
ASSESSING THE QUALITY OF E-COURSES

Jeanne Schreurs , Universiteit Hasselt, Belgium , Rachel Moreau, Universiteit Hasselt, Belgium

Abstract

The EFQM model of quality management is a universal model and is applied in this paper in the school context for the organisation of e-courses. We identified some quality criteria in this EFQM school quality model.

We defined a simplified e-learning EFQM model supporting the evaluation by the learner.

Based on it a questionnaire has been structured that can be used for the evaluation by the learner.

1. Introduction: Quality management in e-learning

1.1. The organisation of e-learning

E-courses are organised by e-learning services companies, by a company's training department and by educational institutes or schools /universities.

1.2. Quality of e-learning

It is challenging to support and enhance quality management in e-learning. The need for quality management in e-learning has risen since the use of e-learning has expanded. We have to find answers on the following questions: how is quality defined, How can quality be assessed?

The same principles apply to quality of e-learning as in the quality of teaching and learning in general. However, there are some special characteristics in e-learning that need to be specified. Quality management has to cover the teaching and learning, including the organization of the learning process, the learning content and the pedagogical and technical support for e-learning including equipment and facilities. Quality criteria have to be defined for those areas.

2. The EFQM Excellence Model of total quality management

The EFQM Excellence Model is a practical tool to help organizations do this by measuring where they are on the path to excellence, helping them understand the gaps and then stimulating solutions. The EFQM Excellence Model is a non-prescriptive framework based on 9 criteria. Five of these are 'Enablers' and four are 'Results'. The 'Enabler' criteria cover what an organization does. The 'Results' criteria cover what an organization achieves. 'Results' are caused by 'Enablers' and 'Enablers' are improved using feedback from 'Results'. Each of the nine criteria is supported by a number of sub-criteria. Those pose a number of questions that should be considered in the course of an assessment. For example in the criteria leadership, focus is on the way management can motivate and stimulate the organization to evolve to continuous improvement. Some questions: How is management engaged in creating a culture of continuous improvement? How is management supporting the improvement activities? How is management evaluating and motivating the staff?

The EFQM Model is presented in diagram form below. The arrows emphasize the dynamic nature of the Model. They show innovation and learning helping to improve enablers that in turn lead to improved results

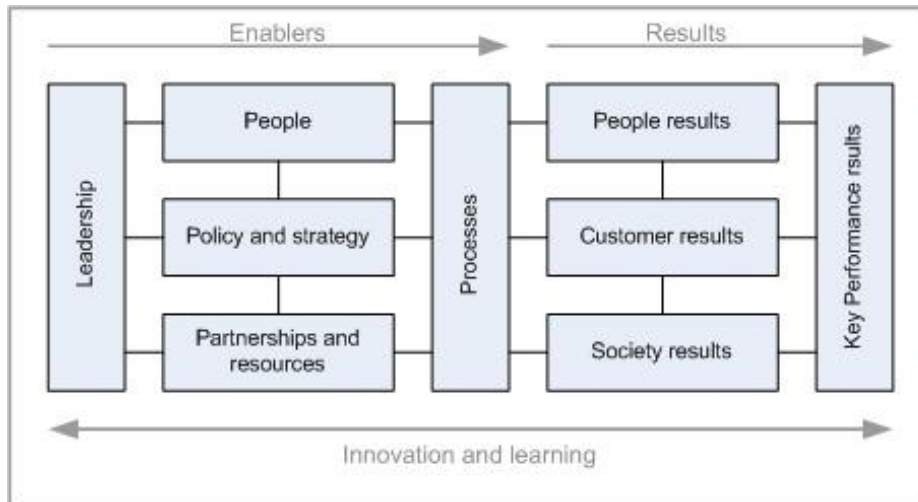


Figure 1: The EFQM excellence model

3. Kirkpatrick e-learning evaluation model

D. Kirkpatrick presented a four-level model of quality assessment, that can be applied to traditional way of learning and also to e-learning.

- Students' reaction: students are asked to evaluate the training after completing the program. First is asked how well they like the training. But other questions are about the relevance of and the fitting to the objectives, the quality of the included interactive exercises, the ease of navigation, ...
- Learning results: has the learner increased his knowledge of the topic? What about the achievement?
- Impact of learning on the functioning in the workplace: Are any of the new knowledge and skills retained and transferred back on the job? Is the student's behaviour changed as a result of new learning?
- Impact of learning on the business results: the evaluation of the business impact of the training must be measured.

4. The application of the EFQM quality model within the school context for the organisation of e-courses

4.1. Key terms within a school context

This paper deals only with the school dimension of the teaching and learning activities. The EFQM criteria will be limited in that way. More specific will we focus on the activities directly linked with the organisation and management of e-courses.

