



e-learning quality for sme's:
guidance and counselling

ROI Methodology for e-Learning Courses

ROI METHODOLOGY FOR E-LEARNING COURSES

Edited by

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First edition

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Title

ROI Methodology for E-Learning Courses

Edition

CECOA – Centro de Formação Profissional para o Comércio e Afins
(Vocational Training Centre for Trade)

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Place of Edition

Lisbon, Portugal

Date of Edition

October, 2007

Number of Copies

Print on demand

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1. INTRODUCTION

The *ROI Methodology for e-Learning Courses* (final version) was developed under the framework of the Pilot Project “ELQ-SMEs - e-Learning Quality for SMEs: Guidance and Counselling”, and supported by the Leonardo da Vinci Programme.

This methodology was developed for training consultants and training organizations and aims at the conception and provision of a set of guidelines for the application of the ROI¹ Methodology in e-learning environments. It is also targeted to help employers, employees and training providers to perceive the training outcomes and results in terms of their impact in SMEs². This ROI methodology has proven to be very useful for SMEs, especially for very small enterprises with management departments that are not specialised in training. Nowadays, the majority of the trainings supported by the employer are not in-house trainings and they are connected to very high costs including travel and accommodation costs for the participants. Comparing the costs of e-learning versus instructor led training (or traditional training) is not only important to gather the ROI on training but it is also a way of encouraging the management of the enterprises in the trade and service sectors to analyse the importance of their employees’ training and how it affects the success of their businesses. By reflecting about the increased knowledge that employees achieve after attending certain training, management and human resources managers should be able to recognise the added value of training and the way it improves the efficiency of the employees, hence resulting in better services and perhaps in sales growth.

The tools created by the project partners of ELQ - SME shall enable SMEs in the trade and service sectors to calculate the ROI of training simply and easily, using indicators which are, for the most part, easy to collect. At the same time, comparing the costs of traditional training versus e-learning may encourage SMEs from the trade and service sectors to use e-learning in their continuous training initiatives.

¹ ROI: Return of Investment, i.e., the increase in financial value provided by a new investment.

² SME: Small and Medium Enterprise(s).

The business advantages of e-learning have to be seen according to each specific case but it is a reality that good e-learning courses allow more flexibility both for employers and for their employees since participants can reduce their time away from the job; they receive just-in-time training that can be carried out in-house and when supported by the adequate learning materials, e-learning allows learners to study in an independent manner and when their time allows them.

Customized e-learning trainings can meet exactly the needs of the learners and therefore have a positive impact on their efficiency. Instructor led trainings (ILT) are of course still effective ways to learn new topics and acquire new skills, especially in terms of behavioural changes but they usually result in high costs in terms of fees, travel and lodging expenses - and of course - costs resulting from the employee's absence from the workplace.

BFI was responsible for the coordination of work package 5 and the technical coordination of the *ROI Methodology for e-Learning Courses* (product 7 – final version) while the organisation ProfitWise was responsible for the internal evaluation of this document. All partners provided support in terms of inputs, tools and suggestions to the present *ROI Methodology of e-Learning Courses* and gathered their expertise in terms of didactical and also economical implementation of e-learning.

The partnership is fully aware that this ROI Methodology for the e-Learning Course is not a complete work. It must be seen as a “step forward” in the attempt to provide useful guidelines, tools and materials in the field of e-learning courses evaluation. We hope that this result of the project can help training consultants, training organizations and e-learning providers showing clear evidences of the adaptation of the offer and the demand; what is effective in regards to e-learning investments; how the impact and sustainability for SMEs looks like and how to reach these criteria more easily.

Assuming this product as the beginning of a continuous improvement process, the partnership welcomes all contributions, suggestions and comments that end-users would like to forward and wish you a successful implementation of the present methodology.

2. GUIDELINES OF THE ROI METHODOLOGY FOR E-LEARNING COURSES

Implementing a strategy to evaluate the return on e-learning investment is a complex process that can be facilitated by these guidelines. The introduction of e-learning courses in companies can also be a complex process that sometimes comes across difficulties and it is therefore crucial to be able to argue both on a pedagogical and on a financial basis. Investments in training have to be justified and SME managers will want to see the return on the sometimes very high investments they do on training programmes. Being able to produce an accurate and clear return on investment has long been of vital importance for small and medium enterprises as otherwise the costs remain unjustified. In spite of the fact that every calculation is to some extent subjective - especially when calculating quantitative factors - the present *ROI Methodology for e-Learning Courses* shall allow its users to easily come to a conclusion about the payback of the training methods of their choice.

