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Experiences from a Decade: A Universal Approach to Business Model Teaching

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Abstract

There are many different approaches to teaching business models. This paper presents a universal five-step approach developed from an ongoing longitudinal action research project to uncover best-practice in educating and developing business model competencies. The approach is based on the teaching principles of case-based teaching, learning-by-doing and problem-based learning.

Introduction

One of the most famous references used when teaching business models (BMs) is "Business Model Generation" (BMG) by Osterwalder and Pigneur (2010) and especially the framework Business Model Canvas (BMC). Even though the book is rather intuitive and more application-focused than most traditional textbooks, it offers little information about how to teach the subject to students or practitioners. We have, not surprisingly, experienced that if the subject of BMs is taught in a traditional lecture format, it can become somewhat "dry" or boring. Nevertheless, a traditional lecture format is a convenient and time-efficient 'go-to-solution' for first-time teachers, as they lack guidance and instructional resources for lesson planning (e.g. Goodwin, 2012). This paper – therefore – offers an approach and useful guide for inexperienced teachers to design a BM course for the first time. Furthermore, this paper offers insights on how to create an engaging and enrichening teaching session for participants, which could be an inspiration for veteran teachers to redesign or test new things in their BM course(s).

Keywords: Teaching, business models, business model canvas

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There are many ways of teaching BMs to both practitioners and students (hereafter labelled "participants"), for instance, blended learning (Margolina and Bohnsack, 2019), gamification (Sort and Holst, 2019), and flipped classroom (Bitetti, 2019). This paper will build upon three different – but complementary – didactics: case-based teaching, learning-by-doing, and problem-based learning (PBL). In the following, these didactics will briefly be introduced. Later, we will explain the differences and complementarities of the didactics enabled in our universal approach in the "Approach" section.

Pedagogical approaches using cases or case-based teaching have been advocated by scholars to enhance the individual's learning process (Schank, 1990; Leake, 1996). Schank (1990) emphasises this by stating "Good teaching is good story telling" (p. 232) or in other words: case-based teaching should create an excellent narrative which enables the participant to engage in the setting and the topic.

Researchers, as well as psychologists, agree that rehearsal and learning-by-doing stimulate successful learning (Hogan and Warrenfeltz, 2003; Ann Haefner and Zembal-Saul, 2004). Some of the main features of learning-by-doing are propositional knowledge produced within academia and knowledge validated through practical work (Gibbons *et al.*, 1994).

Likewise, more and more universities are adopting characteristics of PBL (De Graaf and Kolmos, 2003; Savin-Baden, 2014). PBL is an instructional participant-centred approach that empowers participants to "conduct research, integrate theory and practice, and apply knowledge and skills to develop a viable solution to a defined problem" (Savery, 2015, p. 9). PBL can be performed in many constellations and modes of knowledge (see further Savin-Baden, 2014). De Graff and Kolmos (2003) argue that these features in PBL lead to higher motivation and harder work from the participants as well as improving learning capabilities at a higher complexity level.

Based on the abovementioned research on teaching, we initiated an ongoing longitudinal action research project to uncover best practice in terms of educating and developing BM competencies. This initiative includes a business development project on network-based BMs with more than 100 companies involved, a research project on BMs as a communicating tool (see Sort and Nielsen, 2018), along with experiences from teaching BMs in different settings and contexts over the last decade. Furthermore, we have had scholarly discussions with colleagues from the BM community as well as Alexander Osterwalder and Yves Pigneur, the renowned authors of the book 'Business Model Generation' (2010). This action research project has led to the development of what we refer to as "a universal approach to teaching business models".

We have developed and refined our approach during the years and will continue to develop it further. The approach has been used both in teaching contexts as well as professional settings. Results show that participants afterwards have a profound knowledge and application skill on how to use BMs and the BMC as a language for discussion, analysis and innovation.

Our approach has been applied with university students ranging from first-year bachelor students to master students in their final year and from a vast range of different study directions such as Art, Business Administration, Management Accounting, International Business, Engineering, Medicine, and Innovation Management. Furthermore, the approach has been applied successfully in different geographical settings, such as Denmark, China, Italy, and Germany. The approach has also worked well with practitioners from small- and medium-sized enterprises as well as large corporations in various industries. This validation from a large variety of both students and practitioners is why we dare calling our approach universal and a "best practice".

