Abstract

Teaching with case studies has expanded extensively and it has shown that this methodology is a very good manner for the learner to maintain the given knowledge and challenge themselves in more than one way. Teaching with cases opens up the walls of curiosity of decision-making, problem-solving, discussions and more. The case methodology is rich in detail which allows the apprentices learn not only theoretical concepts but practical concepts in different case situations.

Introduction

Using cases in the teaching process gives the ability to understand different situations in different manners. For instance, cases are used as presentations, discussions, debates etcetera. The instructor usually holds a seminar when they lecture with the help of cases. Case studies can be defined as “a description of a real or simulated managerial situation along with personal history of an individual, institution, or business faced with a problem that must be solved” (Gerring, 2004, p. 5). Cases and the case methodology also gives a better understanding of the teaching (Merseth, 1996). Teaching with cases can be either written, oral or in an audio-visual form, that are being analyzed by the instructor and the learners as they ultimately present a conclusion (Lundgren, 2013). Such cases can also explicit in terms of solving a problem in any common form, that way the participants get immediate feedback from each other and the instructor (Lundgren, 2013).

In Scandinavian countries, the case methodology which let the learners create, not only import case studies, is still missing in educational purposes (Søilen & Huber, 2006). Thus, today’s researchers and academics are in a working process of writing new case studies because of high demand of cases that produce educational products, i.e. teaching materials (Søilen & Huber, 2006).
Teaching with vignettes, scientific stories and historical case studies, are very common at an early age and a common form of scientific stories are life stories (Søilen & Huber, 2006). Life stories defines the background of a study or a subject instead of going directly to the relatively theory, which in turn creates curiosity and faster learning (Søilen & Huber, 2006). The case methodology prepares everyone involved in the teaching, a professional future with the ability of making decisions and solving problems.

**Method**

This study will show how cases are used in lectures for obtaining a better understanding of the benefits of such lectures. The study is based on qualitative information through scientific papers and case studies. Since teaching is a human activity, it is easier to understand the topic through qualitative research (Mavhunga & Rollnick, 2015). This paper is based on secondary sources, such as scientific articles and case studies. The articles and the cases are being compared, not only for its content but for the differences among the authors findings. The scientific papers are used for describing the empirical evidence with the help of examples from different case studies and also for understanding the usefulness of teaching with cases.

**Empirical evidence**

In 1870 the Harvard Law School began teaching with cases of Dean Christopher Columbus as their guide (Merseth, 1996). Cases were individually analyzed and discussed by students and by 1915, the case methodology arose in many law schools which made the case methodology in legal law education, later on it spread to medicine and business as well (Merseth, 1996).

Merseth (1996) explained that cases affects teaching in a manner that gives the learners an opportunity to solve problems and to educate them in analyzing skills. It may also teach them how to make decisions in the classroom. Students learn the best when they go through with problems. Hence, they learn to focus on both theoretical parts and practical parts which can be crucial for their understanding (Vople, 2015). Merseth (1996) argues that the main reason of cases is the self-analysis and personal reflection, even though some use cases to transform theory to practice. Teaching with cases is being proposed as a professional field, for instance in business, those who have had previous experience will be better affected by the case methodology (Merseth, 1996). To exemplify this; the student get a subject about eating-disorders where they get
a case which involves solving a problem in teams, design an evidence-based campaign, being ethical but also involve multiple concerns (Austin & Sonneville, 2013). Their assignment is to identify the bias and make research, but also decision-making, to evident the collected information (Austin & Sonneville, 2013).

Teaching cases should be followed by a replication analytic design when being used in natural science or humanities and an individual case means an independent experiment while multiple cases allows comparison of the identifications (Ambrosini, Bowman & Collier, 2010).

Merseth (1996) states that when cases are used in teaching the first approach is to review important data and answer study questions given by the instructor. Continuously, the work process can either be made individually or in smaller groups to share insights and opinions. Then they meet at the seminar with every class member, to discuss the case subject. At the seminar, the leader guides and gives direct feedback, but also observes the interactions between the students (Merseth, 1996). Cases engage the apprentice in a manner where they apply theory to practice which are used by nursing, law, business, social science, etcetera (Popil, 2010). This exemplifies with the case regarding MSA Sordin AB, who want to increase the work competencies which means further education (Søilen & Huber, 2006). They were educated by teknIQ who had offered to help the company. The process consisted of lectures both theoretical and practical parts (Søilen & Huber, 2006). The company focused on further educations to keep high competencies standards (Søilen & Huber, 2006).

