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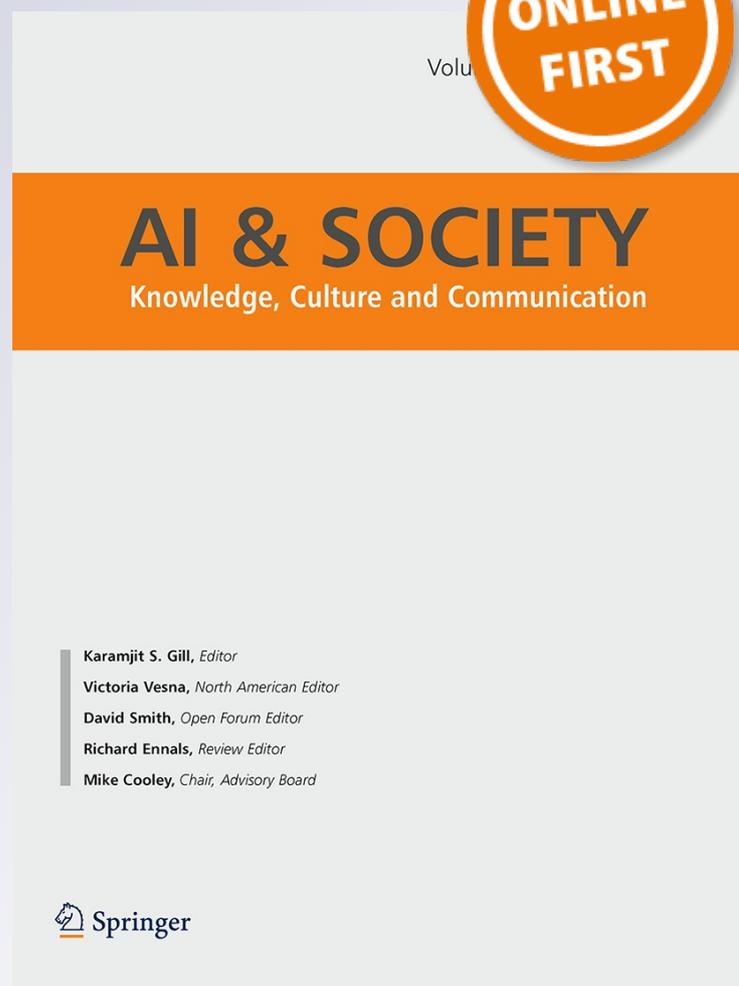
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How can we learn leadership? The vision of the Europe-wide University

Natalia Kobza¹ · Torben Schaefer² · Robert Glawar³ · Dietrich Brandt⁴

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Abstract In the view of many students, business and engineering education in Europe today do not sufficiently take into account complex problems, tendencies of *chaos* and uncontrollable business behaviour, and the lack of mutual *trust* in business transactions. Additionally, universities seem to fail in creating *leaders*, instead focusing on educating future managers. Therefore, the student-run international organisation the *European Students of Industrial Engineering and Management* (ESTIEM) offers a whole series of educational activities and programmes in parallel to their own university courses. It is based on the concept of *experiential learning*. Through ESTIEM, we, students of Industrial Engineering Management, learn and practise working in teams with shared and rotating leadership among ourselves. These experiences are to be described in the paper in some more detail, as a model for university education in industrial engineering and management. Furthermore, the following questions will be

tackled: What does leadership mean today? How are problems handled by leaders and managers in industry nowadays? How can leadership to solve complex problems be taught in the university? As a consequence, it is suggested to develop out of the ESTIEM programmes, a series of university-equivalent ESTIEM courses. In the long term, the goal might be to realise the vision of a genuine Europe-wide “ESTIEM University” in its own right, similar to normal universities which will help in shaping new leadership generation in Europe.

Keywords Leadership · Education · Experiential learning · Business · Chaos · Europe

1 Introduction

For the past years, companies have put a lot of time, money and other resources into educating and growing their leaders—future managers. This paper contributes to enhancing the understanding of experiential aspect of leadership learning process and provides examples of gaining leadership skills by Industrial Engineering Management (IEM) students within ESTIEM (*the European Students of Industrial Engineering and Management*) organisation. It is illuminated that not only future employers, but also universities, schools, groups of friends, etc. have a huge influence on developing qualities which help in leading and can be transformed to different areas of life. The problem of leadership learning that is tackled in this paper originates from the growing importance of leaders in today’s business world. The worldwide networks of enterprises are increasingly challenged by the need of doing business with each other, within globally *unstable* systems. Whether they like it or not, enterprises and their

✉ Natalia Kobza
Natalia.Kobza@estiem.org

Torben Schaefer
Torben.Schaefer@estiem.org

Robert Glawar
Robert.Glawar@tuwien.ac.at

Dietrich Brandt
brandtdietrich@gmx.de

¹ Faculty for Business Administration, Mummert Scholarship for Executives of Tomorrow (Bosch Foundation), University of Cologne, Cologne, Germany

² Eindhoven University of Technology, Eindhoven, The Netherlands

³ Vienna University of Technology, Vienna, Austria

⁴ RWTH Aachen University, Aachen, Germany

managers are forced to take into account how our global world more and more frequently tends to develop *chaotic* behaviour. Consequently, leaders need to deal with wicked and complex problems in organisations. In such highly competitive and globalised environment, issues that are encountered in business are becoming more and more challenging. There is no clear guidance how to deal with those new problems. As systems become more and more compounded, the importance of leadership among engineers, logisticians and other functional roles has steadily increased. They need to have effective means both formal ones as well as informal ones (Bodner et al. 2013).

Moreover, those leaders' qualities are required nowadays by employers already in the first job after the graduation. Today's world, in particular the industry, sets very clear goals ahead of students, especially students of IEM, who are being prepared and taught to act as future managers. Therefore, more and more students see a need of gaining leadership abilities outside their universities. They strive to obtain necessarily qualities to become more competitive on the job market. There are numerous ways to develop leadership skills offered nowadays. There are, however, many doubts, whether it is possible to teach leadership in academic way. Traditionally, education has been viewed as the means to convey information. In that regard, students were viewed as identical empty vessels to fill with information (Freire 1998). How can students of today get educated for coping with such chaotic patterns, in our future professional lives? Several suggestions that such an approach to educate and use of traditional pedagogical methods of lecture is not able to produce sustainable knowledge and since individual differences are not taken into account and the role of experience in knowledge formation is ignored (Bingle and Hatcher 2003). Even worse, such an approach may turn students into passive under-achievers (Guyton and Hall 2000). After passing through the traditional educational system in universities, students may possess many facts, but are unable to apply them to the real world (Manolis et al. 2013) and to lead a team of co-workers.

Directions and advices on leadership can also be found in professional journals, traditional as well as the inspirational literature, or on many websites offering personal consulting. Most of them focus on how to be effective and efficient within the organisation and in the system that the leader operates in. In some of those sources, the notion of *leader* is used as *manager*. In this paper, it will be discussed, if this equitation is eligible and if leader's qualities are really those which are currently praised on the job market.

Here, the student-run international organisation ESTIEM has taken a lead across Europe on behalf of all *European Students of Industrial Engineering and*

Management. It does not make sense any more to ask university teachers to come up with better educational concepts and to prepare students better for the future professional challenges. There seems to be very little willingness within business and engineering education to take into account those tendencies of global business systems to slide into *chaos* and uncontrollable behaviour. There is also very little openness for the problem of how one may need to cope with the worldwide lack of mutual *trust* in business transactions—*trust*—which is the basis for any business as students are told again and again in various lectures, also *trust*—which is a legitimisation of a leader in a team. Therefore, universities across Europe (the best universities among them) in some aspects need to be considered as hopeless to be reformed towards such considerations, or one sees these universities as being unable to reform themselves. Consequently, ESTIEM students have come up with an own alternative educational programme—to educate themselves about what is missing at the university. Today, this approach means organising a whole series of educational activities and programmes in parallel to the university courses, as already referred to recently by some other ESTIEM students (Juras et al. 2012a, b), and the teachers are invited to these events according to ESTIEM standards and expectations. In particular, the project of the *Summer Academy* offers the opportunity to develop such leadership skills in complex settings and under conditions of self-organisation. This project—the ESTIEM Summer Academy—focuses specifically on such leadership skills. In this paper, it is presented how this ESTIEM Summer Academy supports the process of learning leadership. These experiences are to be described here in some detail, as a model for university education in industrial and general engineering.