Goal is to evaluate the school performance on that aspect and to take afterwards actions to support improvements. The evaluation involves both internal assessment by school and some form of external assessment by education authority officers, advisers or review teams.

The "people" in the model comprise both the learners and the teachers. Both are responsible for the learning process and for the overall attainment.

The "customers or clients" are the parents and some representatives of the community.

Learners have a dual role as clients of the educational system and as people while contributing to the life of the school and to the learning process. The government of the country and the governing council of the school and other elected members of organising and controlling organisations can not be seen as customers /clients, because they have (overall) responsibility for the quality of education offered by the school, devolving operational control to the school head and the administration.

Schools enter into partnerships with some agencies which supply additional services as f.e. psychological services. Suppliers of materials must be seen too as partners. But networking with other schools , even internationally is becoming popular the last years.

4.2. An overview of some quality criteria in the EFQM school quality model

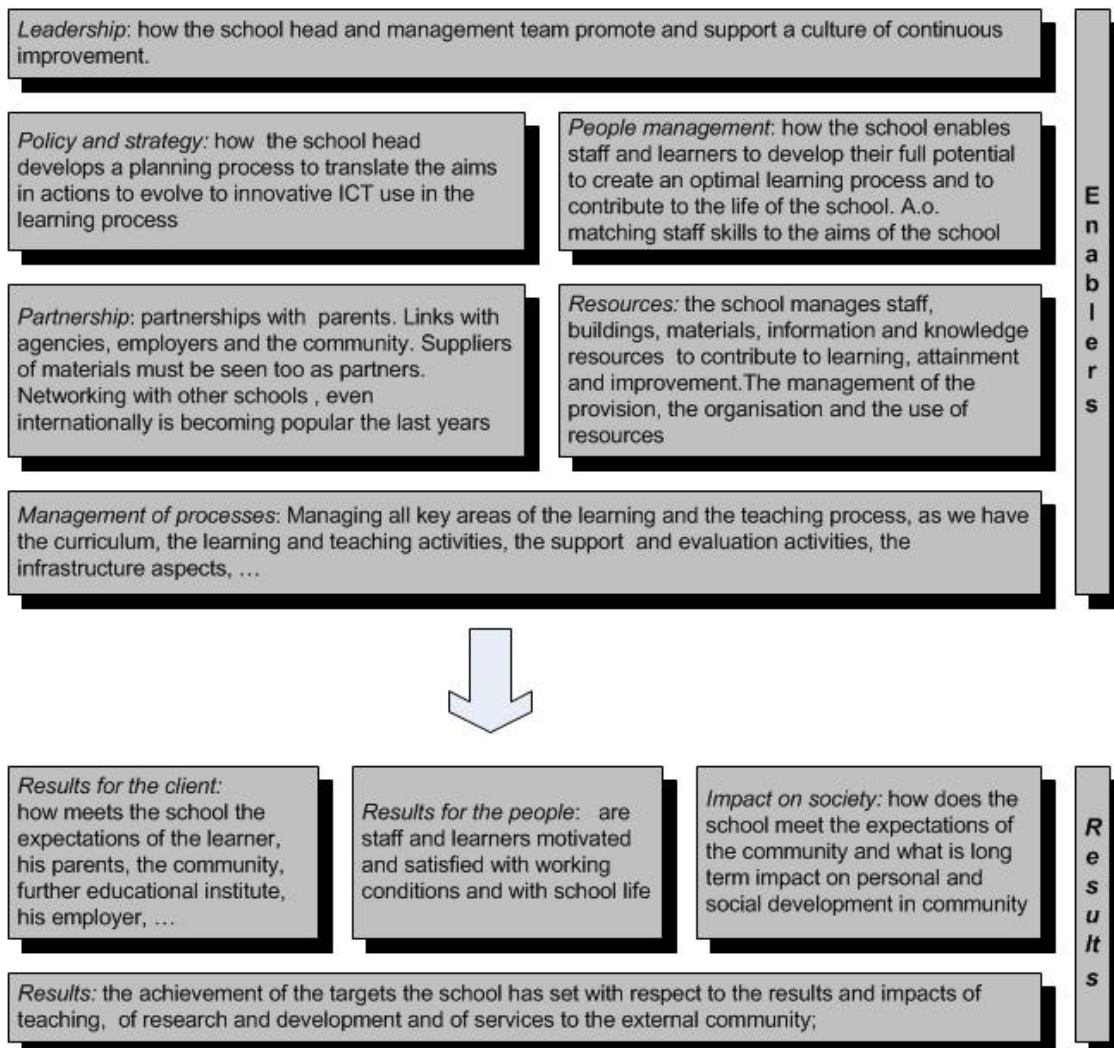


Figure 2: The EFQM school quality model

5. A simplified e-learning EFQM model supporting the evaluation by the learner

5.1. Evaluators

The evaluation involves both internal assessment by school and some form of external assessment by education authority officers, advisers or review teams.