Three other cases when the instructors use discussions and seminars:

1. Berglunds Mekaniska AB has a manager who wants to involve the employees more by common breaks and call moments, not only for them to feel involved in the changing process, but to share their knowledge among each other. It was also suggested to have a staff binder where they can note comments that later will be discussed. The manager kept in mind for the need of further education (Søilen & Huber, 2006).

2. TOMVA AB restructured two times. Their change was mainly for emphasizing personal development among staff. Another important point is the share of knowledge. They also consider to further educate the employees through seminars or workshops (Søilen & Huber, 2006).

3. Rock City AB developed their company that led to the enforcement of education and offering courses to other high schools. They also held in seminars and conferences, and as important as they are they still keep
the traditional “teacher-student-hierarchy” in mind (Søilen & Huber, 2006).

Lundgren (2013) says that teaching with cases gives a better understanding of the reality and how it is used in different situations. Continuously, the learner is the main focus, because this method activates the learners to work outside the box and helps them develop in oral and written skills in an analytical manner. Since the case studies does not have one correct solution, it encourages the apprentice to seek for different alternative solutions (Lundgren, 2013). The author explains the possibility to teach with living cases, which means that the apprentice produces the case based on secondary resources, such as annual reports and home pages. A case example is about learning history by cases as they contribute to the present and the understanding of history (Williamson-Lott & Baedi, 2016). Teaching with case studies would give a better understanding for the learners by actually doing the assignment, not only in written form, and to transfer the theory to practice for a better understanding and for a longer memory sustainability (Williamson-Lott & Baedi, 2016). The given assignments ended with seminars for the final result (Williamson-Lott & Baedi, 2016).

Gerring (2004) states that cases can be defined as intensive and introducing. However, distinguishing them as formal and informal units can make it easier to understand them. A formal unit can be described as an analysis of a person, group, etcetera, as the informal units do analysis in a peripheral way (Gerring, 2004). Healy and McCutcheon (2010) narrate that cases can be used as a teaching method and is different from the traditional teaching method. Accounting education, for instance, has found use of the case method and to some extent, it is vital of how they teach with case studies (McCutcheon, 2010). Furthermore, teaching with cases in accounting education, has not been extensive and therefore the teachers are inexperienced in lecturing in that environment, because it claims that the potential of using case methods implicates to have positive impacts (McCutcheon, 2010).

For instance, in the following case examples they teach with models. The first company, Mercatus Engineering AB, chose to restructure the organization, doing that by education (Søilen & Huber, 2006). The process began with a development program starting with theoretical sections that were followed by discussions regarding core values and vision issues. Including exercises in relaxation and stress management. This process was based on the FIRO-model, containing three phases. The first phase explains the belonging i.e. where the employees find themselves within the group. The second phase speaks for the
need of taking control or another role and the final phase is the affinity i.e. how you work as a group. This reorganization gave their company a better internal balance (Søilen & Huber, 2006). The other case tells about Bräcke Trähuskomponenter AB, who sees its employees as their most important resource, therefore they wanted to involve them in the company’s common goals (Søilen & Huber, 2006). They used the PUFF-model for visualization of how the improvement and results will look like. This also included cooperative participation and meetings. Another main principle was the importance to promote their independence. The process began with an education regarding the PUFF-model, which is then followed up by what measures they reach (Søilen & Huber, 2006).

Putnam and Borko (2013) recites that learning experience in primary or secondary education has been provided by teaching with cases, which could be discussing ideas to engage the apprentice in activity. The setting experience gives reflection and critical analysis and cases also have some advantages than other activities that are used in teaching (Putnam & Borko, 2013). When this method is used in teaching, the instructor gives immediate feedback to the pupils (Putnam & Borko, 2013). Popil (2010) says that critical thinking are being developed in clinical setting which means with the consideration of the outcome, they learn and experience real life data analysis. In clinical settings they usually teach with case presentations where they get to reflect on what has been asked and performed, as it gives the result of a deeper learning (Onishi, 2008).

Tärnvik (2004) states that the main principle with the methodology is that it allows students to speak, stimulate their interest through to reality and increase the problem-solving proportion. The author also says that when teaching with cases, it is supportive for the teacher, as he or she takes notes for each case, which could be more extensive than the actual story. Another case methodology in teaching is using scientific papers since they are safe and convenient. Hence, the working processes consists of the critical evaluation and research results (Tärnvik, 2004).

