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How to encourage enterprising behaviour in students?
Leila Kæmsgaard Pagh Schmidt

Abstract
Our history of learning has an impact on the way we organise lessons today. We still have many teacher-led lectures with considerable focus on the content to be learnt. This paper discusses how we can give the initiative back to the students. The paper search for didactic elements in the teaching methods applied, which will provide the students with enterprising behavioural skills. For students to be enterprising we know that the learning environment must leave room for them to behave in an enterprising manner. Besides teaching methods that enhance enterprising behaviour we also need to consider basic psychological needs such as commitment, courage, competence, relationships and autonomy. A high degree of compliance with these five psychological needs generally generates a higher level of enterprising behaviour. The approach to the research question is based on different levels. The first level is a search for knowledge about the basic issue: is something happening in the classroom regarding the five psychological needs? The second level is a search for what happens in the classroom and the third level concerns studies about why this happens. Four important didactic elements were found to apply across educations: 1) active students, 2) involvement of practice, 3) creation of visible relevance and sense, and 4) the teacher as a didactic element per se. The findings underline the need for teachers to focus on their own enterprising behaviour in class as well as the enterprising behaviour of the students.

Keywords: enterprising behaviour, learning environment, didactic elements.

Introduction
Up until World War II, the Danish school system was characterized by an authoritarian approach with focus on content before student (and had been for centuries). The way we used to think about children was influenced by the notion that children were disobedient and immoral and needed disciplining. The result of this approach was that children were stripped of personal initiative and critical thinking. A child was seen as an empty box into which you just had to pour knowledge. After World War II, there was a reversal of the educational thinking. Now the child was considered a whole person and we began to be attentive to the opinions of the child. Modern educational thinking aims to give the personal initiative back to the students. Nowadays it is expected that students participate actively and are critical towards what is going on. Over the past 200 years, the idea of compiling students in classrooms has been a well-adopted method, regardless of educational thinking (Appel & Fink-Jensen, 2013; Larsen, Nør & Sonne, 2013; Gjerløff & Jacobsen, 2014; Gjerløff, Jacobsen, Nørgaard & Ydesen, 2014; de Coninck-Smith, Rosén & Vyff, 2014).

My interest in this field stems from my experience as a teacher at VIA University College. I have wondered how natural it is for me to plan a lesson that builds on old-fashioned values, where the teacher speaks and the students listen. My interviews with teachers have revealed that we might not have completely detached us from our history of learning.

One teacher said: “they also expect something to be poured in. I just do not believe that this is the way you learn, but I do it anyway.”

Two questions arise from this quote. Why do the students have these expectations? Moreover, why does the teacher do it anyway?

The answer to these questions might be that students are used to textbooks studies and teacher-led lessons. Moreover, the focus on learning objective that can be measured in an exam might be part of the answer (Kirketerp, 2010).

However, the questions underline my motivation to work in this field. I have focused on the “giving the
initiative back to the students” part, which means focusing on enterprising behaviour in students.

The aim of the research has been to find a connection between the different didactic elements of different educations and the student’s perception of enterprising behavioural skills in order to identify the didactic elements with an effect on achieving a higher level of enterprising behaviour. In that way I can contribute with knowledge about what actually gives the personal initiative back to the students.

My research question is: which didactic elements in the different teaching methods applied provide the students with enterprising behavioural skills?

Theory
The focal point of this article is entrepreneurship education. Entrepreneurship is seen as a social process, based on the individual’s own opportunities where ideas are discovered, created and exploited to create value for others. It is a particular way of acting and a method that can be learnt (Sarasvathy, 2008 ; Shane & Venkataraman, 2000).

A distinction can be made between three different forms of entrepreneurship education:
1. Learning to become an enterprising individual
2. Learning to become an entrepreneur
3. Learning about academic entrepreneurship
(Fayolle & Gailly, 2007: 581)

This paper focuses on point 1, training to become an enterprising individual. The focus is not on a specific course, but on the general didactics where teachers focus on supporting students to act in the field of the profession they are entering. This is important because not everyone has to become entrepreneurs. However, everyone has to act in his or her profession and thus create value for others.

Enterprising behaviour is defined as a competence to perform a changing action of positive value to others (Kirketerp, 2000). You can look at enterprising behaviour as an attitude to life and it is essential for a good life. Above all, a good learning environment must leave room for the students to be enterprising as regards their own development (Kirketerp & Knoop, 2012).

Enterprising behaviour has an impact on all aspects of life. It is beneficial for the learning acquired during an education. The more active students are and the more they engage, the greater chance they have of learning something essential and that they learn it in a way that allows them to remember it and use it in relevant contexts (Illeris, 2009).