2 Leadership today

This section elaborates on two theoretical constructs: leadership and experiential learning. Additionally, problems which occurred within an organisation will be discussed. There are many different situations where leaders are needed. In fact, everyone can act as a leader and everyone should be responsible for all the interactions that he/she is experiencing with others. Therefore, the common understanding of leadership concept needs to be created.

2.1 Understanding leadership

The concept of leadership began to emerge in 1930s, and first research on this topic was made by Lewin et al. (1939). They were first to attempt to define the phenomenon of leadership; however, the term “leadership” did not appear

in the literature till the second half of the twentieth century (Whatley et al. 2012). Countless definitions of leadership were formulated since that time. Each of them brings some characteristic emphasis on leadership style, traits, motives, etc. While trying to discuss the matter of leadership learning, it is crucial to find a proper definition and differentiate it from the so-called leadership mythology which very often confuses leadership with a position rather than a privilege. Hence, when reflecting on this topic, the main challenge is to create a realistic perspective which includes complex approaches. In the professional literature, often the term “mainstream leadership” can be found. It focuses on leaders as persons, their abilities and existing theories that can explain their leadership style. Most of the time, however, it does not consider the environment and the responsibility that the leader has to take (Schyns et al. 2013).

Yukl (2006) suggested that “leadership is the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives” (Yukl 2006, p. 3). Northouse (2010) proposed that leadership includes traits, abilities, skills, behaviours that “influence process that assists groups and individuals (...) to achieve a common goal” (Northouse 2010, p. 12). Additionally, Rost expands this definition stating that leadership is “an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes” (Rost 1991, p. 102). Among many remarks, it is important to stress that Yukl (2006) did not limit leadership to roles; he argued that it is connected to specific features, but also to social processes. The term “collective leadership” was already used many times in the past (Denis et al. 2001). This proves that leadership is not attributed to one person, but is based on social context and exchange within a group.

Leadership is, however, widely understood in business world from an individual leader’s perspective, as the ability to manage projects, people, products or processes in a particular situation. Other members of the group are treated as followers, and partnership between them and their “manager” is usually not mentioned. Responsibility of making decisions lies most of the times only on the leader. Leadership is thus viewed in terms of successful management of a division in a corporation or a company. Recently, scholars started using the term *entrepreneurial leadership* to differentiate it from *team leadership* (Bagheri and Pihie 2011). There is also not that much theoretical research performed on that issue so far, but it can be expected that university teaching will follow this path, focusing on leaders as entrepreneurs who manage a successful company. This vision of leadership promotes certain characteristics that a leader possesses, and traits which are suited

for successful and effective performance. The focus lies on particular qualities like being innovative, willing to take risks and able to predict and create the future for organisation. Many scholars apply here economic rhetoric and treat leadership merely in terms of the successful organisation, from the corporate perspective: “*Will my company bring revenue?*” Such leadership competencies should help managers increasing the probability of their success in the business world. This view results in treating leadership as a skill that not only can, but should be acquired by entrepreneurs. Leadership is associated with entrepreneurship based on leadership practice education, research and trainings. This may, however, need to be changed because it appears too much as the capitalistic approach of the twentieth century. In fact, the most important thing when considering leadership is its context. Somebody who fails in one situation may turn out to be a great leader to influence or motivate people. To sum up, leadership can be viewed from many different perspectives. As a form of individualistic qualities, a collective phenomenon or in broader sense—a representation of group, society interests (Whatley et al. 2012). Already this proves that developing leadership cannot be limited to enhancing one’s abilities or focused on acquiring only personal traits. Given the complicated and complex definition of leadership, it is not surprising that there are many doubts about teaching leadership and spreading it alongside. An important notion about leadership was raised by Whatley et al. (2012). They argued that leading cannot occur in isolation, but it comes with being led.

2.2 Experiential learning

Simultaneously to the leadership research, studies on education were progressing. The mechanism of learning was widely explored in the literature (Whatley et al. 2012). In the end of twentieth century, some researchers started focusing on its holistic and integrated nature naming four tenets which are required in the holistic approach: concrete experience, reflective observation, abstract conceptualisation and active experimentation (Kolb 1984). Kolb (1984) is considered the inventor of experiential learning theory. Kolb’s theory is based on the assumption that learning is a dialectic process that occurs within a group of individuals who make common experiences which are transformed by each of them into new understanding or knowledge on their own (Kolb 1984). In addition to practical teaching, Kolb’s theory disputes that experience must be accompanied with reflection and that only then, the learning cycle is complete. Reflection is how students connect theory and practice (Moore et al. 2010). It also helps them in integrating principles they learned into life. However, the most important thing is getting experience (Boyer 2013). The

exchange between individual and the environment results in reflection which leads to conceptualisation of ideas and ultimately to active experimentation. Boyer argued that it is not only important how the knowledge was gained, but also what was the nature of interaction with others. After some time, two areas of research—leadership and experiential learning—came together and try to explain the process of leadership learning. However, it still remains unclear how to deliver leadership knowledge. When asked a question: “Can leadership be taught?”, most people would say no, but would have difficulties in explaining why. If it was true, several assumptions must have been made: there must be people who teach leadership, people who want to learn it and that this education will prove them to become leaders.

2.3 The educational concept of experiential learning

Students do not explicitly refer to any educational concept or philosophy to guide them in their actions. But for the knowledgeable outside observer, it comes closest to the concept of experiential learning which was once put forward by Kolb (1976). Learning based on experience is seen as an essential part of how humans learn, grow and develop (Kolb 1984). To this day, several studies lend empirical support to Kolb’s model (c.f., Abdulwahed and Nagy 2009; Jilardi Damavandi et al. 2011; Massey et al. 2011) and it is even described as “the most influential learning style model” (Kayes 2005) (Fig. 1).

As an example, this learning process can be described in the following way (c.f. Starting Point 2012):

“Kolb’s *Experiential Learning Theory*” presents a cycle of four elements:

1. Concrete experience
2. Reflective observation
3. Abstract conceptualisation
4. Active experimentation

The cycle begins with an experience that the student has had, followed by an opportunity to reflect on that experience. Then, students may conceptualise and draw

conclusions about what they experienced and observed, leading to future actions in which the students experiment with different behaviours. This begins the cycle again as students have new experiences based on their experimentations. Although this continuum is presented as a cycle, the steps may occur in nearly any order. “This learning cycle involves both concrete components (steps 1 and 4) and conceptual components (steps 2 and 3), which require a variety of cognitive and affective behaviours...” (Kolb et al. 1984).

According to Manolis et al. (2013) the experiential learning model is based on six assumptions:

1. Learning is best conceived as a process, not in terms of outcomes.
2. Learning is a continuous process grounded in experience.
3. Learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world.
4. Learning is a holistic process of adaptation.
5. Learning results from synergistic transactions between the person and the environment.
6. Learning is the process of creating knowledge.