Therefore, once you start preparing the entrepreneurs from SMEs in the trade and service sector to measure and evaluate the return on e-learning investment there is a lot of awareness raising work you must do. It is also necessary to clarify that financial calculations can only be based on valid criteria that are easily quantified (e.g. fees or travel costs) and that the payback in terms of learning outcomes can be based on the reduction of time taken to complete tasks, the ability to carry out activities that were not possible before, or the increase in the quality of the activities (see also http://www.e-learningguru.com/wpapers/building_case.pdf).

The following implementation stages give you ideas on how to involve the SMEs managers in the process of decision-making for the introduction of e-learning courses. The aim is to pinpoint the added value of e-learning both on pedagogical and on financial terms and to clarify the benefits it brings to the enterprise and its employees. The following implementation steps are hence aimed at supporting you to build a business case for e-learning by focusing on a business manager's perspective.

IMPLEMENTATION STEPS OF E-LEARNING COURSES

THE FOLLOWING STEPS CAN HELP YOU MAKE A BUSINESS CASE FOR E-LEARNING

2.1. Before the e-learning course

1. Share your vision on how e-learning can add value to the SME business
2. Explain your strategy and way of working including the benefits and success cases
3. Map the business opportunities and threats of the SME
4. Segment those parts where e-learning can strengthen the SME business
5. Determine the possible economic profit and potential proportion of added value of e-learning
6. Determine the total setting in which e-learning will add value and set the requirements
7. Calculate the initial investment for e-learning based on the projected returns

2.2. During the e-learning course

1. Determine the interdependencies with other stakeholders, factors and interventions
2. Form a steering group with stakeholders based on the interdependencies
3. Determine the lag indicators (final results)
4. Determine the performance indicators of e-learning (lead indicators)
5. Determine how the results will be presented to the main stakeholders including participants
6. Determine how the effects will be monitored and evaluated
7. Set up a data collection plan

2.3. After the e-learning course

1. Collect and analyze the data
2. Present the results periodically to all stakeholders
3. Determine how the added value of the e-learning intervention can be optimized based on the data
4. Adjust and optimize the e-learning intervention
5. Determine the final added value and return on investment with the focus group
6. Publish or present the final results to external parties
7. Celebrate your success

The implementation of e-learning courses in SMEs is a process that requires expertise and knowledge about various processes. The steps mentioned above give you inputs about the facilitation of these processes.

3. ROI METHODOLOGY TOOLS FOR E-LEARNING COURSES

3.1. Questionnaire on ROI for the Trade and Services Sector³

Before getting started with the calculation of the ROI of e-learning courses with the SME managers, owners and entrepreneurs from the trade and services sector, you should start by jointly searching for answers to the following questions.

1. What are the results that the SMEs manager, owner or entrepreneur want to come up with?

The answer can be found in the short term business plan of the company. Every enterprise has to make a planning at the beginning of every year. It is of course not sure that he/she has written it down, but you can expect that the short term business plan contains the goals of the enterprise.

2. What factors will have influence on the continuity of the company?

Think of competition, products, customer wishes, customer perception, business processes, knowledge and skills of employees, a. o.

To find valid answers to this question you can use Performance Score Cards, Balanced Score Cards, SWOT analysis and GAP analysis by using the *Servqual* methodology.

3. Which of these factors can be solved by means of training and education?

Determine the company education and training needs and training gaps.

³ Contribution from Rene van Leeuwen, Profitwise, Netherlands. See PR5 – Annex 1 - Questionnaire on ROI for the Trade and Services Sector.

4. What are the needs on the level of knowledge and insight?

By determining the knowledge and insight needs you have determined the field of solutions that can be provided by e-learning.

5. How much does the e-learning solution contributes to the established business goals?

This is the so called isolation stage and it should be calculated in percentage.

6. How high is the probability that the results will be achieved?

This is the probability stage and it should also be calculated in percentage.

7. If we make a careful calculation as it is normal by the rules of good merchandise ship, with what percentage will you reduce the determined values?

This is the so called carefulness stage.

8. Now you can fill out the values in the presented scheme

The costs of an e-learning solution can be calculated by using the content calculator, which is included in the ROI Methodology for e-Learning Courses (final version). After you have filled in all values in the scheme you can calculate the ROI for different actors.