The enterprising behaviour of individuals manifest itself in fundamental psychological needs for
- Survival as individuals and species
- Freedom for growth and self-regulation
- Positive emotions
- Engagement
- Coping skills/performance in terms of learning, creativity and change
- Social relations
- Existential meaning/actions of value to others.
(Kirketerp & Knoop, 2012)

Enterprising behaviour is affected by the self-efficacy of the individual (Bandura, 2012). High self-efficacy has a positive effect on the enterprising behaviour of an individual. Positive experiences from behaving in an enterprising way will most likely encourage even more enterprising behaviour in the future (Kirketerp & Knoop, 2012).

Another relevant theory is The Self Determination theory by Deci & Ryan. According to this theory, conditions supporting the individual’s experience of autonomy, competence and relatedness foster the most volitional and high quality form of motivation and engagement for activities (Deci & Ryan, 2014).

Based on the above-mentioned theories this paper focuses on five psychological needs:
- Engagement
- Courage, to perform actions of value to others
- Competence
- Social relations
- Freedom, room for autonomy

These are the psychological needs from the above-mentioned needs, especially relevant in a didactic context. A high degree of compliance with these five psychological needs generally generates a higher level of enterprising behaviour (Kirketerp & Knoop, 2012).
With the focus on giving back the initiative to the students, the theory of self-initiated learning by Carl Rogers comes in relevant. To him teachers cannot just hand over knowledge to students, because no knowledge is secure. The teacher must be the facilitator of learning, creating a community of learning dictated by the interest of the students. (Rogers, 2005).

The facilitation of significant learning rests upon certain attitudinal qualities that exist in the personal relationship between the teacher and the learner. Carl Rogers points out three important qualities of the teacher that facilitate self-initiated learning.

1. Realness (teacher as a real person, with no mask on in the classroom)
2. Acceptance of the learner (the teacher can accept personal feelings that both disturb and promote learning)
3. Empathic understanding (sensitive awareness of the way the process of the learning seem to the student)

(Rogers, 2005)

In this way, Rogers suggests that the different didactical elements we bring to the classroom does not support self-initiated learning itself. However, our attitude and the way we interact with the students are essential.

This knowledge links up with the five psychological needs. The attitude of the teacher and the relationship between teacher and student is bound to influence the psychological needs and thus the enterprising behaviour of students.

The didactic model by Illeris is used to explain different learning environments. This distinguishes between teacher-led or self-directed learning as well as theory- or problem-based learning. Convergent thinking represents a clear distinction between what is right and wrong. Divergent thinking, however, represents a more open approach with many equally good results. Assimilative thinking aims to apply knowledge in a specific context, whereas accommodative thinking aims to apply knowledge in a much broader general field (Illeris, 2009).

The need for autonomy calls for didactic thinking with self-directed focus. The general aim of entrepreneur-ship education is to give the students a holistic and problem-orientated understanding in contrast to the discipline-orientated thinking (Kirketerp, 2010). With this in mind, this paper argues that project-orientated didactics would produce the highest degree of enterprising behaviour in students.

This does not mean that didactic thinking should only build on project orientation. A good learning environment builds on different didactic elements from the above model (Illeris, 2009).

**Method**

In the search for variations in teaching methods, various educations and locations were brought into the research. The aim was to find similarities across educations and locations in order to qualify the findings in a broad perspective.

The final research covered 129 students from four Danish-speaking classes:

- Nursing education in Aarhus (34 students)
- Nursing education in Holstebro (49 students)
- Architectural technology and construction management in Horsens (ATCM) (33 students)
- Civil engineering in Horsens (13 students).

Common for these students is that they all study professional bachelor programmes at VIA University College with each programme targeting a very specific profession during the whole study period. All students are in their second year of study.
The major differences are different learning environments and didactic approaches. The educational programmes represent different areas in the didactic model by Illeris.

The two nursing classes have the same curriculum but with different groups of teachers on different locations. How would that affect the students’ perception of enterprising behaviour? Generally, the education is characterised by heavy learning of theory, placing the education mainly on the left side of the didactic model (Figure 1), where teaching and studies are the main methods. Module five of the education, the period when this research was conducted, is a severely criticized module by both students and teachers, mainly because this module is very different from the other modules, focusing on entrepreneurship and problem-oriented studies. This specific module five is actually playing with some didactic methods placed more between divergent and accommodative thinking.

The ATCM program became part of this research project because it builds on problem-based learning using case studies as the focal point throughout the education. The education is based on problem-oriented thinking and group work, placing it mainly in the upper right area of the didactic model (Figure 1). Parallel to the students’ work with projects, the teachers teach theory to support this.

