



Associative Financial Literacy

Accompanying the journey of life

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Teaching Associative Financial Literacy

Class 8

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Overview

This article describes a one-year student company project, combined with lessons in double-entry bookkeeping, and explains why it makes sense to establish such lessons in the 8th grade (or lower secondary level).

The student company project grew out of the circumstances of the class at the time and should only serve as an example here. Lessons in double-entry bookkeeping also have their value independently of this, but of course it becomes more attractive due to the practical connection.

The appendix in particular gives beginners an overview of the structures of double entry bookkeeping. These are relatively easy to grasp even for lay people if they do not claim to want to understand every aspect of business life that is relevant today.

Why double-entry bookkeeping?

In double-entry bookkeeping, all forms of assets and debts, on the one hand, and expenditure and income, on the other, are sensibly structured and related to each other. The balance sheet, which is drawn up at a certain point in time, shows the relationships as in a stationary picture, whereas the income statement shows processes within a certain period of time. This double representation depicts the money flows of an institution with its internal and external effects in a comprehensive and structured manner. For a few centuries now, double-entry bookkeeping has therefore become the "language of business life" worldwide, in which those involved can clearly communicate across cultural and linguistic boundaries.

The way to the project

In the 8th grade, the students at our school raise money for a joint graduation trip. A suggestion from Rudolf Steiner¹ gave rise to the idea of combining this with bookkeeping lessons. For this purpose, a small student company was founded, accompanied and recorded from an accounting perspective throughout its existence from opening to liquidation.

This was not about setting up an early commercial training, but simply about the motto: "I am human and nothing human is alien to me!"

¹ „In fact, no child ought really to reach the age of fifteen without being led from arithmetic to a knowledge of the rules, at least, of the forms of bookkeeping". GA. 294, 3.9.1919. "So sollte ... kein Kind das 15. Jahr erreichen, ohne dass ihm der Rechenunterricht in die Kenntnisse der Regeln wenigstens der einfachsten Buchführungsformen übergeführt worden ist.", Erziehungskunst. Methodisch-Didaktisches, GA 294, 3.9.1919.

Preparation of the teacher

For those who are not yet familiar with double-entry bookkeeping, much teaching material and many online courses are too specific and user-unfriendly. It is advisable to work through a book such as "Bookkeeping in 20 hours".² Here the technical basics are presented briefly, and in a generally understandable and comprehensive manner. The book suffices well as a tool for the class teacher!

Preparation of the class

First of all, an understanding of the balance sheet was developed. It compares the *assets* of a person or institution (cash, account balances, inventories, means of production, intangible assets, etc.) with their *liabilities* (outstanding bills, loans, mortgage debts, etc., including equity.). Equity is also on the side of liabilities. It expresses what proportion of the property I myself am entitled to. (The fact that equity appears on the debit side was a tough nut to crack for some students!) In terms of content, this followed on the one hand the treatment of debts and assets (negative / positive numbers, 7th grade) and on the other hand, the study of historical biographies in the 8th grade. People also take stock from time to time in the course of their lives, certainly at least at the end. What did I bring with me? What was given to me? What have others contributed to my life? What remains? It becomes noticeable that the balance sheet is less about external success or failure, but that it touches on questions that can also concern a young person in the depths of his soul: "Who am I? What I want?"

In its classic presentation, the balance sheet was treated as a T-account (see illustration). It thus carries within it the image of the scales (*bilancia*, balance), the equilibrium between assets (active) and liabilities (passive). This can be an advantage for understanding compared to the vertical format that is widespread in business today.

Incidentally, it can also be instructive for adults to draw up their own balance sheet for a purely economic point of view. What economic values do I have at all? Who do I have economic obligations to? Or does my life mainly consist of expenses and income, so that I have a rather small "balance sheet total"?

