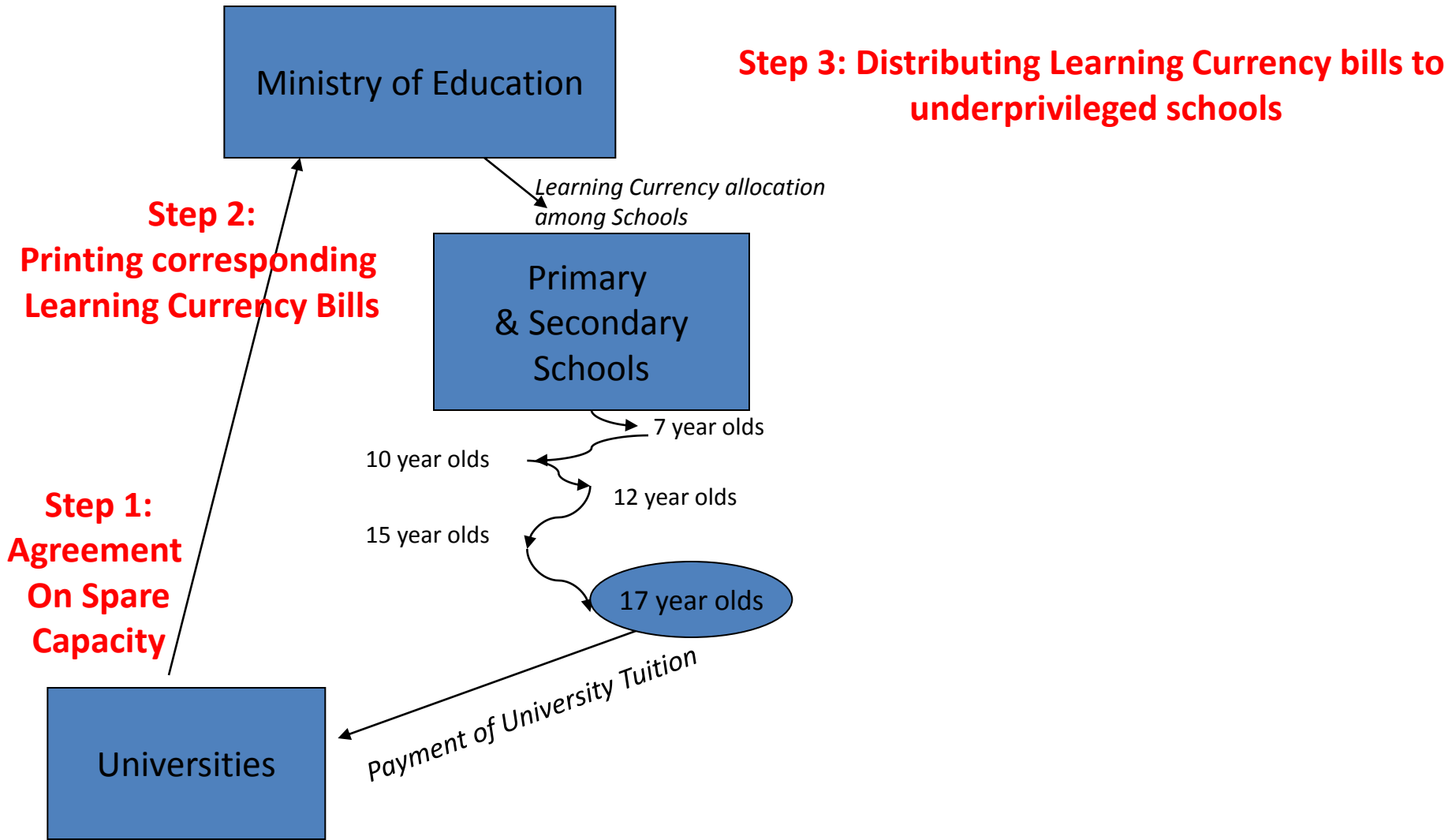
- Has been reinvented now under various names:
  - Learning through Teaching (Gartner)
  - Reciprocal Teaching (Palincsar, Brown, Carter, Fekete)
  - Reciprocal Peer Tutoring (Fantuzzo, Greenwood)
- US:
  - Time dollar system: both mentor & mentee improve!
  - Methodology transposed to computer-based learning (Vanderbilt University: « Teachable Agents project »)
- Germany (« *Lernen durch Lehren* »): over 1000 teachers use mutual learning, first in learning French and since 2001 in all other fields