Approach

The universal approach described in this paper will focus on how the widely accepted framework Business Model Canvas (BMC) can be taught. The approach and didactics apply to most topics and frameworks related to BMs such as the Value Proposition Canvas, the Lean Start-Up Canvas, and the BM Environment Map. However, due to the confinements of the short paper format, we focus on the one topic that we believe most teachers can relate to, namely BMC.

Our approach builds upon the notions of case-based teaching, learning-by-doing, and PBL, which would also reflect the expectations towards the participants in the learning objective after a teaching session. Case-based teaching relies on examples or cases to enhance the participants understanding of the topic. The cases typically include pre-made materials and clear-cut outcomes. As such, the participants get a more practical approach and more profound learning by understanding the different context where the topics can be applied (see Schank, 1990). Taking this a step further, introducing learning-by-doing fosters hands-on experience for the participants to further enable and stimulate successful learning (Ann Haefner and Zembal-Saul, 2004). Finally, adopting PBL in a more open-ended approach where a limited amount of information is provided and the outcomes to the scenarios or problems are nonconclusive. As a result, the participants learn how to think critically, be able to define a problem, and work towards a solution on their own (Savin-Baden, 2014).

The rationale of these three pedagogical learning approaches is found in our belief that participants should leave a teaching session with the ability to understand, reflect and apply a given theory, framework or tool. Towards this aim, the three pedagogical approaches enable each other; case-based teaching offers both understanding and context learning, followed by learning-by-doing that offers the participants a setting and ability to apply the tool. Lastly, PBL enables the participants to think critically and find new and interesting problems on their own and work towards a solution which in this case could be the development of a new innovative BM, suggestions for BM design changes or similar.

The following steps comprise the universal BM teaching approach:

1. Identify the audience's pre-understanding
2. Traditional lecture on the topic: BMC in lecturing context
3. Case-based examples: one or multiple cases explained in plenary
4. Learning-by-doing: knowledge application
5. Facilitate self-directed learning with PBL

Depending on the course specifics and the time available, each step (except for the first) can be conducted as a teaching session on its own (usually 60 minutes) but can also be merged into one extended session.

Step one - Identify the audience's pre-understanding

The first step is related to knowing the audience and their existing knowledge about the topic. A good starting point is to get the participants to think about their understanding of the topic BMC and discuss it in pairs or larger groups. Following this brief session, the teacher should ask the participants to share their understanding with the rest of the class.

Some teachers might know the knowledge level of the audience in advance (for example if the session is part of a teaching series). If this is the case, this step can be done by the teacher in advance without setting time aside for discussion. However, if the teacher does not know the audience (for example, if it is a single independent teaching session or part of a university-industry program with a company), this initial step is essential to identify the optimal emphasis and time allocation for the following steps. Besides, having a pre-understanding about the audience plays a vital role in achieving the "zone of proximal development", i.e. situations where the teacher combines the right level of competence of the participants to the right level of challenge in the teaching (see further Wass and Golding, 2014).

Example: It is essential not only to ask if the participants have read the syllabus - in our example the book by Osterwalder and Pigneur (2010) – but also if they have a genuine understanding of the topic. Participants usually think they know much about BMs and the BMC from a quick read through the book. However, quite often, their knowledge or understanding is very superficial. Hence, questions concerning the notions of value and how BMs are different from strategy could be valuable follow-up questions to get a feeling of their actual level. Moreover, if the groups share their understanding, the teacher can listen in and get a good grasp of the competence level.

Step two - Traditional lecture on the topic: BMC in lecturing context

The second step is what most would refer to as the traditional or conventional lecture. The teacher will explain the principles of the topic regarding theories

and methods. In this context, the lecture will typically involve an explanation of how the BMC works, including strength and weakness. Also, the teacher could explain the development of the BMC and framing it in the broader field of BM research. An explanation of each building block should be presented, including what the specific block entails and the concepts or questions affiliated with each BMC building block. During this traditional lecture, the teacher could also start to make use of the case-based pedagogics, but this should be confined to relatively simple cases on a narrative or archetype level.