The diagram shows two T-accounts side-by-side. The left one is titled 'BILANZ' and has 'Vermögen Aktiven' on the left side and 'Schulden Passiven' on the right side. The right one is titled 'ERFOLGS-RECHNUNG' and has 'Aufwand' on the left side and 'Ertrag' on the right side. Both have horizontal lines for entries. The word 'Eigen-Kapital' is written in a box at the bottom of the balance sheet, and 'Gewinn' is written in a box at the bottom of the income statement.



The income statement, the second part of the bookkeeping, was not specially prepared because the nature of it is more familiar to the students (milk booklet invoice, bank account statement, etc.). The only thing that was new for most of them was the form of the T-account. (Images are of a blackboard drawing and a sheet from a student notebook.)

Then various imaginary companies (baker, bicycle dealer, stone grinder) were run through for accounting purposes. The business cases presented were chosen in such a way that the start-up impulse, capital procurement, type of income and expenditure, use and formation of equity capital, various forms of asset accumulation and depreciation (used-up value) became comprehensible.

Even with these "theoretical" companies, it was noticeable how the skills and intentions of the company founder are shown in his/her balance sheet, while his/her active relationship to the social environment is more likely to be shown in the income statement. (See Appendix 1.)

Now the practice continued until the feeling for the correct booking (posting of entries) was definitely present in the students as a skill. The practical principle that each amount must always be booked twice, once on the left in an account ("should"), once on the right ("have"), was very helpful. An income, for example, once in the "have" of the income statement (income), a second time as an increase in value in the "should" of the balance sheet (assets). During a tour of an actual company, to our astonishment, even the professional

² Jürg Prochinig, Urs Leimgruber: „Buchhaltung in 20 Stunden“, Verlag SKV, 8. Auflage 2019, ISBN 978-3-286-32448-0

accountant confessed that sometimes he only knows that, for example, a "should" booking has to be posted somewhere in "have" and only then can he find out where exactly...

Founding of the company

Our "company" had the goal of earning money for the graduation trip. As usual, we wanted to achieve this through a weekly break sale. An elaborate and uncertain development of "markets" was therefore not necessary. It was also clear to everyone that we would orientate ourselves in a socially acceptable and ecological manner. The idea of offering sweets to younger students, for example, was quickly rejected: A good deal is only really good if it is good for both parties! The decision was made to sell warm, flavored apple punch and the company was named "Punsch & Co".

Regarding the "type of business": It was clear that the company would need a managing director ("CEO"), but no student wanted to take on this position. On the other hand, it was unthinkable to use the class teacher as an "employer" and the students as "instructor-bound employees"; management guidelines and the ultimate distribution of profits were to be decided jointly. From a strictly legal point of view, the students were addressed as "co-partners".

Start of business activity

During all these preparations, the first business cases were already being processed, which were now listed chronologically on the blackboard: cider orders, change, accessories, donations, initial supplies, etc. The picture was confusing; an assessment of the company's position seemed impossible. The objection of a student that it was enough to keep an eye on the cash balance was already recognized by the class as an error.³

In what followed it became clear how clarifying the double-entry bookkeeping system is. (See Appendices.)

Opening up the accounting department took a whole lesson. The necessary bookings were discussed together and then noted by the class teacher on the blackboard and by each student in his/her own notebook.⁴

Once a week, the sales figures and other bookings were entered together, which each took a few minutes. At the end of the calendar year (December) we prepared a first interim balance, the statements of which were eagerly awaited.

It was impressive how much the equity that had already been formed differed from the cash on hand. This is instinctively felt to be a decisive asset, but that can be very deceptive. In our case this was mainly due to the fact that the company had a lot of outside capital (advance payment from the class teacher) on the liabilities side (debts); Assets (assets) were mainly formed by the cider stocks.

The equity in the balance sheet, i.e. the value that "only belongs to the company itself", was numerically exactly the same as the profit in the income statement. Later on, the students were able to experience what the difference between these two values is.⁵

Factory tours

In addition to working in "our own company", we also got to know real companies. First we visited some production / work rooms, then we got an insight into the bookkeeping, preferably together with the boss or the accountant.

