

Developing Business Model Competences in the Enterprise

Ludmiła Walaszczyk

Lukasiewicz – Institute for Sustainable Technologies, Radom, Poland

ludmila.walaszczyk@itee.lukasiewicz.gov.pl

Abstract: Despite the COVID-19 pandemic, 2021 saw a growing interest in starting own business: as per the Census Bureau's Business Formation Statistics, the number of applications to form new businesses filed in the U.S. was the highest compared to any other year on record, reaching the total of 5.4 million (Economic Innovation Group, 2022), while in the EU, after an initial downward trend recorded in the first and second quarters of 2020, the number of new business registrations grew again in the third quarter of that year, and this upward trend continued throughout 2021 (Eurostat, 2022). Of course, as a result of Russia's invasion on Ukraine and related economic crisis, a downward tendency could be observed, but business registration levels in the EU in the first quarter of 2022 were still higher than during the pre-COVID 19 pandemic period (2015–2019) (Eurostat, 2022) and online searches indicating and intent to open a business spiked by 76% from 2018 to 2022 (Search Engine Journal, 2022). This shows that despite many external impediments, people are still tempted to start their own business, and many influencers, motivational speakers and coaches, as well as various popular TV shows broadcast worldwide (like the *Apprentice*, *Dragons' Den*, *Shark Tank* or *Planet of the Apps*) encourage them to do so. Becoming an entrepreneur has become a goal many people, especially 20-, 30- and 40-year-olds, strive to achieve. However, many of those people fail to realise that the very entry in the business register does not automatically make them entrepreneurs or their business successful. Neither does a good (or even excellent and innovative) business idea that attracts customers, as it was in Kodak's, Blockbuster's, or Ask Jeeves' case. What is required, is the ability to stay attractive to existing and prospective customers, i.e., the ability to win and retain customers, and to adapt to the changing demands, trends and economic conditions. All this can be achieved thanks to a meticulously designed and regularly reviewed and updated business model. The aim of this paper is to present and analyse the learning process of acquiring and building competences in the area of business models with the use of different innovative tools. The results presented and discussed in this article come from surveys as well as face-to-face and on-line meetings conducted in the ProBM 2 ERASMUS+ project (*Understanding and Developing Business Models in the Era of Globalisation*), in which the total of 261 respondents from seven (7) European countries, i.e. Poland, Italy, Greece, Romania, Portugal, Malta, and Switzerland, took part between 2019 and 2022. From the meetings and surveys it follows that much more awareness of business models needs to be encouraged and developed, particularly as regards improving competences helping future business owners and their employees assess profitability and efficiency of their operations and ensure that the business will be a going concern.

Keywords: business models, competences, enterprise management

1. Introduction – Business model — what is it and why is it important in today's economy?

Even though the first interest in the topic can be traced back to the 1950s, the concept truly developed in the 1990s, as a result of the sudden explosion of e-commerce (Lewis, 1999; Afuah and Tucci, 2000; Magretta, 2002; Afuah, 2003; Zott, Amit and Massa, 2011; Rogoda, 2011; Onetti *et al.*, 2012). The interest in the topic of business models is still growing, particularly due to the success of such technological companies as Xerox, IBM, Apple, Google or Facebook achieved with the help of their unique and effectively implemented business models. The ever-growing interest in the topic of business models also stems from the fact that in the era of globalisation, digitalisation, and dynamic technological progress, the environment in which companies operate has radically changed, forcing them to intensify their customer-oriented activities and to regularly review the value they deliver. The market globalisation and internationalisation also changed the perception of the company's value creation and management processes, which should be organised and supervised in cooperation with related entities and not solely within the company (Nenonen and Storbacka, 2009). The growing popularity of the business model concept and the spread of the business model as an economic keyword seen in the late 1990s is confirmed by, among others, the results of literature analyses carried out in 2005 by Ghazani and Ventresca.

