

DOI 10.18372/2786-5487.1.15811

Jaan Alver 

PhD, Professor,
Tallinn University of Technology,
Tallinn, Estonia,

Lehte Alver 

PhD, Professor,
Tallinn University of Technology,
Tallinn, Estonia

CURRICULUM MODELING: AN EXAMPLE OF ACCOUNTING CURRICULUM

***Annotation.** The process of globalization sets up new requirements for the curricula building in the business world. There is more pressure on accounting professionals to expand and enhance their knowledge, skills, and abilities beyond what they are currently likely to possess. Providers of accounting education must take into account the changed world and create contemporary curricula. The paper explains a new model of accounting curriculum developed at Tallinn University of Technology as well as its educational philosophy and principles of designing. It also describes conditions required for development and continuous improvement of competitive curriculum.*

***Key words:** curriculum building, accounting curriculum, accounting education.*

Introduction

The higher education community is under significant pressure to change. The biggest challenges are to become more operationally efficient and effective; to improve student outcomes; to increase access to higher education; to control costs; to recruit and retain top faculty and researchers. Effective transformation requires an enterprise-wide approach to improve and enhance organizational models, operating processes, technology, leadership, and talent models. Several international organizations are concerned in the development of the best curricula in every field. There are several approaches to global curriculum building. One approach is prescriptive and specifies the general and technical education professional accountants need to develop the required skills. It is best thought of as an “input” approach. Another approach is the competency-based approach, where competency is defined as the ability to perform activities within an occupation or function to the standards expected in employment. It then specifies what basic competencies professional accountants need. It looks at competencies as “outputs” or “outcomes” and then works backwards to specify the education necessary to achieve these “outcomes”. Because the competency-based approach is still in its infancy, the experts have chosen the first and more traditional approach, that is, to develop a curriculum for accounting education rather than to follow a competency-based approach.

Curriculum design

There are three models of curriculum design: subject-centered, learner-centered, and problem-centered design [9].

Subject-centered curriculum design revolves around a particular subject matter or discipline, such as mathematics, literature or biology. This model of curriculum design tends to focus on the subject, rather than the student. Teachers compile lists of subjects and specific examples of how they should be studied. In higher education, this methodology is typically found in large university or college classes where teachers focus on a particular subject or discipline. Subject-centered curriculum design is not student-centered, and the model is less concerned with individual learning styles compared to other forms of curriculum design. This can lead to problems with student engagement and motivation and may cause students who are not responsive to this model to fall behind.

Learner-centered curriculum design, by contrast, revolves around student needs, interests and goals. It acknowledges that students are not uniform but individuals, and therefore should not, in all cases, be subject to a standardized curriculum. This approach aims to empower learners to shape their education through choices. Differentiated instructional plans provide an opportunity to select assignments, teaching and learning experiences, or activities that are timely and relevant. This form of curriculum design has been shown to engage and motivate students.

Problem-centered curriculum design teaches students how to look at a problem and formulate a solution. A problem-centered curriculum model helps students engage in authentic learning because they are exposed to real-life issues and skills, which are transferable to the real world. Problem-centered curriculum design has been shown to increase the relevance of the curriculum and encourages creativity, innovation and collaboration in the classroom. The drawback to this model is that the individual needs and interests of students are not always accounted for.

Curriculum building is very similar to building a new product. For higher education institutions, a curriculum is like a product for industrial companies. The following steps must be covered [2]:

- study of potential markets;
- evaluation of raw materials;
- evaluate resources;
- study competition;
- develop strategy (select your niche);
- state a mission;
- design a product;
- design a production process;
- implement changes;
- monitor outcomes.

Strategic planning is a tool, which can help ensure that the change process will be effective. This concept has been often used in curriculum planning.

At the end of 20th century, attempts were made to create international suggestions for building accounting curriculum. The following international organizations should be mentioned:

- Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR) [6];
- International Accounting Education Standards Board (IAESB) [4];
- International Association for Accounting Education and Research (IAAER) [3].

In February 1999, ISAR adopted its Guideline on National Requirements for the Qualification of Professional Accountants (including a model curriculum). The model curriculum (MC) was revised last time in 2011 and approved (Model accounting curriculum – revised) [10]. The MC is organized based on knowledge. It was used by IFAC (to be more specific by IAESB) as a basis for developing new international education standards (IESs) [5].

Building the accounting curriculum at Tallinn University of Technology (hereinafter TalTech) the model presented by Hofer and Schendel [2] and learner-centered and problem-centered approach [9] were used. At the same time, the requirements [3, 4], standards [5] and revised model accounting curriculum [10] of the above-mentioned international organizations were taken into account.