According to these propositions, students can own a lot of information, but may not apply the information in tasks, solely because they have no experience in doing so. Therefore, experiential learning enables students to apply the information they own in order to build self-efficacy and in the end learn from their actions (c.f. Bandura 1991). By overcoming the restrictions of routines and by changing beliefs due to tolerance and openness to change, experiential learning and reflective techniques can be used to raise self-awareness, professional confidence, emotional intelligence and the ability to see professional problems in a broader context (Dobos 2014). Table 1 shows different learning/training methods, and their correlations with Kolb’s experiential learning model are shown.

When putting it into practice, the concept of problem-based learning comes into view as it has been introduced in universities around the world (e.g. Maastricht or TU

Fig. 1 Kolb’s experiential learning model (Kolb et al. 1984)

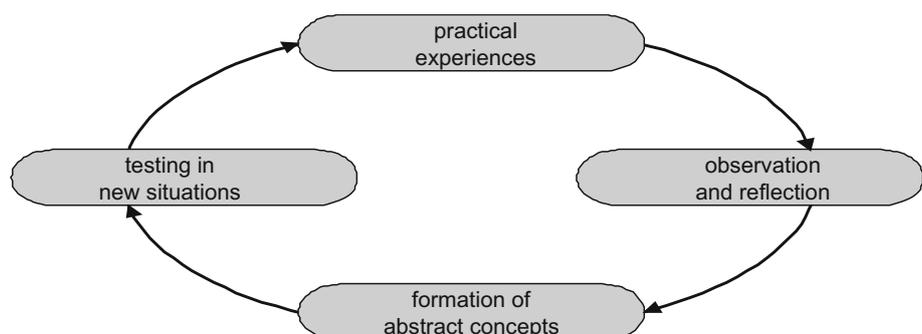
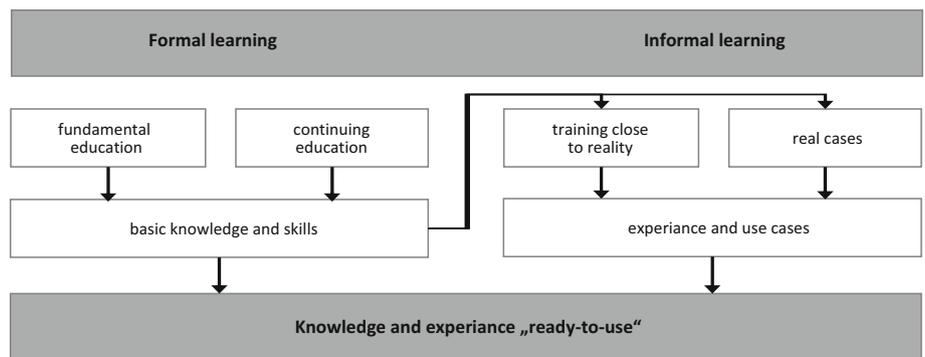


Table 1 Learning methods (Dobos 2014)

Learning/training methods	Stages of Kolb's learning cycle
Simulation, case study, role play, game, project, demonstration, field trip, benchmarking site visit, outdoor experience, job rotation, in-basket	1. Concrete experience
Discussion, small group activity, buzz group, self-tests, designated observer, observational tours, reading, critical incident, coaching, counselling, mentoring, feedback assessment, workplace observation, networking, shadowing, briefing instructional films	2. Observation and reflection
Sharing content, guided discussion, lecture, presentation	3. Formation of abstract concepts
Laboratory experience, on the job experience, job rotation, internship, fellowship, international transfer, performance tryouts	4. Testing, active experimentation

Fig. 2 Formal and informal learning (Mistele and Trolle 2011)



Eindhoven, NL). Today, it may be described as the following (PBL 2012): “problem-based learning (PBL) is an exciting alternative to traditional classroom learning. With PBL, your teacher presents you with a problem, not lectures or assignments or exercises. Since you are not handed ‘content’, your learning becomes active in the sense that you discover and work with content that you determine to be necessary to solve the problem. In PBL, your teacher acts as facilitator and mentor, rather than a source of solutions”.

In order to ensure a sustainable future and a high level of employment, Europe needs a new approach to use the exciting opportunities by gaining new skills and competences not only in the traditional setting of the classroom (formal learning), but more and more outside of it (Tripon 2014). However, the definition of formal and informal learning has little to do with the formality of the learning method, but rather with who is leading the learning process (Cross 2006). In order to handle difficult situations in a business environment, one needs to combine the theoretical knowledge gained by formal education as well as the informal experience-based knowledge picked up by experiential learning as shown in Fig. 2.

While formal learning provides a fundamental knowledge and ensures continuous education, the development of performance over time in the learning process is

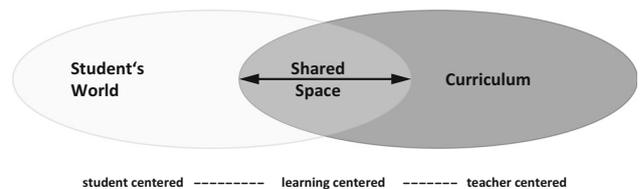


Fig. 3 Shared learning space (Maniotes 2005)

mainly driven by informal learning which provides experience and uses case studies (Abd Baser and Buntar 2010). Today, the emphasis is more and more shifting from formal to informal learning, because of the possibilities of the digital age, in regard to information sharing and information seeking. In technology-rich environments, learning activities between school and home merge increasingly as the control of the learning process shifts from the teacher to the students and results in more and more students-driven activities (Mills et al. 2014). In this regard, for a modern understanding of education, it is very important to be aware of the overlapping space between the student-centred world and the teacher-centred curriculum where complementary student–teacher communications may support formal to informal learning (Maniotes 2005) (Fig. 3).

2.4 How to handle problems in organisations

“In a highly complex and rapidly changing global economy [...] businesses everywhere are rearranging their activities to carry them out in networks and teams. Some businesses, for example, are entering into highly integrated, long-term relationships with customers and suppliers [...] Many of these networks transcend national as well as organizational boundaries” (Garcia 2000). Accordingly the leading of organisations nowadays is far more challenging and complex than in the past. Many complex problems need to be handled, and it does not only matter *what*, but also *how*.

“Enterprises are increasingly challenged by the need to establish *flexible* but *trustworthy* structures of doing business with each other, within globally instable systems. Whether they like it or not, enterprises and their managers are forced to take into account how our global world more and more frequently tends to develop *chaotic* behaviour” (Juras et al. 2012a, b). Global industry does not show clear directions for enterprises. To deal with that issue, scholars try to put some frames on it. One of the theories suggested by Reihlen (1996) proposes two approaches: the analytical versus the evolutionary strategy. So how do we function as leaders in this chaotic environment? How do we make sure that problems are addressed from the right perspective and what is the role of the leader in solving those problems? The *evolutionary strategy* as described above gives us a different perspective on solving such problems. Problems are treated as complex construction of reality. Responsibility in processes lies always on *all* organisational members. The question that now arises is: how can we as students be prepared for that kind of leadership? How can we learn it and how can we—as leaders—deal with those chaotic patterns? “Here the student-run international organisation ESTIEM has taken lead across Europe on behalf of all European Students of Industrial Engineering and Management. For them it does not make sense any more to ask their university teachers to come up with better educational concepts and to prepare them better for their future professional challenges—they consider their universities across Europe (the best universities among them) as hopeless to be reformed, or unable to reform themselves. Therefore they have come up with their own alternative educational program: to educate themselves in a different way: Their approach means organizing a whole series of educational activities and programs in parallel to their university courses, and they invite teachers for these events according to their own standards and expectations” (Juras et al. 2012a, b). It means for us as students to incorporate social and emotional abilities to be gained in a multicultural team. Such experience is crucial for preparing us to act effectively in a global environment within complex

networks. Those skills might be more adequate to personal development than learning facts, and professional success comes with such learning rather than through learning hard knowledge. It is needed to be aware of that process, and it should be important for every single student. Another question that we are facing now is: can we as students be prepared for that complexity? Can we learn to cope with it and how can we deal with these chaotic patterns?