Waltergruppens skolor AB is an example of a problem-solving case. It is about a man who wanted to start a private school (Søilen & Huber 2006). He saw the students as customers and the courses as products. They considered a restructuring after the so called High Performance Programming-model which included four steps; first step is the reactive phase, the second step is the responsive phase, the third is the proactive phase and the fourth step is the high performance phase. The first and second phase means that the instructor sets
up orders and sees how the employees responds. They wanted to reach the third phase where the leader is responsible for the common planning and the co-workers to begin to take responsible for their actions (Søilen & Huber, 2006).

Case discussion is the optimum choice according to Merseth (1996), because the participants engage in other ways than reading alone, that way they construct ideas and reflect about their own teaching. For example, case discussions can be in narrative, hypermedia or in an electronic form, which offers the teacher model collective researching for their students (Merseth, 1996). A case illustration is about how they used the audio-visual form in their seminar, when they made a presentation of a 10-minute video film (Spitzer, 2013). They see it as an emphasizing manner to deal with conflicts by using the case method in their teaching (Spitzer, 2013). Svenska Magnet Fabrik AB is another case which agree that discussions should be included (Søilen & Huber, 2006). The company wanted to develop, therefore a development program was considered. It started up with courses followed by discussions and after that, they got critique from the instructor, which later on led to the finishing result (Søilen & Huber, 2006).

According to Burko (2015), using cases as a teaching method in natural science is different from business or law cases, because there is only one right answer in natural science. Burko (2015) also tells that when the science is correct, the knowledge will be told by short story cases, but there is also a variant where the knowledge could be correct or incorrect science as the apprentices gets to identify the differences. For instance, Plato in the astrobiology science, used cases when stating Atlantis (Burko 2015). Using quantitative reasoning in case studies is very common, for example, when apprentices gets a question and transfers their learning between two different subjects (Burko 2015).

Handelsman, Ebert-May, Beichner, Bruns, Chang, DeHaan, Gentile, Lauffer, Stewart, Tilghman and Wood (2004) mentions that the use of cases in teaching is similar to scientific teaching since both engage the learner in a process where the methods are systematically being tested. A case illustration is about case studies that were used in teaching to find differences between two constructs in chemical equilibrium (Mavhunga & Rollnick, 2015). The benefit of using cases was that they got to discuss during the process through components that were used. Furthermore, it started with a traditional lecture discussion of the knowledge of these components followed by examples, which lead to finishing with pre-service teaching by illustrating the results.
from their knowledge about the components (Mavhunga & Rollnick, 2015). They also audio-recorded during class (Mavhunga & Rollnick, 2015).

As described by Strach and Everett (2008), the case method either brings the problem to the learner or let the learner bring the problem, most commonly in advanced courses. Hence, it makes them ask what they would have done in the current situation. Furthermore, it has been shown that giving the instructions through case methods, conducts to easier solving the problem (Strach & Everett, 2008). Quality teaching case studies gives authenticity, but it demands a long process, which means it gives believability and plausibility (Strach & Everett, 2008).

Swanson and Morrison (2009) emphasized that cases tells stories therefore they are useful in an historical narrative in teaching, which means teaching about historical things that have happened. In Helsinki School of Economics they used the case method in their teaching, for example in decision-making, in events, in return of payoffs, etcetera (Swanson & Morrison, 2009). A case example of this is about decision-making regarding the salary in India and how it is divided between different performance among staff. The case also gives the apprentices an insight of cultural differences. The main principle is to show them the confusing process of decision-making that later on was followed up with discussions. (Kumar & Vakkayil, 2012).

Lecture case methods occurs for not being satisfying because the class still remains as a lecture, which means that what has been taught will not stay in the apprentices minds (Herreid, 2011). According to Herreid (2011), clicker cases is predicted as a better way because it includes a PowerPoint presentation where the apprentices gets to answer the questions by clicking their answer. Another method is the discussion case method, which do not involve lecturing and limits the participants in a discussion with the teacher (Popil, 2010). Furthermore, the optimal method is the small-group case approach, because the interaction between the participants will be higher, especially when the teaching is among the apprentices (Popil, 2010). Then there is the problem-based learning (PBL), team learning and others, but these two attempts to capture the participants working strength by cooperating in permanent groups (Popil, 2010).

Bonny (2015) conducts a study whether case studies was more effective in learning gains, learning from a textbook or learning from class discussions, where the results showed that most of the participants thought that using cases was better than the other options. Furthermore, teaching with cases increases
the apprentices performance on examination questions (Bonny, 2015).