The curriculum building process was as follows.

Step 1. Study of potential market. For creating a new product, the potential market must be researched. Globalization and internationalization play an important role in accounting. Accounting professionals need a high level of qualification. There are different types of business units in Estonia, from listed companies to local level companies. All these companies need highly qualified accountants. The rapid development of a large number of small and medium-size enterprises, joint ventures, and the privatization of large state-owned enterprises have also created an increasing demand for well-educated, highly skilled accountants and auditors.

Step 2. Evaluation of raw materials. To be effective for creating a new product the quality of raw materials should be taken into account. The raw material for a curriculum is its students. In this area, each institution should carefully consider the demographics of its student body. There are many factors, which should be considered: the demographic situation in country, the age distribution, mobility, location, and the number transferring to and from other institutions, work experience, commitments outside work, family commitments, and language skills. Estonia's demographic situation has deteriorated. Low birth rates affect the number of potential students. Potential students were born between 1991 and 2000, when the number of live births registered in Estonia fell from 19,300 to 13,000 per year [1]. On the positive side, TalTech is located in the Estonian capital, where more than a third of the population lives. This gives the advantage of getting more students.

Step 3. Evaluation of resources. In a strategic analysis, one's own inside resources as well as the strengths and weaknesses must be evaluated. The following questions could arise: Is our faculty able to be in line with nowadays' requirements (to teach new subjects)? Does our teaching staff have enough knowledge? Do we have the critical mass to establish the curriculum? At what level are the language skills of our teaching staff? At TalTech, the Accounting Unit has a teaching staff with high qualification – 9 persons from 12 have PhD degree, everyone has a good command of English and the ability to use professional literature in English.

Step 4. Study of competition. The nature of competition, market share, and how the institution of higher education reacts to competitive strategies have a significant influence on curricula and other strategic decisions. It should be emphasized that TalTech is the only higher education institution in Estonia with such a deep accounting specialization.

Step 5. Developing of strategy. By Porter [8] the second generic strategy, differentiation, attempts to make an organization unique in a dimension that is valued by the customer and the third generic strategy focus, concentrates efforts on a narrow segment of the market. To create a new curriculum demands to follow each of the previous steps: study potential markets, evaluate student body, evaluate the faculty and other recourses, and study competition. The main question is: Is this a good product, is this unusual or unique?

The third generic strategy, the focus strategy, concentrates efforts on a narrow segment of the market. It answers to the question – what knowledge or expertise can you use or develop to add value for your customers. TalTech has concentrated its efforts on the master level curriculum.

Step 6. State the mission. A formalized mission statement is essential in the planning process. TalTech's mission has always been to have the best accounting curriculum in the country.

Step 7. Design of product. After the fulfillment of steps 5 and 6 the product must be designed. At TalTech, the accounting specialization represents a part of the Business Administration curriculum at the undergraduate level and one of the two sub-curricula of the *Accounting and Business Finance curriculum* at the graduate level. Together they form a "3 + 2" (undergraduate + graduate) *Accounting curriculum* which in total consists of 22 accounting related courses. The undergraduate part of the *Accounting curriculum* includes three courses (Financial Accounting, Managerial Accounting and Taxation) which are obligatory for all business students. In addition, students who specialize in *Accounting* must take two compulsory courses (Intermediate Accounting I and Intermediate Accounting II) and they have an opportunity to choose Cost Accounting. The master's program *Accounting and Business Finance* includes 4 semesters of study. The accounting curriculum includes six categories of subjects – general studies; basic studies; core studies; special studies; free choice courses; practice (internship) and graduation thesis. The conceptual model of the Accounting curriculum at TalTech, shown in Figure 1, includes 10 compulsory courses (42 ECTS) shown in ovals and 6 elective courses (25 ECTS) shown in rectangles.