The civil engineering education was selected for this research project because it is mainly based on convergent thinking. As is the case for the nursing education, this education places considerable emphasis on the theory to be learnt. Most of the semester studied for this research project was characterised by classroom teaching followed by individual assignments, placing the education mainly in the lower area of the didactic model. However, the last three weeks of the semester students worked in groups on a project, moving to the upper right area of the didactic model.

The approach has been to distinguish between three different levels of knowledge:
1. Is something happening in the classroom regarding the five psychological needs?
2. What is happening in the classroom regarding the five psychological needs?
3. Why is this happening in the classroom?

The first level is a search for knowledge on the basic issue: is something happening in the classroom regarding the five psychological needs? Here the research project used a quantitative method, the digital tool ACT, measuring the students’ perception of enterprising behavioural skills over time. The ACT program was developed by Anne Kirketerp and used for the first time in this research (Schmidt, L.K.P, 2014).

The program had to be installed on the students’ computers and the program popped up randomly twice a week between 10 am and 2 pm. The ACT program measures the five psychological needs mentioned above. The students scored from 1 to 10, with 10 being the highest score.

![Screen shot of ACT program](Figure 2)

This research method builds on the experiencing-self of the students instead of the remembering-self (Kahneman, 2011).

When the program pops up on the screen, the student can choose not to score that day. This means that the data represents a different number of students each day and consequently the data may not represent the whole class. Therefore, the ACT data was used as a basis for qualitative interviews with students and teachers.
After repeated data input over a period, the student replies resulted in a graphic image like this:

![Individual graphic image](image)

The curve shows that something is happening regarding the five psychological needs. However, it does not say anything about what lies behind the curve and what affected the scoring in ACT.

This leads to the **second** level, searching for knowledge about what happens in class. The curve has fluctuations and it is essential to know more about these. In this study, the focus has been on the highest score to reveal which didactic elements encourage enterprising behaviour in the students. For this second level, qualitative interviews with a teacher from each class as well as quantitative surveys among all teachers involved lead to analyses of what happened in class.

The teachers were asked about their:
- joy of teaching
- view on learning in general and didactical approach
- view on entrepreneur and their reflection about the didactic elements when planning lessons according to the five psychological needs
- interpretation of the ACT curves

The teachers provided me with teaching plans to be studied in relation to the specific lessons achieving high scores.

The **third** level of knowledge searched for answers as to why these fluctuations occurred. Which initiatives in class could be linked to a high ACT score? The research of this level consisted of qualitative studies among students. Focus group interviews with the students were conducted for each class. The interviews revealed that the different didactic approaches and elements affected the students’ experience of enterprising behaviour. However, they also revealed that other circumstances affected the curves also, such as personal and social circumstances. If the students had a good day in general, they were likely to score higher than on a bad day. Since circumstances were likely to affect ACT data, this level is solely addressed in view of qualitative data from focus group interviews. The ACT curves have been used to identify tendencies to highlight in the focus group interviews with students.

Searching for similarities across educations and locations in the students’ perception was part of this level.

### Findings

The findings revealed that something does in fact take place in the classroom in terms of the psychological needs. Some of this can be linked to the initiatives taken by teacher in class. However, the research also reveals that other circumstances affect the students’ perception according to the psychological needs as well. Focusing on the didactic initiatives by the teacher positively influencing enterprising behaviour revealed a common pattern across the four classes, four important didactic elements representing all three educations.

### Activity

First, the students scored high on the five psychological needs when they were being active. Getting up from their chairs and having something in their hands. The research also revealed high scores for the five psychological needs when the students had to teach students from other educations about topics from their own profession. One student said: “if I have to teach someone something, then I have to have the hang of it and then I will of course do sufficient homework in relation to this subject.”

In addition, the findings clearly demonstrate that project work has a positive effect on the five needs. Project work tends to make the students more engaged. The students are attentive about the influence of project-work on their level of activity. Quotes like “we are most active during project periods” and “during project periods we talk to each other more, and in general social bonding is stronger” support this finding. This underlines the above argument that project-orientated didactics support the enterprising behaviour of students because it complies with the psychological needs.

It is also worth making a note of the fact that students that are more active also benefit from a greater chance of learning something essential and useful in relevant contexts. Interviews with students underline that the students are very much aware of this. They really want to be active students, and they ask for learning environments to support and push them to behave in an enterprising manner.
Involvement of practice
Second, relationship to practice was an important element, teaching that was related to or involved practice. The students searched for a link to the practice of the “real world” out there when studying theory. Quotes like “it makes it easier to learn when it is related to practice” and “they have to link the theory to something we can use in practice” support this finding.