2.5 On the way to learning leadership

There are no clear guidelines how to teach leadership. It has been already mentioned that universities try to equip students with specific abilities. However, as discussed before, leadership phenomenon cannot be limited to individual level. More often it is connected to a social process. Self-awareness and development of social skills are the basis for leadership development to be considered in its social context. It requires social awareness that includes empathy, motivation and listening. Leadership has to move and be transformed from individualistic to collective perspectives. This social context is widely disregarded in research; it is usually considered only in terms of effects and influences that the leader's actions have on the group. Additionally, it has been argued whether leadership can be acquired or learnt. But it is possible to *develop competencies* attributed to leadership which can help with successful execution of tasks. They will never replace the *gift of intuition* that one possesses when talking, listening and understanding team members. It means learning through all the perspectives of the problem which can be seen within the group. Thus, leaders may embed knowledge and understanding which they have gained from others in the culture of their organisation. Through ethical behaviour, they promote values and serve as examples within the organisation.

Developing leadership initiative and skills has actually become the most recent goals of business education. By leadership initiatives, academicians try to show behaviours which can motivate others, coordinate teams and tasks, and help in performing a managing role in a group (Oswald et al. 2004). Yet there is little factual knowledge about such *personal competencies* for leaders' successful performance. What is taught at the universities and at the IEM courses are *entrepreneurial competencies* like communication, time management, self-confidence and how to use them in a particular department, within a certain system. Real leadership, however, is not constrained within the current system; it is about transforming this system, and it means treating leadership as a process that is developing in a team to lead into the future. Transformation means change, change means having an influence, influence comes from the personal approach and willingness to make this change.

It is essential that leaders identify themselves emotionally with being a leader, and in consequences with the group, with the team members and with the objectives that they share within this group. The leaders should recognise their potential and influence and treat them as their responsibilities of leadership. Being a leader is undoubtedly connected to our personality. It is not surprising that teaching it might be so complicated. Nevertheless, there are some attempts that try to focus on that, instead of enhancing some “selling skills” of leaders like communication, creativeness or working under stress abilities. A leader should be considered as a whole and complete person, and as this person he should aim first of all at understanding him/herself and achieving full potential. Self-discovery is a first step to become a leader. The notion that leadership can be taught would also mean that knowledge can be transferred by frameworks and materials. Developing leaders should be possible when guiding them and providing with resources. However, it is observed that leader’s actions and decisions flow naturally. They are more a matter of intuition than skills. Leading starts with leading yourself.

Peterson and Seligman (2004) argued that specific virtues of personalities help in developing leadership character and enable making ethical decisions as a leader. They chose six virtues which should be common among different cultures, religions, moral rules or philosophies. Those are: wisdom, courage, humanity, justice, temperance and transcendence.

WISDOM	according to Peterson and Seligman represents such cognitive attributes as creativity, judgment and love of learning
COURAGE	is responsible for emotional assets such as bravery, perseverance or honesty
HUMANITY	should provide leaders with interpersonal abilities like love, kindness and social intelligence
JUSTICE	is described as civic strengths which could influence teamwork, being fair and leadership per se
TEMPERANCE	protects against excess, that is: forgiveness, humility, prudence or self-regulation
TRANSCENDENCE	helps leaders in spreading their values and bringing them to the larger audience. It can be achieved with help of gratitude, hope, humour or spirituality

Peterson and Seligman’s objection was to show a link between certain virtues and values and ethical decision-

making. They contrasted it with existing teaching that focuses on functional content of leadership instead of leader’s character. Virtues represent some abstract elements of strong character.

Focusing on this direction and based on specific virtues, the virtue-based orientation (VBO) model was created (Crossan et al. 2013a, b; see Fig. 1). The VBO puts one’s virtues in the centre of ethical decision-making that leaders need to face (Crossan et al. 2013a, b; see Fig. 1). VBO model is an extension of Rest’s (1986) four-stage process of awareness, judgment, intent and behaviour. An explanation of ethical decision-making that starts with moral awareness and judgment completes with moral intent and results in moral behaviour (Crossan et al. 2013a, b). VBO includes, however, a critical element which is reflection and underlines in this way the critical role of experiential learning process. The use of virtues can be deepened through reflection. VBO model proposes that leaders can deepen their virtues through first experience and then reflection which is developed individually, but may also include interaction with others (Fig. 4).

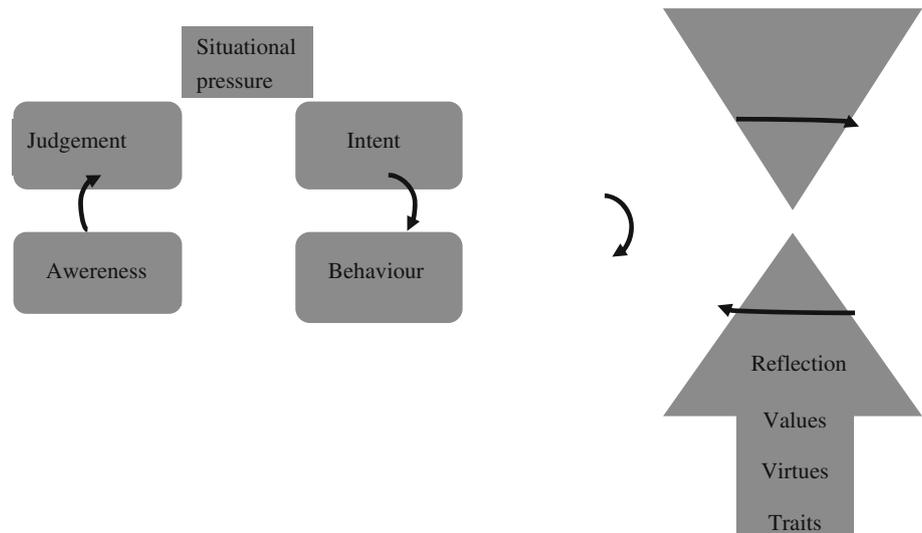
Self-reflection is a mediator to Rest’s model. Not always leaders’ judgment tells them what is good and what is wrong. Thanks to reflection leaders can use their knowledge and make an ethical decision on their own. They apply the values to the specific situation. Reflection leaves room for understanding. The VBO model consists of this reflection, since it is an indicator how to become a better leader. It makes leaders realise about the kind of person they wished to become. Also, applying evolutionary approach, reflection can be used to reflect on how to deal with complex problems.

The critical role of leaders’ competencies is dealing with turbulent situations, competitive environments and complex problems. As it has already been mentioned above, there are those two approaches that can be applied to deal with that issue. The *analytical strategy* approach is connected to hierarchy and many formalities which may result in miscommunication, too much control or limited motivation within the team. The *evolutionary approach*, however, enables leaders to include and empower team members in any decision-making process. What is needed to make this happen and is it possible to learn this way of leading people?

3 ESTIEM as a project of experiential learning

In order to ensure a sustainable development in the current European context, education is one of the key factors. Only an education system with a good mix of formal, non-formal and informal learning can guarantee economic development and social cohesion (cf. Tudor 2012). On university

Fig. 4 Virtue-based orientation (VBO) model was created (Crossan et al. 2013a, b)



level, the problem-solving process that is involved in experiential learning helps increasing student creativity and results in innovative solutions (cf. Ayob et al. 2011). Despite its positive influence on the educational system, experiential learning faces the problem that universities often have not enough space and resources for conducting practical courses, workshops and case studies for the number of students willing to enrol in those course (cf. Nooghabi et al. 2011). Therefore, more and more European student organisations which aim at the development of students beyond the frame of classical universities have started to explicitly enhance the extent of experiential learning. Organisations such as Board of European Students of Technology (BEST), European Students' Forum (AEGEE), Electrical Engineering Students' European Association (EESTEC), European Pharmaceutical Students association (EPSA) and many more have created a own section within their organisation that is responsible for creating platforms for experiential learning for their respective target groups of students. In that sense, these organisations, for example, organise case studies, workshops or specific trainings tailor-made for the needs of the labour market which they happen to often know better than the universities, because of their close cooperation with companies.