3.2. E-Learning Calculator for SMEs of the Trade and Services Sector⁴

Before you start presenting the possible economic profit and potential proportion of the added value of e-learning, you must start by collecting evidence about the following indicators.

INDICATORS / GENERAL INFORMATION

- Indicator 1. Number of courses per year
- Indicator 2. Estimated number of training days per course
- Indicator 3. Number of participants per course
- Indicator 4. Number of years the educational program will run
- Indicator 5. Average wage per day per learning program participant

INDICATORS / TRADITIONAL COURSES

- Indicator 6. Total number of hours of study during work - traditional course
- Indicator 7. Fee per participant – traditional course
- Indicator 8. Travel costs per participant per traditional course
- Indicator 9. Subsistence (food and beverage) costs per participant per day – traditional courses
- Indicator 10. Hotel accommodation – costs per participant per day in traditional courses
- Indicator 11. Total costs of traditional program development per course
- Indicator 12. Average cost of absence from work, per person, per day and in € – traditional courses

INDICATORS/ E-LEARNING COURSES

- Indicator 13. Total number of hours of study during work - e-learning course
- Indicator 14. Fee per participant for e-learning course
- Indicator 15. E-learning platform user fee
- Indicator 16. Total costs of e-learning program development per course
- Indicator 17. Average cost of absence from work, per person, per day and in € – e-learning course

⁴ Contribution from Niels-Christian Moe, NKI, Norway. See PR5 - Annex 2 - E-Learning Calculator for SMEs of the Trade and Services Sector.

INDICATORS / GENERAL INFORMATION

Indicator 1 “Number of courses per year” refers to the overall number of courses per year in which your employees are enrolled (e.g. business English and bookkeeping). You need to estimate this number and once you have this, you can gather the number of training days that the course takes over a period of one year and define it with **Indicator 2** “Estimated number of training days per course”. One course can also take 2 or more years - this is defined with **Indicator 4** “Number of years the educational program will run”. The last indicator in this category, **Indicator 5** “Average wage per day per learning program participant” allows you to calculate the average wage of the participants per day and it helps you to calculate e.g. the costs of absence from work per participant.

INDICATORS / TRADITIONAL COURSES

Indicator 6 “Total number of hours of study during work” refers to the total number of hours of study that employees will need while participating in a course (e.g. for group or home work). **Indicator 7** “Fee per participant” allows you to find out how much the enterprise pays for traditional courses per participant over a period of one year, which can be divided into a daily average. In addition to this, you need to know the other implied costs, such as travel and subsistence or accommodation, if these apply (**Indicators 8, 9 and 10**).

Indicator 11 refers to the money and resources spent on the development of a traditional course - this does not always apply as sometimes companies buy existing trainings on the market - but if your SME develops an own training, you need to calculate the expenditure. **Indicator 12** refers to the costs that occur because employees are not actually at the company carrying out their tasks. This figure is easy to calculate based on the average wage per day (Indicator 5) of the learning participants.

INDICATORS / E-LEARNING COURSES

Indicator 13 gives you the possibility to calculate any hours of study needed by your employees during work hours. To calculate the specific fee that one participant pays to enrol and to take part in a training course you can use **Indicator 14**. The fee for the e-

learning platform mentioned in **Indicator 15** refers to all costs, such as software and hardware requirements, installation of a specific program, technical support during the training, etc. and it should be based on estimated values.

Indicator 16 only applies if a course is especially customized for the enterprise otherwise there are only the fees and possibly an additional fee to use a platform or software. **Indicator 17** is once again related to the costs that occur when employees are away from the work place for training during working times (=paid time).

Once you have gathered the necessary information you need to start by doing some calculations for the traditional courses so that afterwards you can calculate the ROI of the e-learning course. In the following pages you have instructions about the calculation of the different indicators.