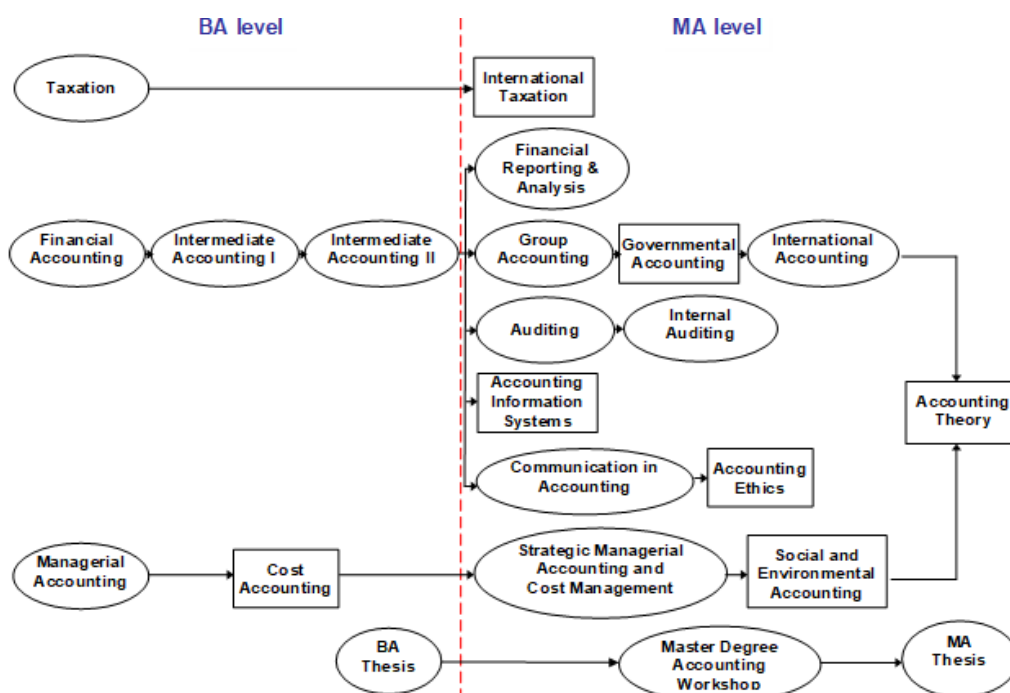


Fig. 1. The conceptual model of Accounting curriculum at TalTech

Step 8. Designing of production process. It should be mentioned that it is possible to find some “small specializations” in the *Accounting curriculum*: for example, in Financial Accounting, Managerial Cost Accounting, Taxation and Auditing. The authors of current paper consider the curriculum containing bachelor’s and master’s study programs to be one integrated system. This is due to the fact that the curriculum is based on the following matrix model as shown in Table 1.

Table 1

Matrix model for Financial Accounting, Managerial Cost Accounting, Taxation and Auditing

Level	Modules/subjects			
	Financial Accounting	Managerial Cost Accounting	Taxation	Auditing
Basic	Introduction to Financial Accounting	Managerial Accounting	Taxation	Auditing
Intermediate	Intermediate Accounting I; Intermediate Accounting II	Cost Accounting	International Taxation	Internal Auditing
Advanced	Group Accounting; Governmental Accounting; International Accounting	Strategic Managerial Accounting and Cost Management; Social and Environmental Accounting		
Theory	Accounting Theory	Accounting Theory		

Source: Compiled by the authors

Step 9. Implement changes. The outcomes should be monitored and analyzed. Study courses need to be constantly updated and, if necessary, new courses should be included to the curriculum.

Step 10. Monitor outcomes. The last step is to implement a strategic information system to provide feedback on 1) whether the strategic plans are being properly implemented as planned and 2) whether the strategy is yielding the intended results.

Conclusion

Successful curriculum development is a cornerstone of a good education. The process of globalization places new demands on the professional qualification of accountants; consequently, there is a need for global harmonization of accounting professional education. Accounting professors and accounting institutions throughout the world agree that accounting is changing and will continue to change. This fact should also be taken into account when developing the curriculum. This paper described the process of developing a competitive curriculum.

References

1. *Demographic problems* (2012). Estonica. Encyclopedia about Estonia. http://www.estonica.org/en/Problems_facing_Estonia/Demographic_problems/
2. Hofer, C. W., Schendel, D. (1978). *Strategy Formulation: Analytical Concepts*. St. Paul: West Publishing Co.
3. IAAER (2021) <https://www.iaaer.org>.
4. IAESB (2021) <https://www.iaesb.org>.
5. IES (2019) <https://www.iaesb.org/publications/2019-handbook-international-education-standards>.
6. ISAR (2021) <https://isar.unctad.org>.
7. Nelson, I. T, Bailey, J. A., Nelson, A. T. (1998). *Changing Accounting Education with Purpose: Market-based Strategic Planning for Departments of Accounting*. <http://www.usu.edu/account/faculty/nelson/chaos.htm>.
8. Porter, M., E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: The Free Press.
9. Stutt, A. (2021). *Curriculum Development and the 3 Models*, <https://tophat.com/blog/curriculum-development-models-design>.
10. Revised model accounting curriculum (2011). https://unctad.org/system/files/official-document/diaemisc2011d1_en.pdf