ESTIEM may thus be considered a large-scale project of experiential learning as can be seen on the web page. There it is up to the students of Industrial Engineering and Management (IEM) to set up framework, structure and content of our learning experiences. In this respect, the ESTIEM network is clearly going beyond the concepts of PBL, because ESTIEM is free to choose the kind of problem it wants to deal with rather than leaving it to the teacher to present them with such a problem. The challenge

for IEM students is stated in the following: "Especially for Industrial Engineering students it is very important to obtain a broad range of skills, many of them soft skills that are not in the focus of most European universities such as communication skills, ability to work in a team as well as to work independently and many more (cf. Bauer et al. 2014)".

Therefore, the mission statement of ESTIEM is the following: "ESTIEM combines technological understanding with management skills. Our goal is to establish and foster relations between students across Europe and to support them in their personal and professional development. Our network consists of 75 local groups in 29 countries, reaching out to 60,000 students"(ESTIEM website, 2012a, b).

3.1 ESTIEM projects

In the following, some programmes of ESTIEM that the network runs will be introduced:

3.1.1 *TIMES: Tournament in Management and Engineering Skills: a prestigious pan-European case study competition*

The Tournament in Management and Engineering Skills (TIMES) is the largest European case study competition for Industrial Engineering and Management students. This prestigious, highly acclaimed event has successfully been organised since 1994 and attracts around 250 top teams each year. Two qualification rounds are required to be selected for the TIMES final, which takes place in an annually changing venue in Europe. Before reaching this final stage, all the participants take part in a local

qualification at their home university. The winning team is then allowed to participate in semi-finals, which are organised throughout Europe. The final week eventually brings together the winning teams from each semi-final to determine Europe's "IEM Students of the Year".

3.1.2 *Vision: you need Vision to see!*

The Vision Project is a Europe-wide series of seminars which studies a new topic in each year. It explores innovative approaches and useful tools to understand the current trends and emerging issues. In addition, it encourages communication between students and the business world. Individual seminars can be attended separately. They are organised by different local groups throughout Europe, each of them having a unique approach to the general topic with different subtopics. The general topic in the year 2012/2013 was "Green Supply Chain". For the upcoming seminar series, the topic is "Food from Soil to Shelf".

3.1.3 *Brain Trainer: train your brain and get ready for business*

Brain Trainer is a project designed to develop leadership, presentation, business and human skills of the participants, through professional trainings lasting two or three days. Its aim is to coach and develop the participants to become more professional and successful in their organisation as well as in their own future career. The division is supposed to be 30 % experience, 40 % trainings and 30 % team spirit.

3.1.4 *Academic days*

Academic days events are designed for students willing to complete their curriculum by getting deeper knowledge about an IEM-related topic and applying this knowledge to real situations with a personal and professional development purpose in mind. Unlike other ESTIEM academic events, each Academic days event focuses on one specific topic in which the organising local group's university has a high expertise. Moreover, this topic is deeply covered and combines theoretical knowledge with practical applications, both completed by continuous reflection. Learning outcomes characterising an event are aimed to be achieved by each participant. This is permitted by the coordination of the content and the guiding through the learning process by a mentoring professor.

3.1.5 *Training events*

Personal development is part of ESTIEM's vision—and it is what ESTIEM trainings are meant for. By passing on

knowledge, skills and attitude in their sessions, ESTIEM trainers support ESTIEM students on their path in ESTIEM and in life. With the development of its members, the whole organisation is developing—through trainings, it aims at improving the work of local groups, projects and committees likewise. A variety of training events are taking place throughout the ESTIEM year.

3.1.6 *Summer academy: a two-week learning experience that you will never forget*

The ESTIEM Summer Academy was set up to bring international students together during summer holidays to engage in open discussion, group work, debate and private study under a senior Academic Leader. By talking, studying and mixing with students from all over the world, all participants gain new ideas and perspectives, not just on their profession but also on other cultures. Through the Summer Academy project, ESTIEM takes responsibility for providing knowledge of ethics and sound leadership among future leaders of Europe. During the Summer Academy of 2012 in Riga, a Vision for a possible ESTIEM University was created, which will be introduced in the following section.

4 The vision of the ESTIEM University

The short descriptions given in the previous section may serve as a first overview of what the students of ESTIEM are organising for their many thousands Industrial Engineering students across Europe, every year. In 2012 and also in the past, there have been discussions about the possibilities to earn credit points for the participants and organisers of these events, from their universities. The vision is as follows (compare Schaefer 2012).

When going to these academic ESTIEM events, we learn a lot and we get different perspectives on topics and widen our horizon, but in the end we normally never get any recognition for our gained knowledge in a certain field at our universities. In our exams, it comes down to simply just the grades and the content which the professors have been talking about even though we know much more about certain topics than asked for—due to our ESTIEM experiences and knowledge that we have gained. That is something which we should change for our ESTIEM network with its great academic possibilities and we may develop different ideas on how we can receive some sort of recognition. The possibility of ECTS points recognition or some sort of acknowledgment through universities for academic ESTIEM events has been

evaluated within ESTIEM for a long time already. In the first instance, it may lead to getting the achievements of ESTIEM students integrated into General Studies. These General Studies are part of the study programme where students can look into other studies and mainly develop their soft skills. But for the future we should also look at our ESTIEM events as being equivalent to other academic courses that we may then get credit for.

Therefore, the authors would like to talk about concrete plans on how ESTIEM students can get acknowledgement for their ESTIEM involvement in the following section, e.g. academic certificates certified by a professor or university when actively contributing to the academic events of ESTIEM mentioned before, or writing a thesis based on certain experiences and research within ESTIEM. Such plans would also mean increasing within universities the awareness of those possibilities of experiential learning. The goal will thus be to develop a series of university-equivalent ESTIEM courses through concrete implementation in certain projects, as a first step. But this is seen only as a first milestone with this educational development. For the long-term Vision, the idea would be to create a concept of a university or per say a Master programme, whereas students can choose their university courses from a pool of different universities to get the best education possible, not having to make compromises with their education. Something similar is done through the ERASMUS Mundus Master programmes, but it does not include as much of the experimental learning aspect. Therefore, ESTIEM could be the perfect foundation and host for such an approach. This is something that has been missing in the current education and which has to be implemented to prepare future generations for raising challenges. But at first, a focus will be put on the current situation and how first steps can be taken in the right direction.

5 Options for acknowledgement and accreditation

5.1 The ECTS points

As already mentioned before, a possible way to receive Europe-wide acknowledgement would be through the system of ECTS points. According to the latest document by the European Commission, one single ECTS point represents, in theory, a workload between 25 and 30 h. Although this seems relatively strict, practice has shown that Europe would not be Europe when things would be easy and everywhere the same. ESTIEM is represented in 29 countries. Based on this, the interpretations vary a lot of how many hours of work a student has to put in for one

ECTS point in the IEM programmes all over Europe. But this is only the first barrier; in the end, the main challenge will still be to create some academic work that is actually worth those ECTS points. What are the possibilities that a student can get academic acknowledgement for ESTIEM activities?