Example: Dependent on the level of the prior knowledge of the participants, the first part of this lecture could be explaining how BM research is related to other subjects (such as marketing and strategy) but also how it is different. A natural part of this general introduction would also be to focus on value creation, delivery and capture towards customers. In this context, we often use narratives on well-known companies and their successful BM transitions. For example, the story of how Xerox became successful after changing revenue model (see Chesbrough and Rosenbloom, 2002) or how Nespresso fruitfully adjusted their customer segment and revenue model (see Matzler *et al*., 2013). Some of the strengths and limitations of the BMC could also be explained. Examples of strengths are the intuitive design and its use as a common framework for analysing businesses, while the latter could be the in-side-out perspective and the missing focus on competitors, for instance. It is also critical to assure that the participants understand how value differentiates from technology, products and services as well as why value is such an essential part of understanding customers and their decisions.

Step three - Case-based examples: one or multiple cases explained in plenary

In the third step, the session shifts into case-based teaching by using cases related to the participants' prior knowledge or educational direction. When teaching the BMC, it makes sense to use one or several examples from the curriculum. However, local cases (geographically or industry-wise) could equally be used to enhance the engagement by the participants.

The use of a BM case allows the participants to achieve an in-depth understanding than solely theoretical learning attained in step 2. The profound understanding is achieved through introducing a case where the teacher demonstrates practical application of the theory in context; for instance, mapping the BMC for a company. The teacher should explain why this BM case is exciting and unique before, during and after the walk-through. These are essential aspects to convey an excellent narrative which, from our experience, will enhance the learning of the participants. The teacher can, after a thorough explanation of one case, choose to do shorter narratives about other noteworthy BM cases that fit the course curriculum or learning points.

Example: When cases (and especially the first one) are applied, the teacher should use sufficient examples when explaining each building block. For instance, we often use Gillette as the first case since most people know and relate to this case (see e.g. Osterwalder & Pigneur, 2010, p. 105). Firstly, we go through the theoretical considerations of the building block "customer segments" to clarify the underlying aspects of that building block. Secondly, we demonstrate how the case can be applied to that particular building block - in this example by explaining who the actual customers of Gillette are. This process of theoretically explaining and practically demonstrating using the case is performed for the remaining building blocks.

To achieve another level of abstraction in the teaching, the teacher could illustrate how the case might have a certain BM pattern embedded. For example, by highlighting the specific building block connections that drive this BM pattern[1]. In the Gillette case, this would involve an explanation on how their close partnership with the retailers enables them to get the best spots in the shop in return for marketing efforts. This, in turn, enables Gillette to keep their brand value towards the customers as well as their revenue model, which is based on selling relatively cheap handles and making high profits on the razor-heads continuously[2], hence the "Razor & Blades" pattern (e.g. Osterwalder & Pigneur, 2010).

[1] For an extensive overview of different BM patterns, please see Gassmann et al. (2014).

[2] The Gillette case works in almost all contexts, as most people have somehow engaged with Gillette; i.e. people have either used a Gillette razor (or similar), seen their commercials or been at a retailer where they are sold. However, we have experienced that cultural differences can affect this case, especially in countries where hair removal is not a common thing.

Step four – Learning-by-doing: knowledge application

While the second and third step should give the participants an understanding of the topic and the BMC framework, the fourth step starts the learning-by-doing process and is also somewhat oriented towards PBL.

The idea behind step four is to apply both case-based teaching as well as learning-by-doing and still facilitating the process in a structured and teacher-led manner. Structured, in this context, refers to the fact that the teacher is still controlling the process and guides the participants. This is done by briefly introducing the participants to a new BM (typically at the archetype level). Like described in step three, this can be a well-known international case, or it could be a more local one. The important part is that the participants have engaged with the case company (experience with buying or using the company's offering) or considerable prior knowledge about the case. The participants now have to map out the BM using a set of predefined answers that should be placed into the appropriate BMC building blocks, see figure 1 and 2. We usually use an A4 or A3 print-out of the BMC.

When the allocated time runs out, the teacher can either go through the right answers directly (if in lack of time) or invite the participants to reveal their answers one building block at a time to increase the discussions and thereby the learning. If the latter approach is chosen, the teacher can reflect upon the answers revealed before presenting the "correct" solution in the end. As such, this step requires the teacher to be well-informed about the specific case. This step leaves most participants with both a great understanding of the BMC framework as well as the ability to use it properly. Furthermore, this step can advantageously be done in smaller groups; first, the mapping in groups of two and afterwards, in groups of four, each group present their final BMC and elaborate on the rationale behind their "answers". If there are variations in their answers (which there usually are), these are an excellent starting point for further discussions, eventually increasing the learning aspect.