The literature on business models is fragmented and heterogeneous and it does not provide a clear and uniform definition of what a business model is. Shafer, Smith and Linder (2005) notice that even though many authors offer different definitions of a business model, none of them appear to be generally accepted, and that this lack of consensus is partly attributable to the fact that this concept is frequently analysed from the perspective of a wide range of disciplines (e.g., management, economics, social sciences, or even psychology), and by scholars and professionals alike.

The term 'business model' was first used in the article by Bellman *et al.* published in 1957. The simplest definition of the business model is offered by Lewis (1999) according to which the business model is simply the business

owner's plan to make money. According to Alt and Zimmerman (2001), the first structured definition of the business model was provided by Timmers (1998) according to whom the business model is 'an architecture for the product, service and information flows, including a description of the various business actors and their roles; a description of the potential benefits for the various business actors; and a description of the sources of revenues.'

In the literature, the business model modules are described as interlinked components that, when combined, form a logically connected whole. Such a way of presenting business models may be found, among others, in the works by Osterwalder, Pigneur and Tucci (2005), according to whom the business model is a conceptual tool that contains specific elements and defines relationships between them, with which a company's business logic can be expressed. To summarise, it can be stated that *the business model is a set of specific components, attributes, and relationships, which present the processes of a company's value acquisition, creation, and delivery.*

Business modelling is the managerial equivalent of the scientific method – you start with a hypothesis, which you then test in action and revise when necessary (Magretta, 2002). A business model is a great tool that helps managers focus on the business as a whole and closely look at how all its elements interlink and fit together into a bigger picture.

The focus of the competences in business modelling was inspired by the findings of the World Bank Group Report 2019: The Changing Nature of Work and by the results of the research conducted by the World Bank in Togo in 2017, which both prove that what a business needs, is the combination of hard and soft skills. The first of the above-mentioned documents states that many jobs today, and many more in the near future, will require specific skills – a combination of technological know-how, business skills, problem-solving, and critical thinking, and these findings are supported by the results of the Togolese study, which show that entrepreneurs who attended training courses aimed at developing business models skills had an average of 30% increase in their profits, while those who attended general business training courses had an increase of only 11%.

2. Research methodology

The overarching aim was to present the learning process of acquiring competences related to business modelling. Competences are relevant to increasing the human capital of an organisation. If the staff are well-qualified, they will do their tasks efficiently. According to Sagi-Vela (2004), a competence is *'the knowledge, skills and attitudes that applying to carry out certain responsibility or professional contribution ensures their success.'* The author performed the research according to the three-step methodology indicated in Table 1.

Table 1: Research path — overview

	Poland	Greece	Italy	Romania	Portugal	Malta	Switzerland	TOTAL
Step 1 — Managers and employees' consultations								
Number of respondents	8	9	6	8	8	11	5	55
Step 2 — Development of the competence map and education materials (peer-review)								
Number of people from each partner organisation	6	4	4	2	2	3	2	23
Step 3 — Learning phases (March 2020–January 2021)								
Alpha testing	15	5	5	4	5	4	5	43
Beta testing	56	15	10	21	10	15	13	140
Total testing participants								183

Source: own study.

In Step 1, personnel from selected enterprises in the 7 countries (n=55), including managers and employees, were consulted to identify key competences associated with topics (modules) related to business models that are considered necessary to ensure work effectiveness. The research was done between 2019 and 2020. Based on the topics identified, the competence map was developed.

In Step 2 an open online training course consisting of different educational resources was developed. The resources were iteratively developed, tested, and refined by project partner organisations (n=23). The learning process how to gain competences was designed.

In Step 3 the learning phases were performed (April 2021–March 2022) — altogether 183 participants from the 7 countries took part in the learning phase.

The long period of the performance of the research was caused by the COVID-19 restrictions.

3. Findings

3.1 Step 1 — Topic and the competence map

The first research phase involved in-depth consultations with the representatives of enterprises intended to collect the data about the knowledge, understanding, and use of business models in practice. The results were used for the development of the training course in business models addressed to entrepreneurs and other people interested in the topic of business models. Those eligible to participate included, among others, entrepreneurs, business owners, business managers, and heads of business involved in managing enterprises operating for at least 5 years. The consultations were conducted electronically (via e-mail, Skype, Google Drive) or face to face.