5.1.1 General conditions for an ECTS accreditation

In order to ensure that all ESTIEM universities are going to accredit the academic work such as courses, problem-solving exercises, research theses, specific business modelling projects or soft skill qualifications, certain conditions need to be set. For once, a certain minimum of an academic level needs to be guaranteed. This means that each ESTIEM university needs to have a responsible person who will look over the academic content and that some kind of agreement between ESTIEM and the respective universities needs to be worked out. That can either happen on bilateral basis (similar to the current ERASMUS system), or on a general contract with ESTIEM and all member universities. However, there need to be one contact person from each ESTIEM university, and ESTIEM needs to set up capacities to take care of all the external relations of such an agreement. Furthermore, every format of academic work which wants to be accredited needs to have some type of extermination. First, it would be important to state what kind of content was shared by the lecturers and what knowledge was gained throughout the event, also the amount of lecture and learning time. However, a simple certificate with just signatures would probably not be enough. It may need writing a paper about what has been learned during the event, and to get this paper acknowledged by the lecturers or the faculty hosting the ESTIEM event. It may need to even expand the paper to include further research. The paper could be evaluated and graded by a professor or mentor who is working together with the local organiser of this event. This paper would be a proof of commitment, learning outcome and working hours. In the end of the event, the participants could go back with it to their home university and get the acknowledgements corresponding.

5.1.2 Difficulties with a wide reaching ECTS accreditation

One of the main difficulties is that universities have little capacities for supporting the academic formats. Another problem might be that not all participants of a certain ESTIEM event would be willing to have an examination. On the other hand, if the examination is not mandatory, a lot of energy might get wasted in case nobody wants to take the examination in the end. Also the form of examination is an issue, because during a usual ESTIEM event, there is

only little time to study for an exam. Furthermore, university staff can only provide little capacities to read through papers the participants might send in at a later time. Also some universities might not hand out certificates as long as participants are not official students of the university, because of their internal bureaucratic system. In the end, coming up with a wide reaching ECTS accreditation will take a lot of effort and a long time, while there are still many ESTIEM universities not using ECTS at all.

5.1.3 Benefits of an ECTS accreditation

Although there are plenty of difficulties to set up such a system, of course it also provides important benefits. ESTIEM would be the first student organisation to have such a system and therefore could use it for further cooperation with other student organisations. The focus of the organisation would shift towards a more academic purpose, and therefore, ESTIEM would actively shape Europe's IEM education. Additionally, by integrating non-ECTS countries, ESTIEM may accelerate the process of European integration within countries such as Turkey or Serbia.

5.1.4 Alternative accreditation for individual events

A valid alternative to the wide reaching ECTS accreditation is to only accredit individual events. That means that for certain events where both local organisers and the responsible ESTIEM leaders agree to do so, an academic will be acquired and a sufficient certificate for the event will be created in order to help as many participants to get the event accredited as possible. Although this way the amount of accredited events will be considerably low, it does not need too much preparation once standardised forms and best practices are available. Therefore, it might be a good alternative until a wide reaching ECTS accreditation is feasible in the future. This idea was, for example, carried out by the two authors during the Vision seminar series "Green Supply Chain" at the "Vision—Responsibility for Generations" seminar in Vienna. Hereby through a simulation game, the participants received accreditation by the Vienna University of Technology. Another alternative for individual ESTIEM universities is to find an agreement with the respective university to accredit certain events for the local ESTIEM members. That means whenever one of the members gets a certain certificate from an ESTIEM event, which meets certain requirements, it will be accredited by the respective university without any necessary negotiation. Therefore, the best practice is to set an agreement with the respective dean of studies (or dean of academic affairs)

and work out the conditions a certificate needs to have in order to be accredited.

5.1.5 Possible way forward

The most important thing in order to achieve a wide reaching ECTS accreditation including as many ESTIEM universities as possible is that there needs to be a long-term project that will take several years to be completed. It needs to be defined for which academic format and for which events such an accreditation shall be achieved. The amount of ECTS equivalent needs to be set. ESTIEM needs to establish contacts with as many universities as possible and a first group of universities together with the ESTIEM project team, works on an agreement (either bilateral or with ESTIEM) in order to achieve first quick wins which are needed within the first year after setting up the agreement. During the project time, as many new "partners" need to be acquired as possible. In the end, it also comes down to the initiatives of the event participants and of the acting ESTIEM members, but the goal should be to develop something similar to the current ERASMUS system. The experience within ESTIEM shows that so far, only a few people actually thought about academic acknowledgement for ESTIEM academic activities. Therefore, if the wish to implement this idea within the ESTIEM network as it exists, the awareness about these possibilities has to increase among all event participants and acting members. Also the awareness of the universities has to be raised about what the ESTIEM network can offer to them: excellent European IEM students (including students from Turkey and Russia) who will get attracted to the university study courses once these universities have shown us their willingness to cooperate with ESTIEM and to respond to the needs of the students. Also industry may become increasingly aware of the opportunity to recruit through ESTIEM projects such good IEM students who are particularly well trained and experienced in European business and cooperation and who are prepared for modern international and chaotic developments.

6 ECTS points concepts for ESTIEM projects

If one looks more widely at all the different opportunities which ESTIEM offers to students, a huge variety of such opportunities turns up in line with the goal. In total, ESTIEM has ten projects, four initiatives and three training events. In this paper, the focus will be briefly on the ESTIEM projects mentioned above. They are briefly taken up again hereby also to be continued with further ESTIEM initiatives that have academic content.

6.1 TIMES: Tournament in Management and Engineering Skills

As mentioned above, the Tournament in Management and Engineering Skills (TIMES) is the largest pan-European case study competition for Industrial Engineering and Management students. TIMES participants who attend the final will have gone through a total of six case studies, and semi-final participants through three case studies. Because of these experiences, the participants would have the chance to contribute a paper or thesis on their experiences: how they approached these different cases in their teams and how the case studies are connected to their studies. TIMES participants have thus the possibility to evaluate and reflect on the case studies and on their approach on problem-solving. For these finalists, the proposal would be to grant two ECTS points, and for semi-finalists, one ECTS point.

6.2 Vision: you need Vision to see!

Again as mentioned above, the Vision Project is a Europe-wide series of seminars, organised since 1993. It is targeted for Industrial Engineering and Management students all over Europe with an annually elected main topic. The series normally consists of 8–10 seminars, where each event gathers around 25 participants and lasts 5–7 days. Each seminar has its own chosen subtopic. The contents of the seminars consist of academic lectures, company visits, workshops and cultural activities. The division between academic content and leisure activities is normally around half and half.

The proposal concerning academic acknowledgement of the Vision series is to pick up those seminars that have a high academic focus and a unique subtopic. All participants are invited to write a paper about the knowledge they have gained during the event on the main topic and the subtopics. With central support or on their own initiative, the Vision organisers find a mentor (lecturer or professor of the university) who is willing to assess the papers (~10 pages) that are handed in by the participants. Overall, one could give 1–2 ECTS points for the Vision Project and the papers corresponding.

6.3 Summer academy

The ESTIEM Summer Academies have been taking place for the past 10 years, two of them each year in parallel, in different locations across Europe. In 2012, one of them took place in Sofia, Bulgaria, under the academic leadership of M.J. Platts (University of Cambridge). Its main theme was Deep Entrepreneurship—Manufacturing Europe's future. The other Summer Academy took place in

Riga, Latvia, with a joint academic leadership of D. Brandt (RWTH Aachen University) and T. Ariens (Rotterdam University of Applied Sciences). Its main theme was Human-centred system design—People, organisation and technology. Through the retirement of M.J. Platts in 2013, there was one original Summer Academy left. Therefore, in 2014, two new Summer Academies with two new Academic leaders were organised. The “Engineering Management Excellence—Deep Systems Thinking for the Future of Europe” with the Academic Leader L. Stapleton (Waterford Institute of Technology) took place in Novi Sad, Serbia. The third one was “The Intellectual Roots of Industrial Management” with Gregory H. Watson (President of the International Academy for Quality) in Helsinki, Finland. About 15 students attended each event from all over Europe. The academic leaders, whose names have come up here, follow closely the new roles of the teacher as needed within Kolb's experiential learning model. This point was already taken up as early as by Burch and Miller (1977). They emphasised these new roles of the teacher who is not any more merely the deliverer of new knowledge but a new kind of mentor, facilitator and organiser of the student's learning experiences, and the student's coach or academic guardian during the four steps of the learning process. According to the specific international context of the Summer Academies, the teachers have to continuously display their abilities in cross-cultural communication. Furthermore, they need a wide spectrum of approaches in group work in order to arrange the student groups again and again in different ways during the 2 weeks of the Summer Academy. The interactions within and between the groups have to get organised according to the state of development and progress of the students' experiences as they cooperate and communicate with each other. This understanding of the teacher's new roles is also reflected in the discussion of Kolb's model on the web today (Starting Point 2012): “Teachers need to establish a sense of trust, respect, openness and concern for the well-being of the students”.