**Analysis**

Using senses to receive information is advantageous, faster and might result in a more sustainable learning. Senses facilitates thinking and different perspectives that people encounter in everyday life. This, in turn, can be a helping hand to solve problems. Furthermore, the universal is what is considered to provide the benefit, which lies in the prediction about the universe since it is more interesting to receive reactions from different perspectives of everyone and not the one individual.

Cases in teaching provides the benefit of learning how to solve problems in a manner which could sustain and result into better analyzing skills (Merseth, 1996). When teaching in a classroom, allowing the apprentices to involve in the process, will make them use more than one of the senses. They will not only speak but hear and see. Continuously, it will lead to feelings, as the apprentices can analyze the discussions and come up with concluding thoughts. Using most of the senses, will facilitate the analysis and the understanding of situations. According to Merseth (1996) and Austin and Sonneville (2013), using cases for transforming theory to practice can give effect on problem-solving skills, which is advantageous as apprentices can act ethical and identify biases for their decision-making. This in return will increase the apprentices skills in solving problems, making decisions and analyzing.

The case methodology are used in business and law schools, but also in natural science, since it is followed by several advantages. As for Ambrosini, Bowman and Collier (2010), cases can be defined as both independent but they are also a way of comparing different findings. Merseth (1996) agrees since cases can be used individually or in groups to share knowledge among each other. This way, the teaching will increase in standards as apprentices discuss, which later can finalize into common sense. For instance, the MSA Sordin AB case exemplifies common sense, as the company strive for higher competencies by education and for keeping standards.

By using both theoretical and practical methods, the process and results will more likely lead to common sense. Furthermore, the case studies of Berglunds Mekaniska AB, TOMVA AB and Rock City AB, are further advantageous examples of using discussions but also seminars when teaching, since it will
increase the participation of the learners (Søilen & Huber, 2006). In comparison with Merseth (1996) and Popil (2010), Søilen and Huber (2006) agrees that lecturing with theoretical and practical case methods will maintain high competencies among participants.

Common sense can be developed by anyone who is smart, logical and a problem-solver. As Lundgren (2013) says, analytical skills may increase by learning in both oral and written ways. Furthermore the ability of solving problems are a benefit since cases do not only have one simple solution. Williamson-Lott and Baedi (2016) agrees with the claim that teaching with theory and practice preserves the memory and the understanding of the subject. This allows participants to a deeper analysis step by step. Firstly, such process engages the apprentices of the theoretical parts to bring in the foundations of the subject. Secondly, the process leads to the practical part hence it fulfills and completes the analysis of the subject in a manner of making the theoretical part real. Thirdly, when both parts are completed and compared, the upcoming findings has then lead to a deeper analyzing process that will remain longer than only performing one part.

Gerring (2004) states that cases are distinguished as formal and informal units, which may facilitate the skills in both problem-solving and analyzing. The ability to use and enhance both skills increases understanding of the process. McCutcheon (2010), on the other hand, states that case methods has positive impacts in teaching since it is crucial of how the case studies are influencing the apprentices. This is a version of cause of effect, since cases are causing a problem, the apprentices need to act and solve the problem by making decisions which then will affect the cause. Nevertheless, A leads to B, explaining actions from participants when the case methodology is applied and aims to result into concluding answers, perhaps by common sense. For instance, Søilen and Huber (2006) describes a case study of an organization called Mercatus Engineering AB, that exploited models in the education part as it resulted into reaching the phase of internal balance. The authors also tells of another case study, regarding Bräcke Trähuskomponenter AB, who used almost similar actions as Mercatus Engineering AB since they also used a model to reach their goal. Both cases are examples of getting through a process using common sense, hence they integrate with both theoretical and practical methods.

The case examples has involved many of the beneficial parts such as using models step by step, which gives the opportunity of reaching their goal in a successful manner. Since the organizations are using more than one method in
their process it will enable a faster progress. For instance, Mercatus Engineering AB, which is told by Søilen and Huber (2006), goes through phases which requires them to carefully go through each phase in order to learn something of the phases. This in turn allows the organization to develop effectively and get through the difficult stages to reach the final phase.

Putnam and Borko (2013) and Popil (2010) agrees that being critical operates into a better teaching and learning experience with cases, since participants engage in activity which allows them to use their common sense by analyzing and reflect about the outcome. Onishi (2008) consents that it gives a deeper learning when teaching with cases by different manners. Using case studies in teaching can build up a broader area of activating apprentices and as Tärnvik (2004) says, the case methodology allows the participants to discuss and solve problems by using their critical thinking. Søilen and Huber (2006) exemplifies a problem-solving case which contains going through phases to reach their solution. The case is about reconstructing a school by involving employees in the process, until they end up taking responsible for their own actions. Being critical sets the mark for how deep the process has been since it shows how the apprentices has worked to come up with their concluding thoughts. By avoiding critical thinking in the process can lead to results of incomplete sentences and that you may not have received the appropriate response.