A school father with his own bakery / café visited us in the classroom. We also visited a stonemason and a medium-sized remedy manufacturer in the region. The annual financial statements of our school association were also studied. (The visit to the offshoot of a US defence company fell victim to the corona measures in 2020.)

³ Although this shows the "cash flow", it does not reflect the overall economic situation of the company.

⁴ An introduction to spreadsheet programs in connection with accounting is of course a good idea, but can also take place later, e.g. in the 9th grade. Writing down by hand has its value in the learning process.

⁵ Each year the net profit or less is added to or deducted from the Equity account, showing that it is an addition to or reduction of own-generated capital. It is from this account, in the case of self-employed, that the entrepreneurs takes their income as 'drawings', i.e. transfers of capital to their private balance sheets.

The accounts of the companies visited were inspected on the basis of older or expressly changed figures; anything else would have meant asking too much. The numerical proportions and the account structure were decisive.

Liquidation of "Punsch & Co."

Towards the end of the school year we were able to dissolve our "company" as planned, service all liabilities and distribute the profits fairly.

Conclusion and evaluation

- The students were happy to take part in this lesson. For "Mathemuffel" there was a new, motivating point of contact with the world of numbers. Much of the terms that had already been "picked up" from the business world could gradually be clarified.
- The bookkeeper has to meet the strict requirement of "truth, clarity and completeness of the presentation". This is of great educational value.
- Factory tours: The double view of a company, on the one hand on the visible processes and on the other also on the accounting "in the background", was enriching.
- Further questions emerged: What actually is a share? Do we want to look for investors and expand our business? What kind of demands will they have? How is the relationship between the company owner and the employees to be regulated in a humane manner? These questions can probably be dealt with properly from the 9th grade at the earliest, even if, of course, there is already a feeling for many things in the 8th grade. The knowledge of bookkeeping offers the students the opportunity to develop their objective judgment. This is certainly helpful for in-depth work in later school years.

All of this seems to give me sufficient justification to deal with double-entry bookkeeping in 8th grade.

Student voices (from a survey carried out a year later)

"The balance sheet is an important part of accounting because it gives you an overview."

"Liquid, liquid assets are that which are not invested in material, e.g. cash."

"The lessons made sense because bookkeeping is something that, unlike other school subjects, you really need in life."

"The lessons were necessary to understand what was going on in the background of companies."

"Accounting is important to understand and apply."

"I can now better understand how companies work and how you can keep an eye on your numbers."

"It was good, because now I have at least a little idea."

Appendix 1 re. footnote 3

Exercise example: Eva Karfunkel, precious stone trade and grinding

- 1) Starting a business: loan. A friend lends the founder 45,000 CHF in cash
- 2) Buy 500 kg of cheap semi-precious stones. These are booked as expenses 1200
- 3) Purchase of a 4,200 safe
- 4) Rent (expense) 1,000
- 5) Purchase of a 4,500 grinder
- 6) A bank loan of 12,000 is taken out (money in the till)
- 7) Purchase of 8,000 diamonds. These are stored in the vault for several years.
- 8) Purchase of office supplies: writing paper, envelopes, postage stamps, etc. 400
- 9) Cut stones are sold on the market for 2,800 francs
- 10) Purchase of abrasive sand and special abrasive paper (consumables) 800
- 11) An expensive diamond ring is cleaned and reground for a customer, income 1,800
- 12) Purchase of a laboratory device for examining and testing diamonds 7,500
- 13) The grinding machine is sold for 3000, -
- 14) This results in a loss of value (depreciation), i.e. an expense.
- 15) Part of the loan is repaid (100, -)
- 16) Value adjustment "inventories": The value of diamonds has risen by around 10% overall.