Based on the obtained results, it can be stated that the entrepreneurs from the selected countries have some basic knowledge about what business models are (94.55% of respondents answered that they know what a business model is), but only 43.64% of the entrepreneurs surveyed have heard of the Business Model Canvas before. Almost 100% of the respondents admitted that the development of a business model in the company might be an important aspect, as it can contribute to the success of the company on the market. They also stated that a business model is crucial when it comes to reducing barriers or improving the overall business activity. Additionally, they listed a series of benefits stemming from the good use of business models, including: the plan for growth; the improved operations; the increased profitability and efficiency; the financial sustainability; or the unique corporate image.

Even though the entrepreneurs surveyed understood the role of business models, only slightly above half of them (50.91%) implemented a business model containing all necessary elements in their companies. The rest of them (49.09%) admitted that they did not implement business models because they did not know how to use them, or they indicated other reasons, such as: the early stage of business development and its specifics; the lack of knowledge of the management about this topic; the main focus of the company is on revenue streams and as a result not much emphasis has been placed on other elements of the business model.

Once the responses were collected, the participants received the list with the examples of competences in the area of business models. The competences were linked to the areas of business model canvas developed by Osterwalder et al. (2010), and which are listed as modules in Table 2. The respondents were asked to indicate which competences are crucial in those areas. The final competences are listed in Table 2.

Table 2: Business model competences – ability to:

Module	Competences
1. Introduction	interpret the definition of the business model
	rate the use and benefits of business model
	apply the elements of the Business Model Canvas
2. Customer Segments	interpret what a customer segment is
	employ the importance of customer segments in a business model
	analyse different customer segment models
	outline the impact of different customer segments on other parts of the business model
3. Value Proposition	apply the concept of value proposition
	interpret the elements of value proposition
	use the types of value proposition
	employ the most popular value propositions on the market
	select the most suitable value proposition to satisfy the clients
4. Channels	interpret each of the distinct various phases of communication, related to channels and their aims
	distinguish between the communication channels related to promotion and those phases related to place
	appraise different channels to communicate the organisation's value proposition

Module	Competences
	examine and critique current channels to improve communication with all customer segments and customer relationships
	consolidate and align the communication avenues listed under channels with customer segments, customer relations and value creation
	apply creative thinking to design cost-effective future strategies and innovative channels
5.Customer Relationships	interpret the definition of the customer relationship
	rate the importance of customer relationships in a business model
	employ different customer relationship models
	assess how different customer relationships are capable of impacting other components of an organisation's business model and vice-versa
6. Revenue Streams	apply the revenue streams block and its relation to other blocks
	evaluate current revenue streams to assess their strengths and weaknesses
	appraise the value of revenue streams and their relevance for organisational strategy
	examine and critique current revenue streams in order to improve communication with all customer segments and to improve customer relationships
	appraise and evaluate the current revenue streams segment in order to apply creative thinking to design future strategy and to list alternative possibilities and potential innovative revenue streams
7. Key Resources	interpret the definition of the key resources
	rate the importance of key resources in a business model
	employ the different types of key resources
	evaluate which key resources create the value proposition
8. Key Activities	interpret the concept of key activities within the Business Model Canvas
	inspect the main key activities within an enterprise
	use the relevant key activities required to reach the objectives and purposes of an enterprise
	assess the importance of key activities in the definition of the value proposition
	distinguish the relationship between key activities and the value proposition of an enterprise
	focus only on certain key activities, in line with the value proposition
9. Key Partners	interpret the concept of key partners
	appraise the main partnership agreements with respective advantages and disadvantages
	rate the support of key partners in own company/enterprise operations
	analyse the importance of key partners to satisfy customer needs
	verify the relationship between partners to create joint value
	analyse the role of key partners
	choose the most suitable partner(s) to reduce their own inefficiencies
	set the conditions for an agreement from which the company would benefit
10. Cost Structure	interpret the definition and examples of variable costs
	interpret the definition and examples of fixed costs
	examine the difference between variable and fixed costs
	calculate the variable costs
	calculate the fixed costs
	optimise costs in the company
11. Citizenship and Professional Values	examine the meaning of citizenship and professional values
	distinguish that a business is not only an economic, but also a social and political commitment
	assess the importance of citizenship and professional values in a business model
	implement the benefits of adopting citizenship and professional values in other parts of the business model