Internally, the school management team and the teachers and the learners have to take responsibility for quality assessment on these criteria. The learner can partly take up the role of evaluator. Especially the resources and the processes can be evaluated by the learner.

The assessment of the quality of e-courses must be done by all internal stakeholders:

1. school management team: leadership, policy and strategy
2. teachers and learner: the sources especially the learning system
3. learner: the resources and the processes and all aspects of the learning process

4. school management team and teachers and ICT head: the process of development of e-learning solution
5. school management team and teachers and ICT head: results of learning
6. school management team is responsible for the evaluation of the fulfillment of the requirements of the external stakeholders.

5.2. Evaluation by the learner

We developed a simplified e-learning EFQM model, In most cases evaluation will be limited to the learners evaluation task and so the TQM model will be limited to a subset of criteria, namely those that can be measured by the learner. In that case, the evaluation itself is limited to a subset of the EFQM criteria domains. Some examples are the learning content, the learning process and the resources on point of infrastructure and organisation of the learning process activities.

From the enabler site of the EFQM model, we dropped the management level. It is impossible that the learner can evaluate the management of the company.

We limited the model to the processes and resources. On the results site we limited the model to the learner. The limited EFQM model can be found in figure 3.

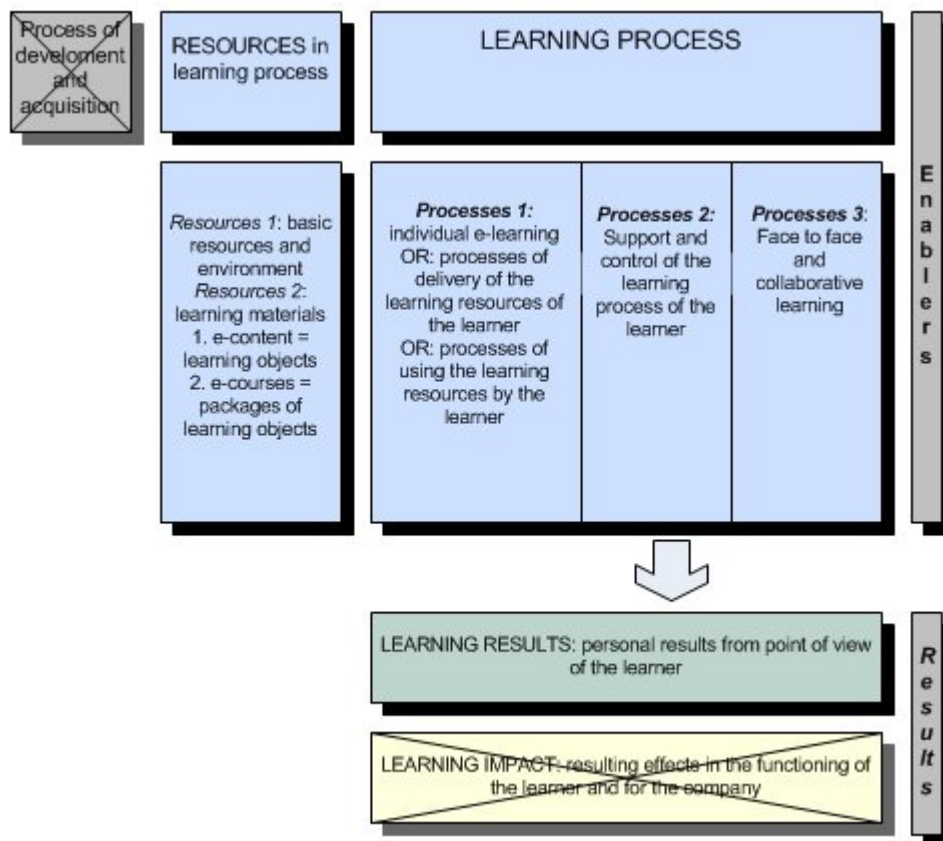


Figure 3: Quality criteria model, based on the EFQM excellence- and the Kirkpatrick's evaluation model

The two rows are presenting the enablers and the results. In the first column we see the process of development and acquisition of the resources to be used in the learning process. In the second column we see the resources themselves being the infrastructure needed for the organisation of the learning process and the learning materials.

The third column is devoted to the learning process.

Our tool must be useful for the evaluation of the individual e-learning activity and for the classroom activities, both being part of the blended learning process we have in mind. Finally special attention goes to the support and to the control processes of the learner in the learning process.