Example: We conduct a "Jeopardy-style" exercise with a "cheat sheet", which gives the participants all the right answers, but they will still have to determine where the answers fit in the BMC. The answers can be stickers, puzzle pieces or other forms of tiles (see figure 1 and 2). At this point, the teacher should function as a facilitator, to whom the participants can ask questions if they do not understand some of the answers

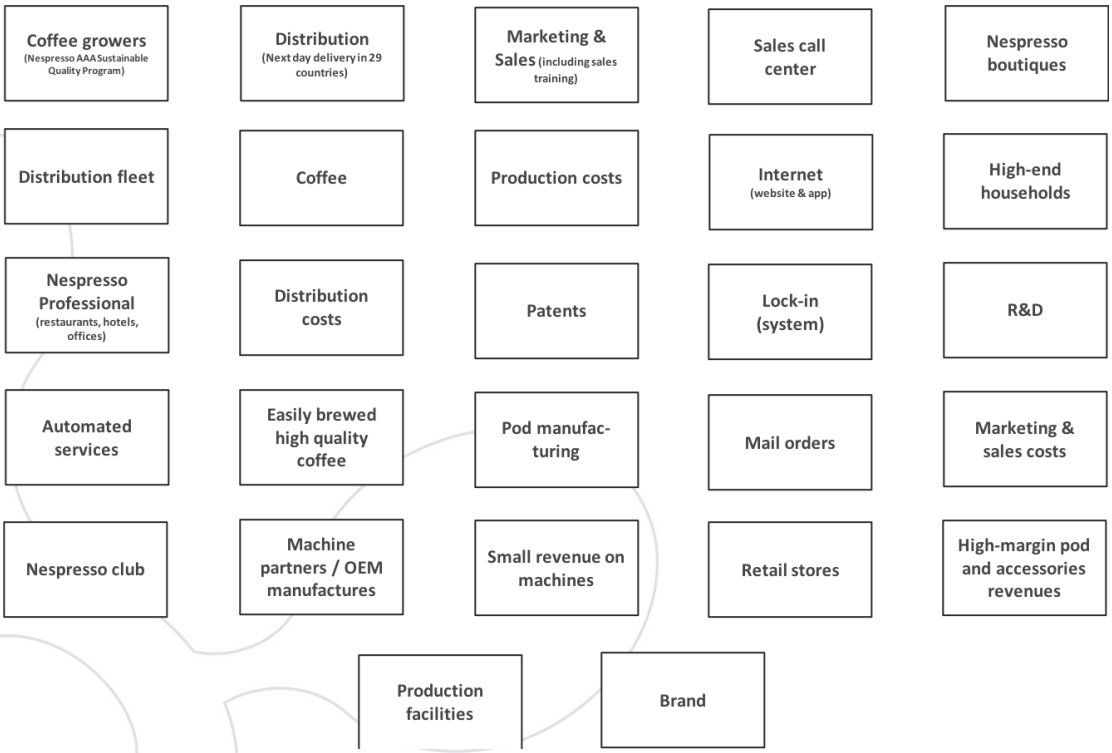

Figure 1: Nespresso "cheat sheet" inspired by Pigneur (2017)