Result:

IN	Cash	OUT	
1)	45'000	2)	1'200
6)	12'000	3)	4'200
9)	2'800	4)	1'000
11)	1'800	5)	4'500
13)	3'000	7)	8'000
		8)	400
		10)	800
		12)	7'500
		15)	100
		Result	36'900
Total	64'600	Total	64'600

IN	Loan	OUT	
15)	100	1)	45'000
Result	44'900		
Total	45'000	Total	45'000
IN	Bank Loan	OUT	
Result	12'000	6)	12'000
Total	12'000	Total	12'000

IN	Inventory	OUT	
7)	8'000		
16)	800	Result	8'800
Total	8'800	Total	8'800

IN	Means of Production	OUT	
3)	4'200	13)	3'000
5)	4'500	14)	1'500
12)	7'500	Result	11'700
Total	16'200	Total	16'200

Assets	Balance Sheet	Liabilities	
Cash	36'900	Loan	44'900
Vorräte	8'800	Bank Loan.	12'000
Prod./inv.	11'700	Result*	500
Total	57'400	Total	57'400

* Own Capital

Expense	I&E Accounts	Income	
2)	1'200	9)	2'800
4)	1'000	11)	1'800
8)	400	16)	800
10)	800		
14)	1'500		
Result*	500		
Total	5'400	Total	5'400

*Profit

Here, too, the first period after the establishment is described, so equity = profit. At the end of the next period, profit would then increase equity, or a loss would decrease it.

Appendix 2 re. footnote 4

Business cases before the opening of the "Punsch & Co." bookkeeping:

- 2.9. The class teacher ordered 100 liters of sweet cider (2, - / liter) from a farmer.
- 4.9. The price for a mug of punch is set at 1.00.
- 6.9. Students pick up change for the cash register on the post office. The class teacher advances the money for this (50, -).
- 10.9. A pupil buys paper cups, spices and napkins, the money for them (15, -) is given to the company. (Unsaleable inventories -> expense)
- 12.9. We borrow 10 liters of sweet cider (worth 20.00) from the bazaar team, we will refund it from time to time. (Stock of goods)
- 16.9. In the second-hand store we buy a hot plate for 5, -. We expect to get rid of them at this price after the liquidation.
- 23.9. The first sale (turnover 24, -)! The number of cups sold / dl is recorded in a booklet. Cider consumption 5 liters -> 10, - deduct from stock.
- 24.9. The ordered cider (see 2.9.) Is delivered, private transfer 200, - by KL. .
- 25.9. Second day of sale, turnover 36.00. Used-up cider 8 liters (16, -), see above
- 27.9. The portions offered turn out to be too big. We decide to only offer 1.5 dl - for the same price (!)
- 27.9. We pay back part of our debts to the bazaar committee (10, -).
- 28.9. The school kitchen gives us 5l of cider as a donation (value 10, -).

Outcome:

IN	Cash		OUT
6.9.	50	16.9.	5
23.9.	24	27.9.	10
25.9.	36	Result*	95
Total	110	Total	110

** here: cash on hand.*

IN	Inventory		OUT
12.9.	20	23.9.	10
24.9.	200	25.9.	16
28.9.	10	Result*	204
Total	230	Total	230

** here: Stocks*

IN	Means of P.		OUT
16.9.	5	Result	5
Total	5	Total	5

IN	Loans		OUT
27.9.	10	6.9. Teach.	50
		10.9. Stu.	15
		12.9. Baz.	20
Result*	275	24.9. KL	200
Total	285	Total	285

** here: surplus (deficit) for year.*

Assets	Balance Sheet		Liabilities
Cash	95	Loans	275
Inventory	204		
Means of P.	5	Result*	29
Total	304	Total	304

** here: Own capital*

Expense	I&E Account		Income
10.9.	15	23.9.	24
23.9.	10	25.9.	36
25.9.	16	28.9.	10
Result*	29		
Total	70	Total	70

** here: Profit (loss)*

Notes

The incidents of 2.9, 4.9. and 27.9 are not reflected in the accounting.

When selling cider, there is always a turnover on the one hand; on the other hand, the decrease in the cider inventory in the "have" and the expenditure in the "should".

It is of great help to the students if the respective offsetting postings are marked in color, as here.

The numbers on the balance sheet are the balances of the corresponding accounts.