They score high on engagement when they work in practice or practice-like situations. As an example, one student said: “I am very motivated during my work placement”.

Knowing that the students aim for a specific profession from day one this does not come as a major surprise. It is critical, however, to be aware of this knowledge when searching for ways to motivate these students.

Visible relevance and sense
Third, all students emphasize the importance of visible relevance and meaning. They are always interested in why they need to learn certain things and how they can use it. Their motivation is closely linked to their view on relevance. Quotes like “I am very motivated when I have a need for specific learning”, “my motivation depends on how I can use the knowledge”, “it has to make sense to me”, “I am more motivated when I can see the red thread” and “I am passionate about the things I would like to work with later in my life” support this finding.

This element is related to the second element. The students search for awareness about how they can use certain knowledge when they go to work in practice.

The teacher as a didactic element per se
In addition to the above didactic elements, the teacher was found to be a didactic element per se. The students put a lot of emphasis on the behaviour of the teacher. They did not mention the professional competences of the teachers at all. However, the focus was on the enterprising behaviour and personal competences of the teachers. Among other things, the students emphasized elements like the teacher personally exhibiting commitment, being enthusiastic about the subject, listening to the needs of the students, changing lessons according to the needs and focusing on the self-confidence of the students. As an example, one student said: “If the teacher understands us and listens to us that can make us feel motivated”. This finding indicates that the students of VIA agree with Carl Rogers and that the relationship between teacher and student has a huge impact on the achieving of enterprising skills.

The data also revealed that the thinking of a whole group of teachers can make a change.

One aspect that became evident when studying the data was that the curves revealed large differences in terms of courage. At first, you would think that the nursing students from different schools would have similar score when asked about their courage. However, the results from the two nursing classes produced the following ACT curves:

![NURSE EDUCATION - MEASUREMENT OF COURAGE](image)

Figure 4: Courage of nursing students

The general level of courage was found to be remarkably higher in Holstebro than in Aarhus for the same education. Research among teachers indicates that there is generally higher awareness of entrepreneurship in Holstebro. The teachers discuss it and the motivation to let the entrepreneurship approach influence the didactic is higher.

The findings led to a discussion of the different learning environments. The nursing and civil engineering educations represent educational programmes with a considerable level of professional skills to be acquired. Does this mean that they have to focus mainly on teaching, studies and teacher-led learning? The findings prove that this is not the case. Educations such as these can also benefit from focusing on a balance between teacher-led and self-directed learning and subject- and project-based learning.
Conclusion
The learning environment available to students has a huge impact on their experience of achieving enterprising skills. The learning environment is strongly influenced by the didactic approaches and the relationship between teacher and student.

The focus on enterprising behaviour in the general didactics is essential in order for students to achieve a higher level of enterprising behavioural skills. There is a need for teachers who will focus on the enterprising behavioural skills of students as well as on their own enterprising behavioural skills and attitude in class. This study reveals four main didactic elements to focus on. Firstly, encourage student to be active. Secondly, make sure to involve practice as much as possible. Thirdly, make sure the students see the relevance and meaning according to their further education and practice. Finally and no less important, the teacher is a didactic element per se exerting a huge impact on the students’ experience of achieving enterprising skills.

The findings are useful knowledge to all teachers. Especially in relation to professional bachelor programmes at the University Colleges where the students aim for a specific profession. All teachers should work towards implementing the above didactic elements when preparing lessons. It is especially advisable to focus on the relationship between teacher and student. The three attitudinal qualities found by Carl Rogers; realness, acceptance of the learner and empathic understanding can be the key to promote enterprising behaviour as well as significant learning. Through this attitude, the teacher can create a safe learning environment which pay due regards to the psychological needs and thus promote enterprising skills.

The findings partly answer the question how we can give the initiative back to the students. It is my view, from interview with many students, that they are ready to fight for more enterprising behavioural skills. They realise that they will gain also more essential and useful knowledge by being more active themselves.

As teachers, we need to focus on our own courage to feel confident that if we plan lessons according to the findings of this paper, students will grow in terms of the five psychological needs and thus take more responsibility for their own learning and development.

Centuries of learning history cannot be denied. It is hard work to fight against the tradition of learning. The fact that we still have classroom teaching as the most widely adopted method might be making us stick to the traditional learning methods we have all been exposed to in school. However, it is obvious that today both students and teachers know that we need to separate ourselves from our history of learning. We need to find a balance between pushing and supporting students as well as a balance between different didactic methods.
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