HOW TO CALCULATE THE INDICATORS OF THE ROI FORMULA FOR TRADITIONAL COURSES

Participation fees of traditional courses

[Number of courses per year]

x

[Number of participants per course]

x

[Fee per participant of traditional courses]

→ *Indicator 1 x Indicator 3 x Indicator 7*

Travel costs per traditional course

[Number of courses per year]

x

[Number of participants per course]

x

[Travel costs per participant per traditional course]

→ *Indicator 1 x Indicator 3 x Indicator 8*

Subsistence (food and beverage) costs

[Estimated number of training days per course]

x

[Number of courses per year]

x

[Number of participants per course]

x

[Subsistence (food and beverage) costs per participant per day during traditional courses]

→ *Indicator 2 x Indicator 1 x Indicator 3 x Indicator 9*

Total costs of hotel accommodation

[Estimated number of training days per course]

x

[Number of participants per course]

x

[Hotel accommodation costs per participant per year for traditional courses]

→ *Indicator 2 x Indicator 3 x Indicator 10*

Costs relating to vacancy and absence from work per year

[Estimated number of training days per course]

x

[Number of participants per course]

x

[Average cost of absence from work, per person, per day and in € during traditional courses]

→ *Indicator 2 x Indicator 3 x Indicator 12*

Expected growth in sales or increased efficiency:

The following formula helps you to find out what the actual added value of a course represents to your SME in terms of economical growth. E.g. After your employees have learned how to negotiate in English they will probably be more successful in sales. The expected growth refers to “the reduction in time needed to complete tasks, the ability to carry out activities that were not possible before, or increases in the quality of activities.”⁵

Total growth in sales or increased efficiency in € per participant after completion of the course

[Expected growth in sales or increased efficiency per participant and in € after the course]

x

[Number of courses]

x

[Number of participants per course]

x

[Number of years the educational program will run]

→ *[Expected growth in sales or increased efficiency per course participant, after completion of course] x Indicator 1 x Indicator 3 x Indicator 4*

⁵ In: „Building a Business Case for e-Learning” by Geo Learning, the e-learning systems company, USA.

HOW TO CALCULATE THE INDICATORS OF THE ROI FORMULA FOR E-LEARNING COURSES

Participation fees per participant of a e-learning course

[Number of courses per year]

x

[Number of participants per course]

x

[Fee per participant per e-learning course]

→ *Indicator 1 x Indicator 3 x Indicator 14*

E-Learning platform user fee

[E-learning platform user fee]

→ Indicator 15

Total costs of e-learning program development

[Number of courses per year]

x

[Total costs of e-learning program development per course]

→ Indicator 1 x Indicator 16

Costs relating to vacancy and absence from work per year

[Estimated number of training days per course - e-learning]

x

[Number of participants per course]

x

[Average cost of absence from work, per person, per day and in € – e-learning course]

→ *Indicator 2 x Indicator 3 x Indicator 17*

Finally, you can calculate the return of the SME investment:

ROI – Return of investment of course costs

[Total growth in sales or increased efficiency in € per participant after completion of course = estimated benefit]

– (minus)

[Total costs]⁶

/ (divided by)

[Total growth in sales or increased efficiency in € per participant after completion of course = estimated benefit]

→
$$\frac{[Estimated\ benefit] - [Total\ Costs]}{[Estimated\ benefit]}$$

ROI – Real return of investment of course costs, allowances made for estimated growth and uncertainty

[Total growth in sales or increased efficiency in € per participant after completion of course = Estimated Benefit/EB]

+

[[Estimated benefit]

x

⁶ Total costs include fees per participant, fees for e-learning platform and if applicable for development of course.

[Estimated benefit in sales/efficiency due to studies in %]]

-

[[Estimated benefit]

x

[Uncertainty value of correct course yield above in %]]

- (minus)

[Total costs]

/ (divided by)

[Total growth in sales or increased efficiency in € per participant after completion of course = Estimated Benefit]

$$\frac{\rightarrow [[EB + [EB \times \text{Study value in \%}] - [EB \times \text{Uncertainty value in \%}]] - [\text{Total costs}]}{[\text{Estimated benefit}]}$$

CONCLUSIONS

If ROI is positive: The result indicates a profitable course for the company.

Growth in sales or in efficiency exceeds the total costs of courses.

If ROI is negative: The result indicates a non-profitable course for the company.

Growth in sales or in efficiency is less than the total of costs of courses.

COMPARISON OF INDICATORS

The table below lists the indicators that apply both to traditional courses and to e-learning courses. This overview allows for a better comparison of the indicators.

Indicators	Traditional	E-learning
Indicator 6.		
Total number of hours of study during work	x	x
Indicator 7.		

Fee per participant	X	X
Indicator 8.		
Travel costs per participant/course	X	N. A.
Indicator 9.		
Subsistence (food and beverage) costs per participant/day	X	N. A.
Indicator 10.		
Hotel accommodation – costs per participant/day	X	N. A.
Indicator 11.		
Total costs of program development/course	X	X
Indicator 12.		
Average cost of absence from work, % of total wage costs/ day and in €	X	X

X = applicable value

n. a. = not applicable

4. FURTHER TECHNICAL INFORMATION

4.1. Examples of self-study courses

Before you start showing the value of e-learning to the SMEs managers, owners and entrepreneurs, you should start to check examples of self-study courses and collect other tips about the implementation of the ROI Methodology.