Far too often this expectation of the students towards their teachers appears a genuine challenge within the traditional university setting. It is a serious obstacle for many university teachers to explicitly follow such an approach to learning and teaching. For the teachers, however, who are presently the academic leaders of the ESTIEM Summer Academies, it has become their second nature to rely on their students to know best what and how they want to learn. By the way, this role model has become easier to follow today than in the past because nearly all knowledge needed in learning is available anyway on the web to be acquired by the students on their own.

Thus, the Summer Academy can concentrate on what the students really want to do. These students know quite

well what they want since they are chosen each year from the best students of Industrial Engineering of the different universities which cooperate in the ESTIEM network. The Summer Academy is designed for all participants to discuss and experience leadership in terms of theory and practice, in industry and entrepreneurship of today. It offers, for example, training experiences which specifically develop communication skills to cope with chaotic situations. Simultaneously, the training is strengthening mutual trust through interaction between the participants. Thus, the students are developing towards becoming future leaders in Europe. Many complex problems are discussed by the students based on their own experiences and research, without any additional lectures. The themes include: global issues of the natural environment/sustainability/limits to exponential growth/the Perfect World and the Big Brother/human-oriented design of socio-technical systems. Societal change/chaos and stability/shaping the future. Leadership and trust/personal balance and growth/the meaning of happiness/team-building across national and cultural borders/leading and structuring group discussions/dealing with situations of chaos.

The ESTIEM Summer Academy is the two-week ESTIEM event of very specific academic content. As described above, it is mainly dealing with the important issues of business ethics and leadership concerning the future leaders of Europe. During this event, all participants are expected to write a thesis (about 10 pages) at the end of the 2 weeks. The theses of certain participants can focus on Business Modelling and Planning, others on logistics or environmental themes. There is the emerging possibility that such research can get accreditation of two ECTS points by some universities. Next to those research-based ECTS points, additional points may be approved through a specific certificate because the students also learn about communication, presentation and leadership skills. In the past Summer Academies, the contents and the theses written there were already used by several participants for their further thesis writing for BA, Master or even PhD. Thus, it can also be seen that these developments are the role-models for getting ECTS point accreditation in the future.

6.4 Brain Trainer: train your brain and get ready for business

A Brain Trainer event lasts usually 6–7 days and contains three to four trainings focusing on various business skills. The trainings are either led by professional trainers or members of ESTIEM, who might be trainers or highly experienced alumni from the business field. Apart from the theoretical knowledge, another focus lies on the learning-by-doing principle, which is facilitated in the implementation hours, where the participants can represent their

acquired knowledge by adapting it to a real-life business situation. To get ECTS accreditation, it could be possible to provide the participants with a certificate that specifically lists the different trainings units and their individual goals. As this is a 2–3 days of academic content focusing on soft skills, it could receive one ECTS point for that experience.

6.5 Academic days

The concept of an Academic days event is a 5- to 7-day ESTIEM event focusing on a specific topic in which the organising university is excellent. An academic days event is characterised by high-quality content in a professional working environment that gives participants deep insight and understanding about the topic. The academic content is coordinated by an academic mentor, who sets up the content and guides the participants through the learning process. It should consist of theoretical knowledge from lectures, practical applications through case studies, company visits, etc. The idea is to complete the successful learning process by daily reflection sessions in the evenings, which could, for example, be facilitated by writing a diary or similar activities. In case of academic days, it is quite easy to gain academic support as there is already an academic mentor in charge of the event. Consequently, it is very feasible to have participants create a thesis on the topic that the academic days are about, and have the mentor assess the thesis. Through that work, it might be possible to get two ECTS points.

6.6 Soft skills and training events

During many different training events, ESTIEM trainers share their experiences and knowledge in order to enable personal development and help the participants gain broad experience on soft skill topics as well as topics like project management, leadership skills and negotiation skills which they will be able to use in their professional life. A sophisticated qualification system that is carried out together with other student organisations ensures that ESTIEM trainers get basic skills in how to deliver a successful and sustainable training. In the so-called Training new Trainer events, every year a new generation of trainer applicants gets formed who later tries to become accredited as an ESTIEM Trainer. But also later in events such as “Training Advanced Trainers”, ESTIEM tries to continuously increase the quality of their trainers. Within the organisation, trainings happen on different levels. For once, they are delivered during different events to make sure that an ongoing knowledge transfer is guaranteed between the generations of ESTIEM members. On the other hand, there are certain events such as “Local Responsible Forum” or “Public Relations and Corporate Relations School” where the whole event is based around trainings about certain

topics which are held by ESTIEM trainers. The idea would be to consider the trainers similar to the student tutors at the home universities. This is already acknowledged in universities. Therefore, if ESTIEM trainers take part in a certain amount of trainings or give trainings at one event, they should be able to receive ECTS points for soft skills development.

6.7 ESTIEM organisation activities

The awareness should also be there that students of ESTIEM, who are active on central level or in some responsible position, should get some acknowledgement and possibly up to two ECTS points in soft skills, specifically in leadership skills. Especially project leaders and the ESTIEM Board learn in their experiential ways how to manage large-scale projects or even whole organisations, and they should have the possibility to get these activities somehow accredited.

7 Possible partners and current development within ESTIEM

7.1 Partners

In the following, the two organisations EPIEM and ESTIEM Alumni as well as the IEM Foundation are introduced, which can possibly support the cause of an ESTIEM University.

7.1.1 EPIEM

This abbreviation stands for “European Professors of Industrial Engineering and Management”. In 2009—during a dinner with professors from the University of Cambridge—the idea was born to develop a network of European Professors of Industrial Engineering and Management, today it is called EPIEM. In June 2010, a first meeting was hosted by the University of Cambridge, UK, during which the goal and aim of the network were discussed and actions for further development were defined. The mission of EPIEM is to provide a platform for professors of leading universities from all around Europe to engage in discussions and idea sharing on what IEM education should look like, and how to educate the leaders of tomorrow. A first aim would be to facilitate networking among these universities in order to establish specific IEM exchange programmes. Since 2010, several more meetings of EPIEM were held at Helsinki (Finland), Karlsruhe (Germany), and most recently at Cambridge (UK) 2012, with the topic “Teaching and assessing IEM skills”.

7.1.2 ESTIEM alumni

This group is about staying in contact with fellow Alumni of ESTIEM to further foster friendships and develop new connections. Active Alumni meet twice a year in council meetings where the different projects and the future policies of the organisation are discussed. Anyone who ever takes part in one of these meetings will experience a special spirit connecting ESTIEM, the so-called ESTIEM spirit. It was one major reason for founding ESTIEM Alumni to keep that spirit alive even after graduation. ESTIEM Alumni is naturally open to all people formerly involved in ESTIEM, but also other professionals interested in Industrial Engineering and Management are welcome to join. There is some hope that this group may contribute more strongly in the future towards academic acknowledgement of ESTIEM activities.