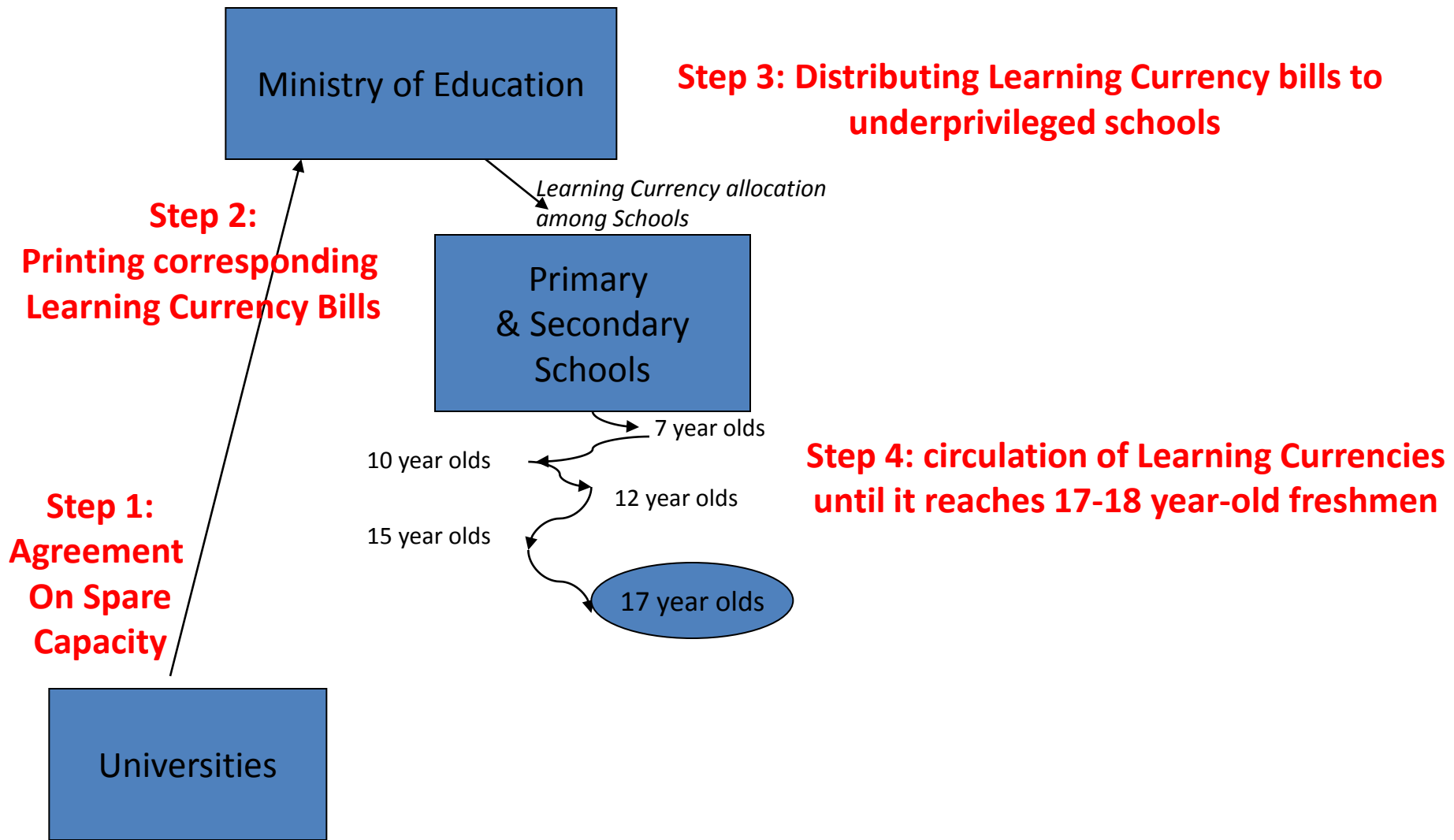
# Plan

1. Historical Precedent: France's *Ecole Mutuelle*
2. Brazil's *Saber*
3. Belgian *Wispos*

# *Saber Learning Currency Process*

- **Step 1:** Ministry of Education obtains agreements with universities about “spare capacity” (number of students that can be added within existing staff and facilities) for a future year
  - Example: 1,000 extra students possible for 2012
  - NB: Satellite distant learning technology will enable to increase significantly the number of students within existing facilities
- **Step 2:** Printing of Learning Currency bills corresponding to tuition payment for spare capacity for a given academic year
  - 1 Learning Currency = 1 national money useable for paying higher education tuition.
  - Bills issued are marked for a given academic year (ex: 2012)
- **Step 3:** Distributing Learning Currency bills to underprivileged schools for mentoring programs (as with Time Dollar mentoring programs)