<http://www.solutionmatrix.com/elearning-business-case-preview.html> (English version)

Self study course about the basic concepts and applications of e-learning and how to calculate the ROI of e-learning courses

<http://de.solutionmatrix.com/> (German version)

4.2. Examples of e-learning business cases

When you want to show to the SMEs managers, owners and entrepreneurs you should start to get useful information on how to communicate the benefits of e-learning targeted to SMEs and check the following examples of e-learning business cases.

http://www.e-learningguru.com/wpapers/building_case.pdf

At the end of the article, there is a business case template. www.geolearning.com

http://www.e-learningguru.com/articles/art7_3.htm

By Kevin Kruse, *Presenting the business case for e-learning*

http://www.e-learningguru.com/articles/art5_2.htm

By Kevin Kruse, *Measuring the Total Cost of e-Learning*

<http://www.learningcircuits.org/2001/jul2001/mayberry.html>

By Ed Mayberry, *How to build a Business Case for e-Learning*

<http://www.learningcircuits.org/2002/sep2002/hartley.html>

By Davin Hartley, *Explaining E-Learning to Executives*

<http://www.elearningmag.com/ltimagazine/article/articleDetail.jsp?id=46418>

By Gili Gordon, *E-learning ROI: How to Build Your Business Case*

http://community.flexiblelearning.net.au/ManagingFlexibleDelivery/content/article_6200.htm

Australian Flexible Learning Community, *Show me the Business Case*

Business Case Guideline _ ROI Project (2005). A document used to calculate the return on investment in training. Available at www.srep.ro/roi2

Business Case Methodology Template – Division of the State Chief Information Officers (2006). The document presents a list of required business case elements.

4.3. Examples of other methods and tools

When you want to explore other methods and tools to characterize SMEs potential implementation of e-learning courses, you may use other strategies to get the employers commitment.

Performance Score Cards:

<http://www.amazon.com/phrase/Performance-Scorecards>

Balanced Score Cards:

<http://www.balancedscorecard.org/basics/bsc1.html>

Balanced Scorecard Institute, *What is the Balanced Scorecard?*

A concept for measuring the company's activities in terms of its vision and strategies. It gives managers a comprehensive view of the performance of a business.

SWOT analysis: <http://www.bplans.com/dp/article.cfm/148>

How to Perform SWOT Analysis?

A strategic planning tool used to evaluate the Strengths, Weaknesses, Opportunities and Threats involved in a business venture or in any other situation requiring a decision. It involves monitoring the internal and external marketing environment to the company.

<http://www.learningcircuits.org/2004/sep2004/dublin.htm>

By Lance Dublin, *Lessons on E-Learning Strategy Development from the Cheshire Cat*

GAP analysis by using the Servqual methodology:

<http://www.qmconf.com/Docs/0077.pdf>

By Arash Shahin, *SERVQUAL and a Model of Services Quality Gaps: a framework for determining and prioritizing critical factors in delivering quality services*

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The following steps were carried out in order to validate the ROI Methodology for e-Learning Courses:

1. Revise and extend introduction (relevance of the methodology, its aims, approach, etc.)
2. Revise and edit questionnaire
3. Revise and edit the list of indicators at 3.2. and provide instructions about the indicators (meaning, numbers, wording and semantics)
4. Explain the meaning of “Total expected growth in sales or increased efficiency of participants”
5. Include an example by using the “e-learning calculator for SMEs”
6. Include table with comparison between e-learning and traditional courses
7. Include additional Indicators / Traditional courses = no. of study hours
8. Include additional information to the costs of e-Learning Courses = software purchase and updates / technical support (administration and maintenance)
9. Revise the “e-learning calculator for SMEs” (add blank fields and further criteria)
10. Add a new indicator: “Estimated number of course days”
11. Indicator no. 15 was replaced by the new indicator mentioned above
12. Correct the formulas for calculating the ROI of traditional courses

E-learning calculator for SMEs

Developed by Niels Christian Moe, NKI Distant Education, as part of the ELQ-SME Project
Project Homepage: http://www.nettskolen.com/in_english/elq-sme/index.html