Source: own study.

The competences presented in Table 2 were then used for the creation of a comprehensive training programme (www.businessmodels.eu).

3.2 Step 2 – How to gain the competences and why are they important?

The didactic principles to be used while implementing the learning process dedicated to business modelling were proposed. The key basics were established:

- *The core of the training model should be a Learner-Centred Approach* – the focus of the learning process should be the learners and their background, interests and questions. They should be able, to a certain extent, to decide what and how they want to learn.
- *The didactic approach should be based on Autonomy/Active Learning/Experiential Learning* – learners benefit from a more self-directed approach, rather than an instructor-led approach. This means the need to create a learning path that can be self-managed by the learners. Encouraging curiosity, problem-solving, engaging in situations, discussions and discovery are all actions that must be undertaken to stimulate people's natural tendency to learn through exploration.
- *The target group motivation is a key factor for the success of the learning* – learners' motivation is mainly driven by internal motives. Each person has their own motivation, for example, professional development or personal growth.
- *Digital Technologies and ICT tools should be considered as fundamental resources for learning process* – e.g. multisensory environments, stimulate learning. People remember more when they see and hear information at the same time, as in multisensory presentations that stimulate creativity and problem-solving skills.

As for the form of learning, the learners were offered to use a comprehensive on-line educational course. Depending on the individual needs, they were able to use the materials from the 'Teach' section, which include online interactive presentations for each module prepared for trainers. On the other hand, the learners could choose the materials from the 'Learn' section which, step by step and in a text format, guides new entrepreneurs and learners through business model topics and materials.

Finally, as for the quizzes and exercises, they could use:

- Open questions to be used as self-assessment or peer learning within a group;
- Online questions with possible multiple choice or true/false answers, or open-ended questions to answer.
- The financial calculator for the estimation of the financial profitability of a business idea in order to calculate if the business activity is profitable, and after how many years costs of investments will be recovered.
- The Business Model Canvas Editor — an open digital tool that can be used to create own business model. It can be filled in with all the information by the user directly through the platform and, once completed, the document can be easily downloaded.

The learners gained competences through the application of the methodology based on the Deming Cycle. The Deming cycle, also known as the PDCA cycle (Plan, Do, Check and Act), is an approach of quality managers that helps implement a continuous improvement strategy in the company — in this case — the improvement of competences in the area of business models, which in turn helps solve problems in an orderly and systematic manner.

The Deming Cycle includes: planning an action to eliminate a recurring problem; controlling the performance of the business activity; performing analyses to identify the discrepancy between the plan and its implementation, and, finally, systematising the corrective change to consolidate a new, optimised process in the company's operations.

The first step in this research was to indicate learners' problems in the area of business models which need to be eliminated. The learners selected the contents built in the form of modules which were crucial for them. Each participant had the possibility to choose different modules, as the course is modularised, which means that the learners do not have to learn in a linear way — module after module. The number of the learners and selected modules is presented in Figure 1.