We can integrate the Kirckpatrick model in our model too in the following way:

	:“learner reaction”	covers the evaluation by the learner of the characteristics of all enablers, resources as well as processes
	:”learning results”	covers the effects on personal learning of the learner
	:”learning impact”	covers the effects of learning on the functioning of the learner in the job, and the results for the company

In this EFQM-Kirckpatrick model we have to remove also two criteria domains, where the learner can not be the evaluator.

The process of development and acquisition from one side and the learning impact from the other side can not be evaluated by the learner.

6. The SEVAQ questionnaire

In the frame of the SEVAQ project (www.SEVAQ.be) we are developing a questionnaire and a system for the evaluation of the e-course by the learner.

List of criteria for evaluation of :

The enabling Learning Processes

- 1.Services organisation
 - 1.1. Guidance of the candidate learner through the selection process
 - 1.2. Registration process and the contract negotiation process
 - 1.3. welcoming of the learner
 - 1.4. Services organisation and administration
- 2.The e-learning activities of the learning process

Figure 4: List of criteria

2. The e-learning activities of the learning process

2.1 Reading of and progressing in the e-course

- 2.1.1. it is possible to read through the course in a sequential way, as built in by the teacher
- 2.1.2. it is possible to read through the course in a flexible self chosen way
- 2.1.3. it is possible to access on the fly additional and deeper learning content
- 2.1.4. embedded usage of supporting facilities as calender, glossary, ...is possible
- 2.1.5. embedded usage of communication facilities as chat, e-mail, discussion, ...is possible
- 2.1.6. the uploading of the pages is very performant
- 2.1.7. the learner has the opportunity of having a fast reading of the overview of the course
- 2.1.8. the flexibility of going back to previous pages is provided
- 2.1.9. the flexibility of skipping pages is provided
- 2.1.10. taking selftests or exercises in the course upon initiative of the learner is possible

Figure 5: List of questions linked with sub-criteria 2.1

Following our concept, we developed our questionnaire in a 3 level structure: 3 main criteria, each containing more criteria which consist of more subcriteria. Questions are linked with those subcriteria:

- The Main criteria :
 - The enabling learning resources

- The enabling Learning Processes
 - The learning Results.
 - Criteria
 - Sub-criteria and questions
- An example can be seen in Figure 4 and Figure 5

7. Conclusion

It is challenging to support and to enhance quality management in e-learning. In this paper we found answers on the question how quality can be assessed. We have translated the EFQM model to become useful in the school context for the organisation of e-courses. That is why we made a fusion of it with the Kirkpatrick's model of e-learning evaluation. If we limit the TQM to the role of the learner as an evaluator, we have to limit our framework too. A set of quality criteria has been identified and will be used for self-assessment by the learners. The learner can fulfil the role of evaluator of the enabling resources and processes and the results of the learning process for the learner.

We defined a simplified e-learning EFQM model supporting the evaluation by the learner.

Based on it a questionnaire has been structured that can be used for the evaluation by the learner.

References

1. K.Ahaus, F.Diepman: "Balanced scorecard & INK management tool", Kluwer 2005
2. CEDEFOP(2004): "Innovative practices in e-learning"
3. A.M.Husson, B.Merison, J.Schreurs, E.Morin, H.Van Heysbroeck: "European self-evaluation tool for e-learning: an ongoing focus on quality and customer's needs" in Proceedings of the 11th Int. Conf. On technology supported Learning & Training: Online EDUCA Berlin Nov29-Dec 2, 2006. page 466-469; ISBN 3-9810562-3-X
4. N.K.Parker: "Quality delimita in online education", in Anderson, Terry & Fathi Elloumi(eds) Theory and Practice of online learning. Athabasca University, Canada.
5. J.Schreurs, R.Moreau: "Presta Coach Performance Management and a balanced scorecard system PRESTA", Proceedings of ECEC'2005 conference Toulouse April 11-13; ISBN: 90-77381-16-3; pages 49-56.
6. J. Schreurs, R.Moreau: "The EFQM self-assessment model in e-learning quality management." In Proceedings of Conference EDEN2006 Wenen 15-17 June 2006. Pages 233-238; ISBN 963 06 0063 3
7. S.Ten Have: "Key managements model". Financial Times Prentice Hall 2003.
8. www.efqm.org

Authors

Prof. Jeanne Schreurs
 Universiteit Hasselt
 Campus Diepenbeek, Agoralaan-Gebouw D, 3590 Diepenbeek
jeanne.schreurs@uhasselt.be

Rachel Moreau
 Universiteit Hasselt
 Campus Diepenbeek, Agoralaan-Gebouw D, 3590 Diepenbeek
rachel.moreau@uhasselt.be