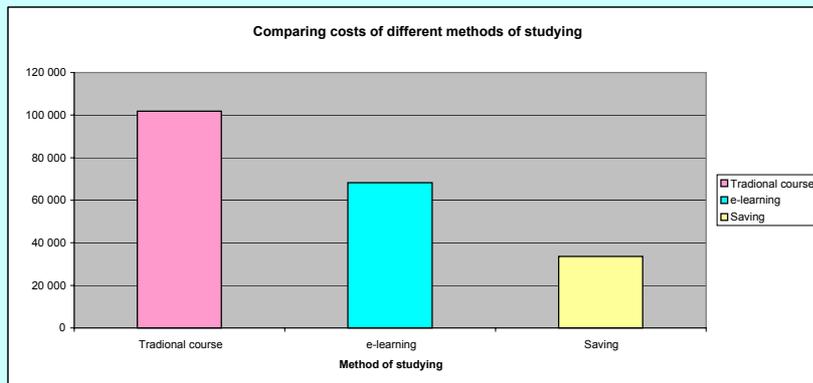
Name of institution: ROI EXAMPLE AS

Course or project title : Bookkeeping

Project parameters - Assumptions		
		Currency: EUR
Indicator	General information	
1	Number of courses per year	1
2	Estimated number of training days per course	10
3	Number of participants per course	25
4	Number of years the educational program will run	2
5	Average wage per day per learning program participant	250 EUR
Indicator	Traditional courses	
6	Total number of hours of study during work - traditional courses	
7	Fee per participant - traditional courses	600 EUR
8	Travel costs per participant per traditional courses	350 EUR
9	Subsistence (food and beverage) costs per participant per day - traditional courses	295 EUR
10	Hotel accommodation - costs per participants per day in traditional courses	100 EUR
11	Total costs of traditional program development per courses	150 EUR
12	Average cost of absence from work, per person / day and in € - trad. courses	200 EUR
Indicator	E-learning courses	
13	Total number of hours study during work - e-learning course	16
14	Fee per participant - e-learning program	700 EUR
15	E-learning platform user fee	600 EUR
16	Total costs of e-learning program development per course	150 EUR
17	Average cost of absence from work, per person / day in € - e-learning course	200 EUR

Expected growth in sales or increased efficiency - per participant - after completion of course	EUR	3500
Total growth in sales or increased efficiency for all participants - after completed course	EUR	175 000

Traditional courses	Costs (EUR) per year	E-learning courses	Costs (EUR) per year
Total costs of traditional program development	150	Fee per participant - e-learning program	17 500
Participation fees	15 000	E-learning platform user fee	600
Travel costs per traditional course	8 750	Total costs of e-learning program development	150
Subsistence (food and beverage) costs	2 950	Cost relating to vacancy and absence from work	50 000
Total cost of hotel accommodation	25 000		
Cost relating to vacancy and absence from work	50 000		
Total costs	101 850	Total costs	68 250
Savings per year - choosing e-learning to traditional courses		EUR	33 600
Total savings during course period - choosing e-learning instead of traditional courses		EUR	67 200



ROI - Return of investment of total costs of studies		
Expected ROI: ROI > 0%		
	Traditional courses	E-learning courses
ROI - Return of investment of course costs	41,8 %	61,0 %
Estimated growth in sales/efficiency due to studies	60%	75%
Estimated uncertainty of correct course yield above	80%	80%
ROI - Real Return of investment of course costs, allowances made for estimated growth and uncertainty	21,8 %	56,0 %
Explanation of results:		
If ROI is positive: The result indicates a profitable course for the company. Growth in sales or in efficiency exceeds the total costs of courses		
If ROI is negative: The result indicates a non-profitable course for the company. Growth in sales or in efficiency is less than the total costs of courses.		



This project has been funded with support from European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Promoter: CECO – Centro de Formação Profissional
para o Comércio e Afins (Portugal) www.cecoa.pt

BFI - Austria Berufsbildungsinstitut (Austria)

www.bfi-stmk.at



Forschungsinstitut Betriebliche Bildung (f-bb) gGmbH (Germany)

www.f-bb.de



University of Tartu, Open University Centre (Estonia)

www.ut.ee



Confederació de Comerç de Catalunya (Spain)

www.confecomercat.es



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ProfitWise (Netherlands)

www.profitwise.info



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www.nki.no



Education and Culture

Leonardo da Vinci

Pilot projects

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