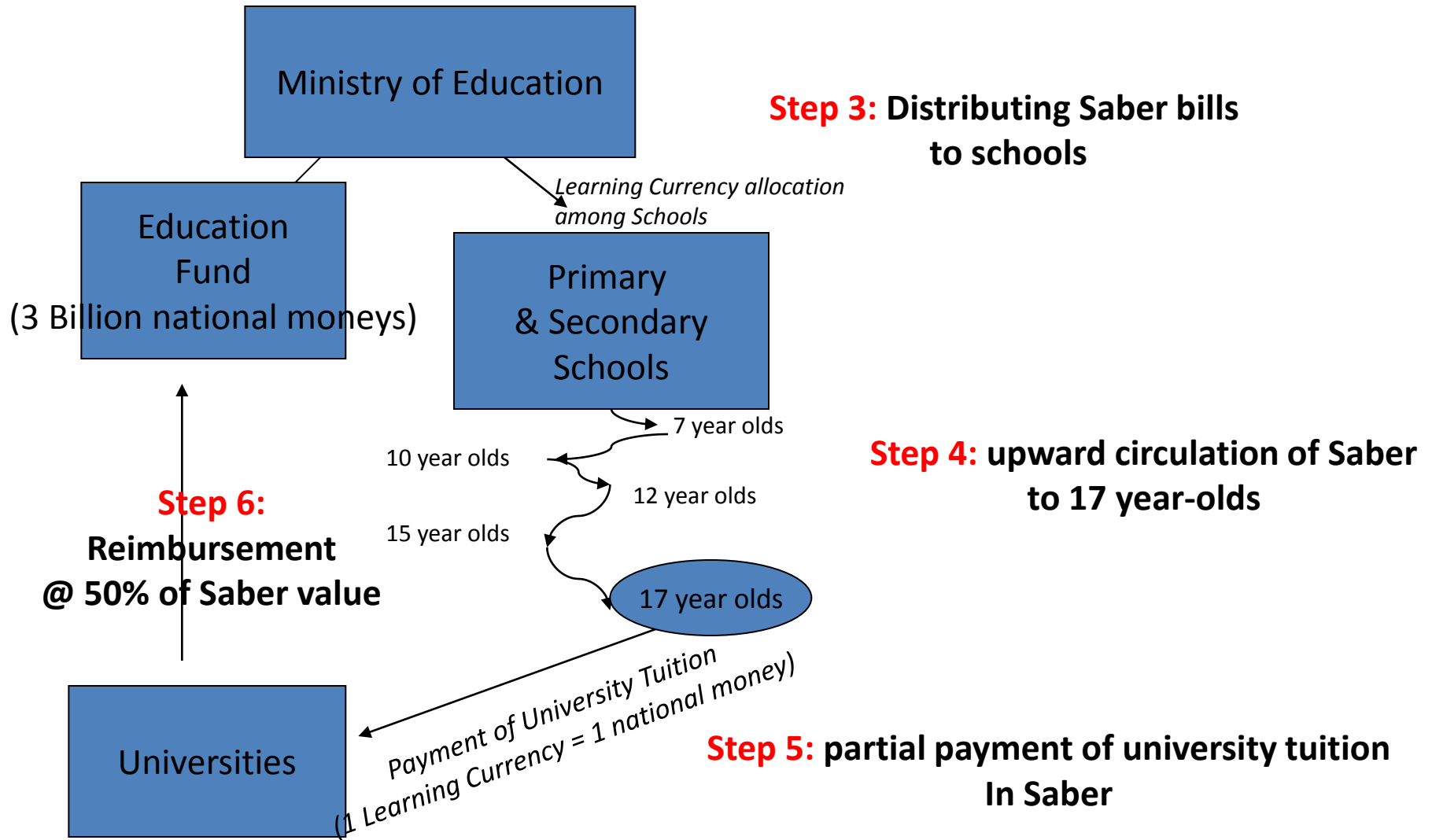


NB: 1 Learning Currency is equivalent to 1 national money redeemable for tuition in higher education

# *Saber Learning Currency Process*

- **Step 5:** 17-year old freshman can use Learning Currencies to pay for tuition at participating universities.
  - NB: If a Learning Currency marked for use in 2012 is used later, 20% penalty
    - => vast majority of 2012 Learning Currencies are used in appropriate year
    - => ensures that no overflow occurs at university facilities in future years.
- **Step 6:** Universities cash in Learning Currencies for national moneys from Higher Education Fund at 50% of face value
  - Marginal cost of an extra student for a university is only fraction of average cost (typically 5 or 10%)
  - Therefore Universities receive more national moneys than they otherwise would, by getting extra students they otherwise wouldn't have

# "Learning Currency" System = Learning Multiplier



NB: 1 Learning Currency is equivalent to 1 national money redeemable for tuition in higher education

# Saber Methodology Results

- Total learning from Higher Education Fund is increased by a factor of 100 compared to conventional scholarships solution.
  - 5x circulation of Learning Currency in mentorship program in school system
  - + repurchase by Ministry of Education of Learning Currency at 50% of face value
  - Factor of 10 in efficiency of “retained learning through teaching”
  - Combines perfectly with distant learning strategy...



# Plan

1. Historical Precedent: France's Ecole Mutuelle
2. Brazil's Saber
3. **Belgian Wispos**

# Belgian *Wispos*

- Project started in Fall 2010 in secondary school (Wispelberg Atheneum in city of Gent) with 30% failure rate in first year in math and French.
- 80 students in 4 classes divided in teams of 5
  - 2 hours per week
  - Games with scores paid in Wispos