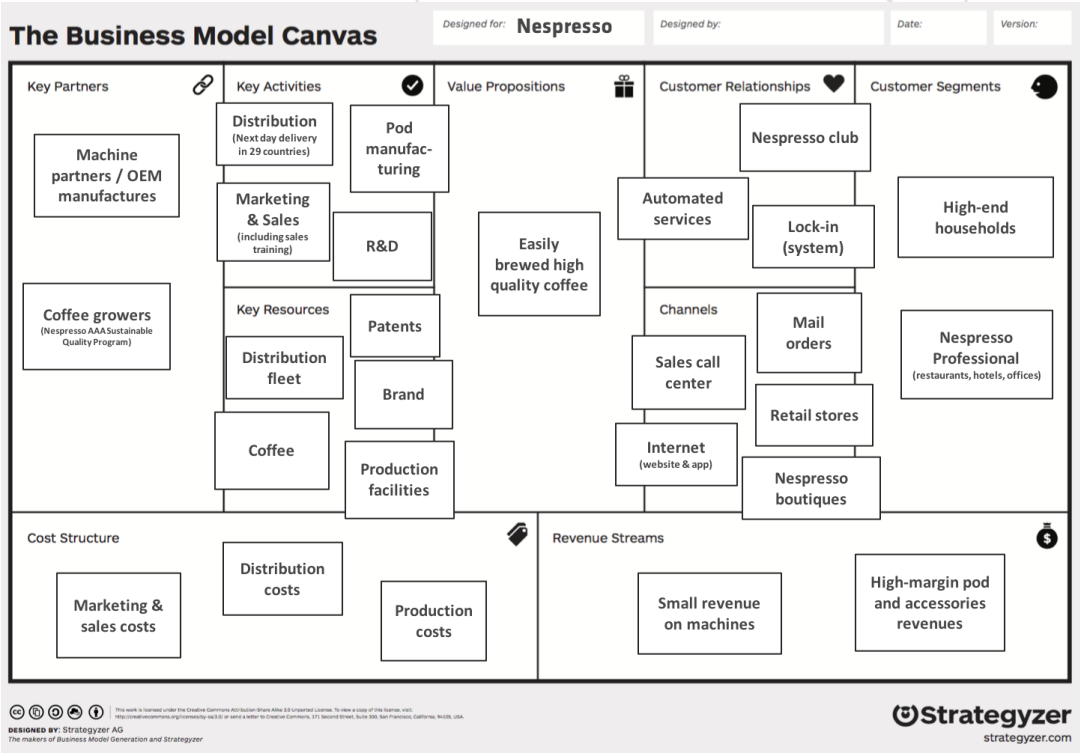

Figure 2: Nespresso BMC using "cheat sheet"

on the cheat sheet. As seen in figure 1 and 2, we have used Nespresso as an example as most participants have an appropriate level of knowledge about the Nespresso brand and operations. We have also successfully applied Tesla, Apple and Airbnb as well as similar large and well-known (local) companies as cases for this learning-by-doing exercise.

Step five - Facilitate self-directed learning with PBL

The fifth and final step is stimulating the participants to apply their knowledge on their own through the PBL pedagogics. The participants are - therefore - required to work independently on a problem or scenario with limited information and no clear-cut outcomes. For example, participants could be given the task to identify the BM for an undisclosed case company using the BMC.

This step should start with the introduction of the, until now, undisclosed case company. The case can be presented in any manner found suitable by the teacher, as long as the presentation do not give away too much information. The important part is to let the participants use their obtained theoretical knowledge, apply it on their own (individually or in groups) and enhance the learning-by-doing aspect in the approach by utilizing self-directed learning. The teacher should, therefore, be involved merely as a facilitator at this point (advise and encourage participants) and not provide the path to resolve the problem.

The final step can be concluded in multiple ways depending on the teacher and the course. Nevertheless, the participants usually do a plenary presentation of the mapped BMC (or in front of an opponent group) to get feedback as there is no absolute solution in this step. Step 5 could also be the actual exam, as it – according to our experience – assesses the participant's abilities to apply their understanding, think critically and develop a solution.

Example: We have used videos, e.g. Zimmerman (2015), written case company descriptions, free search on the Internet (by the participants themselves) as well as inviting actual companies inside the classroom to do a live presentation in this step. The most crucial part is that the participants – individually – can collect enough information to start mapping the BMC but also have room to apply their critical thinking; for instance, to figure out what are the *key resources* and not just routine resources in this particular BM. Hence, we will typically

have participants working in groups to foster this critical thinking. At the end of the session, we often conclude with having the participants present in front of an opponent group to increase knowledge sharing. Furthermore, the participants will see how other groups have solved the task, again a crucial point in PBL.

Key Insights and Discussion

The first attempts of implementing this approach can take a fair amount of time for the teacher, as cases and narratives have to be prepared to make sure the case-based teaching will show its effect. However, we do believe it is time well spent, as the participants show enhanced learning and application abilities compared to doing a traditional lecture about BMs and/or the BMC. At least the evaluation of the teaching sessions we have done throughout the years have indicated this. Also, direct feedback from the participants and examiners of oral and written exams have supported this. The participants demonstrate a higher level of learning and ability when compared to participants where we have used just traditional lectures or similar approaches. For teachers, the preparation time can be reduced significantly, though, by using the examples and cases from this paper.

Our universal approach has applicability across different themes and study directions. Within BM teaching settings, we have used the same approach to invent or improve new BMs ("To-be" BMs, cf. the terminology in Osterwalder & Pigneur, 2010), value proposition designs (Osterwalder & Pigneur, 2014) as well as the BM Environment Map (Osterwalder & Pigneur, 2010). As previously described, the five-step approach is applicable to most teachers in most contexts. However, we do have some further recommendations and insights regarding the use of cases, using scenarios, and the audience.