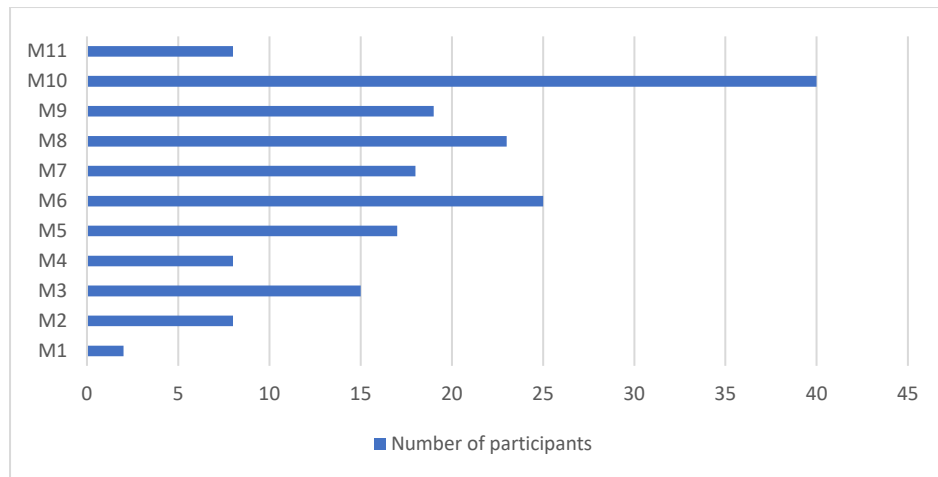


Figure 1: Number of learners vs. modules selected

Source: own study.

As it can be seen in Figure 1, the learners most frequently selected the topic related to finances (module 10 — cost structure, module 6 — revenue streams), and key activities (module 6). It was stated that finances are always the most difficult aspect in the company and the more knowledge you have, the better.

The second step was to learn the content of the module. It was done in the form of self-learning. The participants received all the materials and they were able to learn at time and place of their choice. However, they were asked to learn for approx. 4–6 hours per module, as planned in the course. The respondents found this lack of necessity to come to the classroom or participate in organised on-line meetings very convenient. On the other hand, they admitted that such courses are for people who are systematic and know exactly what they want to achieve. Fortunately, all of them managed to complete the selected modules.

The learners found the third step, i.e., the verification of the acquired competences through completing exercises and quizzes the most important. If the participants failed to complete any exercise or quiz, they were redirected back to the second phase. The failed attempts in each module are presented in Figure 2.

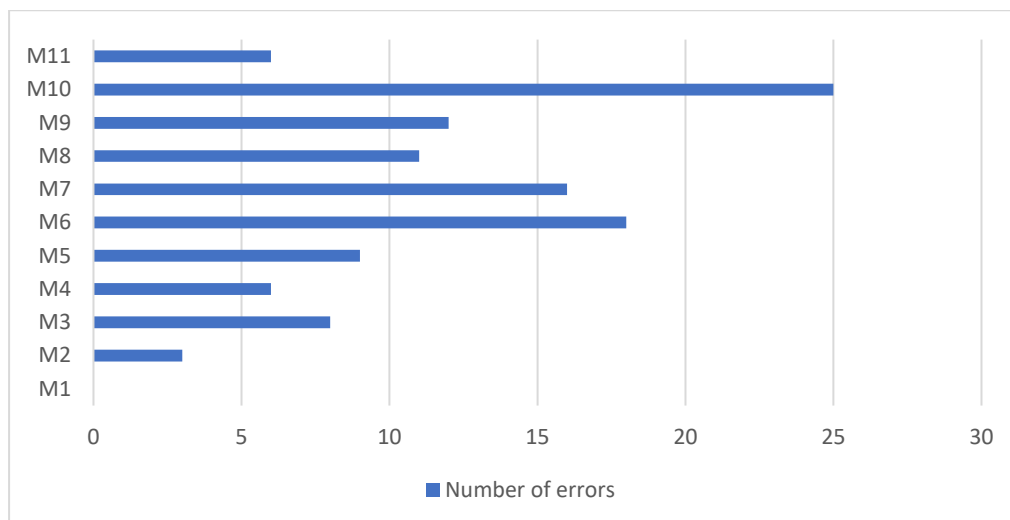


Figure 2: Failed attempts to verify competences

Source: own study.