7.1.3 IEM foundation

The foundation is a collaborative initiative of ESTIEM, ESTIEM Alumni and EPIEM. The aim is to foster caring in communities where students, professionals and professor of Industrial Engineering and Management work and live. The role of the foundation for EPIEM, ESTIEM and ESTIEM Alumni is to foster interrelations between them as well as support actions financially. Therefore, it acts as an umbrella organisation that stays independent and supports the other organisations. Furthermore, it currently tries to establish a Lighthouse Project for the foundation. The goal of this long-term project is to make the foundation tangible, concrete and inspiring. To find this project, an essay competition is planned to be launched this upcoming November to collect ideas to find a topic which can be discussed over several years within the framework of Industrial Engineering and Management. The winner of the competition will be announced in spring 2015 when afterwards the launch of the Lighthouse Project will follow.

7.2 Current development within ESTIEM

As the aspect of ECTS accreditation has been discussed on various occasion within the network and at least up until now, no progress has been achieved and the network has established two programmes for students to support their members educationally and parted from ECTS accreditation.

7.2.1 ESTIEM alumni mentoring programme: “growing together”

This mentoring programme was established in 2013 and aims at bringing ESTIEM students who are seeking advice

in order to make the best choices for their future career, discuss personal obstacles and broaden the horizon work and life choices, while strengthening the bonding between the current and former members of the network. In 2013, the first round with 41 students and 24 alumni applying was launched.

7.2.2 ESTIEM education initiative

This initiative was launched in September 2014 and aims at tackling education from another side. While this paper focused mainly on the ECTS accreditation, this initiative tries to work its way around the build-up barriers. First ideas have been developed to create a competition for Master students to evaluate Master thesis on a European level.

Students are looking for ways to strengthen their characters and develop those virtues mentioned before. They recognise it as a critical factor of leadership, which is, however, often neglected by universities. About 25 years ago, some students of Industrial Engineering and Management took the challenge of starting and running their own company: ESTIEM *European Students of Industrial Engineering and Management* which could offer them, what they did not find at their home universities. Today, we, students of ESTIEM, have more than ten projects, five committees, a couple of initiatives to coordinate and six students in a board who devote completely 1 year of their lives to run this company. We do it in cooperation with universities, but all ideas and their execution come from us. We run several specific educational programmes as well as important social initiatives (e.g. SERI: *Social Environmental Responsibility Initiative*).

8 Leadership development during the summer academy

As it was already mentioned, the purpose of the ESTIEM Summer Academy is to focus on the *process*—processes of decision-making in the group, of creating a group spirit, of learning to trust our teammates, and most importantly the process of growing, as individuals through participation in all those processes, and taking responsibility for the whole group. Thus, we practise creating collective leadership where everyone is responsible for the outcome. This Summer Academy enables us as students to develop *creative leadership*. So what is it exactly that makes the Summer Academy special and how does it help in the process of teaching students of Industrial Engineering Management to develop leadership skills? Does it answer the question of how learning leadership may be possible, and who is a perfect leader? During the Summer Academy,

we discover that the essence of leadership is how the leader influences the group, how he/she engages people, creates and transmits values. We as leaders should be able to facilitate collective efforts and to include everyone in the decision-making process to accomplish shared objectives of the team. What is taught during Summer Academy is that leaders have means to influence the process thus determining the performance of the team. They can use specific tasks, abilities, control means or they can even put some pressure on the group. It cannot, however, bring the desired results when the group does not feel motivated enough to work towards their goals, when the team members do not have enough trust to their leader, but most importantly, when they do not feel connected and loyal to each other. This is why the social approach towards all teammates is crucial.

“(…) the students are developing towards becoming future leaders in Europe. Many complex problems are discussed by the students based on their own experiences and research, without any additional lectures. The Summer Academy is designed for all participants to discuss and experience *leadership* in terms of theory and practice, in industry and entrepreneurship of today. It offers ample training experiences which specifically develop communication skills to cope with *chaotic situations*. Simultaneously the training is strengthening *mutual trust* through interaction among the student participants” (Juras et al. 2012a).

One of the Summer Academies—*Deep entrepreneurship*—attempts to deepen students’ character by focusing on developing specific virtues similar to VBO model mentioned before. Prof. Jim Platts during his Summer Academy proposes a set of virtues as leader’s competencies (Platts 2011):

COURAGE:	Will commit oneself
SERVICE:	Will do what comes to you to be done
HUMILITY:	Put oneself under the hand of Providence
CHARITY:	Will commit resources
JUSTICE:	Will hold to what is right
PRUDENCE:	Good custodianship, balance, integrity
HONESTY:	Independent of emotions
MODESTY:	Independent of attention
PATIENCE:	Independent of time
MODERATION:	Independent of things

How does our Summer Academy help with achieving those aims? The Summer Academy has been designed to teach students of IEM to identify and develop themselves within the group, to show them new ways of behaviour and also possibilities to mirror their behaviour within the group and then through critical, reflective thinking, to challenge and

test assumptions that they made before. Those abilities are not taught at schools or universities. More importantly, we cannot learn them as individuals; they need to be acquired within the group. Interaction within the group can contribute to the development of emotional and social skills, while—on the other hand—those skills will facilitate team spirit. Emotionally skilled leaders will have a better understanding with a group. Such leaders in the group can lead into the future, handle chaotic situations, solve complex problems, engage group members and make their points of view our points of view in the group. Thus, the Summer Academy enables us as the participants to get emotionally engaged in many different decision-making processes, and we do such complex problem-solving through our interaction and reflection within the group.

9 Conclusions

There are many challenges involved in becoming a successful leader. First of all, there is no perfect description for the “successful leader”. Secondly, it seems that universities are aiming at optimising our actions as *individual leaders* in the industry, and thus, they are serving to the students’ *theories* rather than using *empirical practices*. Therefore, not enough efforts are put into training leadership by developing and strengthening one’s character based on specific virtues that should be representative for a leader. Universities help students to become more competitive on the market. In this way, they concentrate on functional content of leadership and create future managers rather than leaders who should be able to face ethical dilemmas. Instead, universities should start appreciating social context of leadership and showing by example and application *individual* approaches of how to behave as leaders within the *group*. Becoming a leader is connected to self-insight and self-knowledge, since those allow students to discover their motivations, their desires and awareness of the responsibilities that they take on themselves. These concepts are the key to success as leaders. Such self-insight is *taught* during our Summer Academy within ESTIEM. It helps students to understand other participants and to understand themselves thanks to those participants. The question for the students within ESTIEM and for the future is whether ESTIEM will be able to put the idea of ESTIEM University into practice and through expanding Summer Academy teaching introduce experiential learning to the education system around Europe. In the past, active students in the ESTIEM network have already thought about this issue. The results out of those discussions have mostly been to become aware of the difficulties that ESTIEM will be faced with. As students across Europe, ESTIEM students have to come up with different approaches and start

ideas to make a Europe-wide university happen. This means that students themselves have to be entrepreneurs of their own university systems. First steps have been taken in the present such as Mentoring Programmes or the Education Initiative as an example. Concerning the long-term Vision, it is clear that learning basic knowledge about IEM-related topics is necessary in any university education. Thus, ESTIEM may focus on two future concepts: firstly, using the “ESTIEM University” as a secondary university only for Master degree studies, and secondly, to have it as a university which is clearly more project-focused and also including more real-life business cases in IEM education. Another approach may be to widen the teaching within conventional universities: allowing students more to choose some more general studies in parallel to their IEM study courses as well (like physics, sociology and all options of improving soft skills and leadership). Here, students would take a look at the whole bandwidth of education possibilities including approaches which have been part of their experiential learning within ESTIEM. As one can see, there are already some ideas out there and it just needs the right motivation and compassion to make them come true.

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