Choosing and using cases

The teacher will need to develop or read up on some (from a teaching point of view) compelling cases as the quality of the narratives in step two and BM cases in step three are dependent on the teacher exclusively. So, the teacher needs to make sure the BM cases fit the course and the setting. Some years ago, we experienced how the use of cases can go wrong. During a BM course at a Chinese university, we used the cases we usually would apply at European educational institutions. However, these cases were not applicable in a Chinese context as we experienced that some of the classic textbook examples (e.g. Google, Facebook and Uber) are somewhat unknown to Chinese students. Furthermore, we once tried to apply "for-profit" company cases in a session primarily consisting of "non-profit" organisation participants at a university-industry program. The participants left with some understanding of the BMC framework; nonetheless, it could have been much stronger if the cases were more related to the participants existing knowledge and everyday work environment.

In general, when the universal approach is used with practitioners, it is a good idea to use cases that are familiar to their organisational environment. For example, if it is a B2B company, participants would exhibit a better understanding of B2B cases rather than B2C cases – and vice versa. Similarly, if it is a smaller organisation, participants would better understand and relate to domestic-based cases than large international corporations. From our experience, if the participants do not understand the general logic of the BM cases, step three, four and five are likely to fail.

It should also be noted that the cases introduced in step five should not give direct answers to the participants. The introduction to a case in step five should be on a general level and not include information like "our customer segments are ..." or "our value proposition is ...". For example, using a YouTube video about Airbnb's business model, where all the BMC building blocks are slavishly covered, will counteract step five's aim of getting the participants to apply their knowledge if the answers are given like in step four.

The use of live cases

As previously mentioned, the approach is also very applicable to include live-case cases, i.e. inviting an organisation (of any type, size and age) to do a presentation. The guest speaker should, however, be noticed about which topics he/she should include in the presentation. If not all parts of the BM are indirectly touched upon during the presentation, the teacher could choose to do a small round of Q&A's, either by him-/herself or let the participants pitch in as well to uncover missing pieces. The general approach will remain the same, and

the company case will typically be introduced in step five. The teacher can, during the other steps, prepare narratives or BM cases that are somewhat related to the live case. According to our experience, this inspires the participants in the subsequent steps; still, the first narratives and BM cases do not have to be related to the live case to reach a good result.

Using scenarios

The fifth step can also entail a variety of setups, where the teacher presents different scenarios or design constructs. The lecturer can, for instance, say that the case is restricted to a B2B setting only or decide that only a specific channel type can be used to reach the customers. We have found that scenarios challenge the participants in new ways and may generate new insights on how the BMC functions in a specific setting. Furthermore, in the fifth step, the teacher could introduce a specific customer segment or value proposition and have the participants brainstorm on how to design a BMC with these requirements.

Knowledge level of participants

The approach can and should be modified as needed (or dictated) by time constraints and the pre-existing knowledge of the participants. If the participants show a general high understanding of the topic, the teacher can choose to spend less time on step two and three before going into step four and five. Moreover, if the application of theories is not essential to the program (this holds for some practical university-industry activities) or is part of an advanced course, the teacher can choose only to apply step four and five.

It should be noted that jumping directly to step four or five might prove counterproductive, as trying to let participants develop skills on their own have shown some difficulties. Studies (e.g. Kirschner *et al*., 2006) have revealed that minimal guidance during the initial learning stages does not show a positive outcome of the learning.

Conclusion

The universal approach to teaching BMs presented in this paper has proven successful in a variety of settings across disciplines and countries. It has been refined during the last decade and can be used as a guide to teaching BMs in an engaging and enrichening way, which can be quite beneficial to new teachers within the BM field. Likewise, our approach can serve as an inspiration to experienced teachers who are seeking new insights. Even though some of the steps can be somewhat time-consuming for the teacher, the preparation time will be reduced significantly, if the examples and cases presented in this paper are used.

The five-step approach combines PBL, learning-by-doing and case-based teaching, which provides the participants with a deep understanding and ability to apply the tools/theories/frameworks theoretically as well as practically. The participants (and the teacher) are highly engaged and usually find that times flies. Furthermore, the teaching sessions are given high ratings when evaluated. In conclusion, we hope this approach can inspire inexperienced as well as veteran teachers to enrich and evolve their teaching sessions both to heighten the motivation and competencies of the participants.

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