As it can be seen in Figure 2, module 10 — cost structure — proved the most problematic, as participants tried to use the financial calculator to estimate investments, which was quite complicated. In the end they were able to use this tool correctly, but first they had to try several times.

The last step of the learning process concerned making a decision in which area of the business activity the competences will be used. This step was especially important for the current and prospective entrepreneurs in need of instant access to knowledge of business modelling.

The Deming Cycle was applied in the learning process because of its several advantages, i.e.:

- It provided a uniform methodology that can be applied in any area of the company to solve recurring problems.
- It saved time at the stage of searching for the most effective solution.
- It contained a set of comprehensive instructions necessary to ensure the full implementation of knowledge and competences.
- It guaranteed a detailed analysis of the most common errors in order to eliminate them.

3.3 Step 3 – Testing the educational resources

Participants from selected countries (n=183; Poland, Italy, Greece, Romania, Malta, Switzerland, and Portugal), who included entrepreneurs, trainers, adult educators, and students, tested the educational materials and completed the surveys to assess the various elements of the platform. The materials were evaluated positively with the grand mean of 85% in the alpha testing and 89% in the beta testing, where they were rated as excellent or good. Moreover, 71 respondents from Poland answered the following questions:

- How engaging are the proposed educational resources?
- Do they support the learning objectives and topics?
- Which are the top three educational resources that are both engaging and educational?

Out of the 71 respondents, 63 of them stated that the resources are highly engaging, 67 respondents thought that the resources are connected to the learning objectives, and 53 respondents stated that only case studies can be used separately as stand-alone learning resources. The respondents were also asked to rank the resources. The combined frequency is summarised in Table 3.

Table 3: Combined frequency of times resources is collectively ranked in top 3

Resource type	Frequency (number of times)		Relative Frequency [%]	
	Alpha testing	Beta testing	Alpha testing	Beta testing
True-false	49	54	23	25
Drag-and-drop Quiz	55	62	26	29
Crosswords	70	72	33	34
MCQ Quiz	24	18	11	9
Video-based	15	7	7	3

Source: own study.

It can be seen that the participants chose true-false exercises, drag-and-drop quizzes and crosswords as the most interesting. True-false exercises are very quick to do. Drag-and-drop quizzes make the learning process more interactive. The learners do not feel bored and even while learning such difficult topics they can relax and play. Finally, crosswords are a common pastime activities and even if they are linked to the topic of business models, the learners still perceive them as something relaxing.

The video materials were perceived as the least interesting. The rate was even lower between Alpha and Beta testing. It could come from the fact that video materials were Internet-based. On the other hand, people prefer acting to listening. Some of them stated that, nowadays, video materials are widespread and that they are not as interesting as they used to be some years ago.

4. Conclusions

Business model competences are indispensable for correct management of all areas of enterprises and there still is a strong need to improve business model competences of business owners and managers.

The main focus of this article was to discuss the potential of the application of learning contents aimed to develop business model competences in the workplace. In the presented investigations, the author echoes and further emphasises the need for such competences for enterprise employees in order to increase understanding of the different business models areas, and in doing so — to increase work effectiveness and wellbeing.

This article discusses and presents an approach to designing and developing educational resources supporting the development of competences in the area of business models. Moreover, in the article the author presents how to acquire the competences with the use of Deming Cycle approach. Although the Deming Cycle is commonly used in the production management, it turned out that it can be successfully used also in 'soft' management, as the steps of the Deming Cycle are universal. The Deming Cycle can be used by two target groups: by the owners of the enterprise in the verification of the competences of the employees, and by the employees to verify their own competences.

On the other hand, the proposed training materials can be successfully implemented in the enterprise and they can be used when amending the business strategy. Compared to the materials offered at the tertiary level, the language of the proposed educational materials is quite easy and the materials refer to both theoretical and practical business model-related aspects.

The research significantly contributes to expanding knowledge and development in this area, specifically the design approach for the corresponding educational resources. The potential impact of the educational materials designed and developed could be extended to consider a more international dimension as the outcomes can be further adapted by organisations globally.

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