The case methodology is beneficial in different manners, but the possibilities of allowing apprentices to discuss would be the main benefit. Merseth (1996) and Spitzer (2013) considers that discussions allow participants to interact with each other, hence they will learn through different experienced perspectives. Søilen and Huber (2006) also agrees that it is advantageous to use case discussions in teaching. Allowing apprentices to discuss with one another, facilitates for the participants to convey their own opinions and be able to solve problems more easily with others.

Moreover, Burko (2015) claims that teaching with natural science cases is different from law and business cases, since it only has one right answer but can still be divided into correct and incorrect science. Natural science can not both be and not be, when something is, it is and cannot be changed. As for Natural science the answers can only be one particular answer and therefore the answer cannot be several objectives. The apprentices will have to make decisions and try to solve and identify the differences of a problem. Therefore the importance of enhancing analyzing and solving-problem skills are high, as teaching with cases may increase the skills. Handelsman et. al. (2004) agrees with Burko (2015) since both scientific teaching and teaching with cases puts
participants in a process where they have to interact. An illustrating example is told by Mavhunga and Rollnick (2015), as the participants discuss about components and comes up with concluding thoughts. Having higher problem-solving skills and being critical, will result into intense discussions with interesting conclusions.

Strach and Everett (2008) claims that the case methodology is beneficial in teaching as it facilitates solving problems. Teaching with cases puts participants in a longer process. Furthermore, it turns out to be more trustful, since the work need to be more meticulous. Moreover, Swanson and Morrison (2009) and Kumar and Vakkayil (2012) explains how teaching with cases enables making decisions which influence discussions. Nonetheless, it enables the apprentices to reflect about cultural differences. This is a great example of a benefit through which discussing in class or between other individuals and groups impacts the results. By using the case discussion method, Herreid (2011) consents that the participants will learn more, hence the knowledge will remain or last longer than normal lecturing. Discussions also have the benefit of sharing knowledge and analyzing skills between fellow students, which then leads to better problem-solving. Moreover, discussions can lead to the participants understanding of what have been processed and how they solved the actual problem.

As previously mentioned, the more senses that are used, the greater the chance there is that the learning sticks in the brain. Although, discussions get its entirety from all other factors, such as seminars, problem-solving, decision-making and other theoretical and practical factors. Herreid (2011) and Popil (2010) agrees that when teaching with cases, it is advantageous to use discussions as a part of the process. When the apprentices are divided into smaller groups or when the teaching consists of a PowerPoint presentation, participants can be involved by clicking their answer on the presentation and discuss commonly. Bonny (2015) also agrees with the other authors how discussions increases the learning when teaching with cases. Hence, it enables everyone's participation such as sharing opinions.

Teaching with case studies allows participants to analyze through observations. For instance, eyes are used to visualize an experiment in a laboratory. This is followed by classification and measurement as we need to think with a logical mind such as putting subjects into different categories, etcetera. Individuals need to act smart and know how to measure findings. Merseth (1996) gives an example of teaching with seminars as it allows direct feedback and observing interactions. Hence, it includes decision-making and problem-solving to help
distinguish and divide the subjects into different categories. Most authors agrees with one another since every action demands a solution that is useful for the final finding in each of their process to reach their goal.

Conclusion

In conclusion using cases in teaching are beneficial in several manners. Cases are advantageous in manners such as to improve analysis skills with the help of using one's senses. Additional advantages is the doctrine of decision-making and being able to solve problems. Other beneficial factors is the process to be able to implement theory to practice and the knowledge that arises through this. Consequently it involves participants senses, which in turn makes it easier to analyze through cases. Another advantage of using case studies in teaching is that it generates into discussions which are mostly started with a seminar. This in turn leads to yet more knowledge as the participants learn from each other. Furthermore, using cases in teaching also increases critical thinking, which is advantageous in an investigation process where participants will come to a conclusion. With a closing sentence, by putting all the benefits together when teaching with case studies, will lead to a more educative process.

Further research

Case studies are used to a large extent in many countries as it would have been interesting to compare between countries. The research could be based on the differences in teaching with cases in different countries. It would have been interesting to find out if culture and religion play a decisive factor.

References


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