# Wispo Results

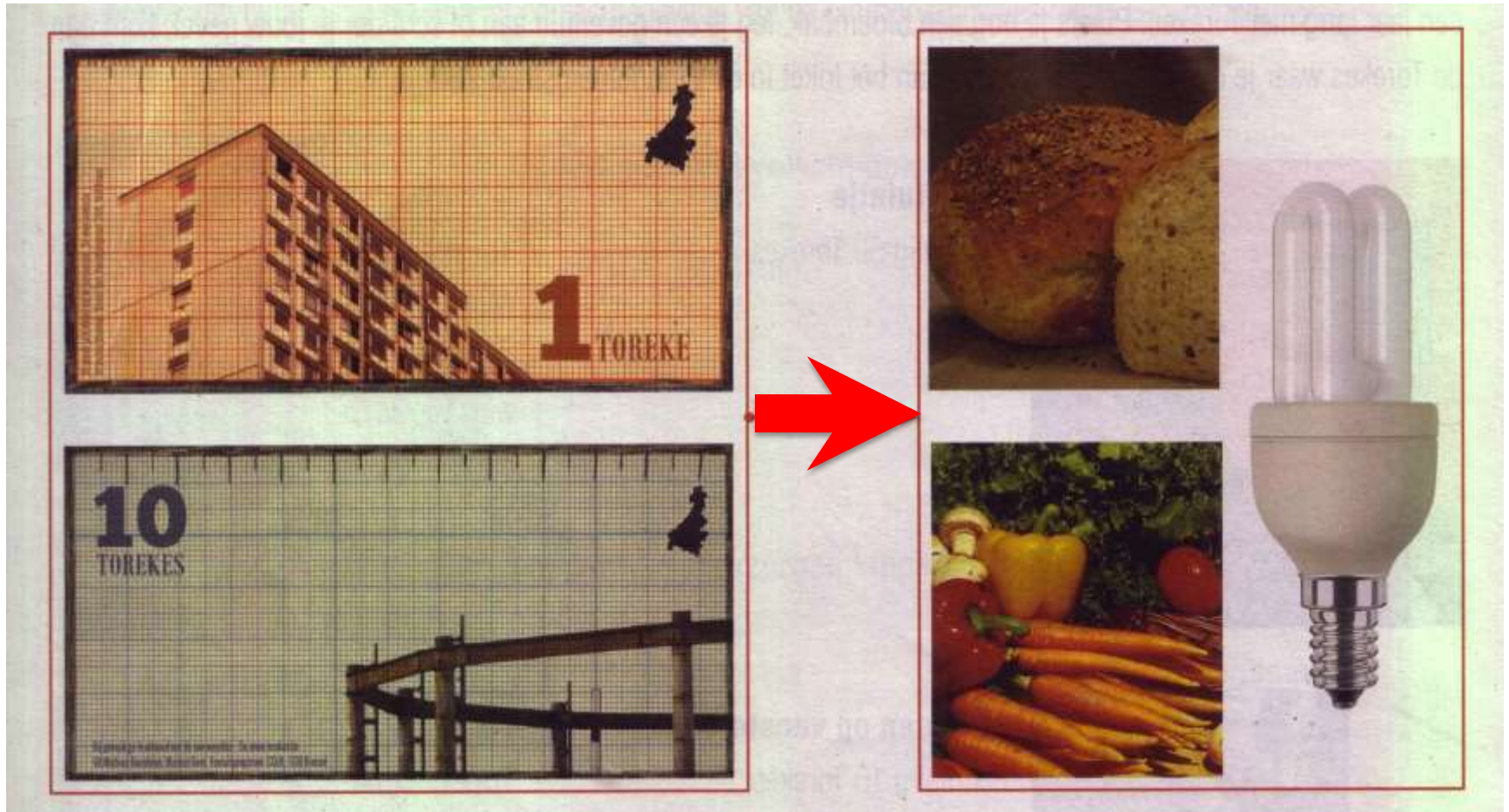
- Stronger bonds between students, including for learning support
- Tests improve after game compared to before game
- Teachers involved have chosen to extend system to the 2d year class for schoolyear 2011-2012
- A second school has decided to immitate the process.

# Torekes: Greening a « Difficult » Neighborhood

- Project launched in Ghent, Flanders, in late 2010
  - Economically poorest neighborhood in Flanders...
  - 8000 registered residents
  - 50% first generation immigrants
  - 9231 inhabitants/km<sup>2</sup> ( + illegals)
  - More than 20 languages, with Turkish dominant

***Starting Point: Dreaming of a little garden !***

# Torekes: Greening a Neighborhood



# Results

- First time that Ghent had more volunteers than they could use!
- First 6 months: 40.340 Torekes earned
  - via 526 service activities
  - 12.068 spent at local groceries
  - 9.000 spent on rent little gardens (150/year)
  - Other uses: movies, public transport

*For same Euro budget, 2 to 4 times more results...*

# Conclusion

- Extension beyond school environments can make all of Lithuania a « Learning Country »
  - where foreigners come to visit to learn too
- Specific proposals presented tomorrow.