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Optimizing Students' Motivation to Learn in Higher Education

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Introduction

The motivational aspect of learning was a delicate subject of the French author and philosopher Jean-Jacques Rosseau. In his novel *Émile, or on Education* ("Jean-Jacques Rousseau on nature, wholeness and education", n.d.), Rousseau emphasized the importance of inner motivation and inspiration for an optimal learning process as well as the importance of expression rather than repression to promote freethinking individuals. A tutor should meet the needs of each young individual; communication between tutor and student was close and mutual.

It higher education, student learning is highly independent and the student has a great responsibility for her or his own learning. The student is expected to learn a lot but is rather free to dispose over when to learn and sometimes also what literature to read. This causes higher demands on self-discipline. Especially during the lockdown, students were left to their autonomy and to communication with peers and teachers via phones/computers which certainly challenged the motivation for many of them.

Motivation is a complex matter. Motivational factors can be either intrinsic (driven by internal rewards such as interest) or extrinsic (driven by external rewards such as good grades), short-term (class related) or longterm (career related). Many motivational factors are malleable; they may be enhanced or diminished by student experiences in college. Motivation is closely related to well-being and to university student retention (Herrmann et al., 2012; Tinto, 1975). This has been widely studied by Profes-

sor Vincent Tinto at Syracuse University of Sociology (Tinto, 2006, 2017). According to Tinto, persistence in higher education is unlikely without motivation and the effort it engenders, and student motivation is the outcome of interactions between student goals, self-efficacy (personal belief in ability to succeed), sense of belonging (to a community) and perceived quality and relevance of the curriculum (Tinto, 2017). The sense of belonging to a social and academic system (social and academic integration) seems particularly important for student retention (Herrmann et al., 2012; Rienecker et al., 2015; Tinto, 1975, p. 122).

During the last two years as I have been teaching bachelor students in Medicine (clinical case and practical exercises at the courses *General pathology* and *Medical genetics*), I have been exposed to different levels of student curiosity: some student are eager to learn and understand everything – others just want the class to finish and the exam to be passed. I am convinced that learning outcomes and students' well-being will increase if we as teachers meet and stimulate the students' motivation.

In this project, I ask myself: What can teachers in higher education do to stimulate students' motivation to learn? How can we help elicit the students' creativity, will and desire for knowledge? What factors are the students in particular motivated and demotivated by? What qualities of the teacher are most important and which study formats especially elicit the students' motivation to learn?

I conducted an online survey with four questions about motivation to learn which was sent out to UCPH students online. Fifty-one bachelor students at UCPH completed the survey. Results have been analyzed and reflected upon with a focus on concrete measures to promote students' motivation in my future teaching, supervision and course planning in higher education.

Method

Survey

The survey is in Danish and has four questions (Appendix A, https://da.surveymonkey.com/r/BDGQQY8)

The first question was the most general: "What is important for you to feel motivated to learn?". Among 11 different motivational parameters, students could answer either Not important, Important or Very important. The

second question was open-ended: "What demotivates you to learn?". All students wrote between one and five demotivating factors. The third question was about teacher qualities: "What qualities of your teacher are important for you to be motivated to learn?". For each of 5 teacher traits, students answered Not important, Important or Very important. The last question was about teaching and study formats: "In what study format/environment are you most often motivated to learn?". For each of 9 study formats, they answered Not motivating, Motivating or Very motivating.

Students

Fifty-one bachelor students at the University of Copenhagen filled out the survey between May 15th and May 28th 2020. Twenty-four medical students filled out the survey after my ended online (due to the COVID-19 pandemic) teaching at the courses *Medical Genetics* (SMEB12006U, Medicine, 2nd semester, DNA and Chromosome exercises, n=15) and *General Pathology* (SMEB12021U, Medicine, 5th semester, SAU12 teacher, clinical case in Cardiovascular diseases, n=9). Twenty-seven other students filled out the survey via a link provided at the homepage of the course *Medicinal Chemistry*, Dept. of Chemistry. They will be referred to as natural science students and were bachelor students in Chemistry (n=11), Biochemistry (n=9), Nanoscience (n=4) or Physics (n=2). One English student also filled out the survey. The average time to complete the survey was 3:48 minutes.

Data analysis and statistics

Quantitative results from the survey are presented in figures. Qualitative results from written answers are presented in appendices. Results from the graduated scales were made numeric: "Not important" and "Not motivated" = 0; "Important" and "Motivated" = 1; "Very important" and "Very motivated" = 2. Differences between groups (medical students vs natural science students; medical students at 2nd vs 5th semester) were analyzed using unpaired two-sided t-tests with a significance level of 0.05.

Outcome

Important factors for students' motivation to learn (Appendix B, figure 1)

Out of 11 different parameters, *interest* in the subject was the most important factor for the students' motivation to learn with a score of 1.80 out of 2. Twenty-four of 26 (92%) natural science students and 17 of 24 (71%) medical students answered that interest was very important for their motivation to learn. The average score for natural science students (1.92) was significantly higher than for medical students (1.67; p=0.023). None of the 51 students choose this factor to be of no importance.

The second most important factor was *to be given clear information about what to learn* (score 1.57). Students in medicine (1.63) and natural science (1.54) agreed that this was of high importance.

Also important for the students to feel motivated was *to have enough time to learn* (score 1.41). 17 of 26 natural science students (65%) and 7 of 24 medical students (29%) found enough time to be very important (score 1.58 vs 1.25, p=0.057). Only 3 students choose enough time to be non-important.

All medical students found *to learn things that make sense for the education and career* important or very important to (score 1.50) for motivation to learn. This was also of importance for natural science students (score 1.27) but 4 of them did not find it important. Average score for all students: 1.37.

Most students found *to choose the course/education themselves* to be important (n=23) or very important (n=21) for their motivation to learn (score 1.27). This was not important for 7 students.

Almost three quarters of the students found *social aspects* (learning community) important or very important for their motivation. Scores at the three categories were rather evenly distributed (14 not important, 19 important, 18 very important; score 1.08) with no significant difference between groups.

An even distribution between the three categories was also seen for *to learn for the sake of knowledge* as a motivational factor (not important, n=16; important, n=23; very important, n=12; score 0.92).

The following three parameters as possible motivational stimulators got slightly lower scores with almost one third of the students choosing the not important category: *to take responsibility for my own learning* (score 0.78),

to get good grades (score 0.76) and *that what I have to learn is challenging* (score 0.75; Appendix B). There was a significant difference between medical and natural science students on the importance of grades as a motivational factor: medical students (score 0.54) found it less important compared to the natural science students (score 1.00; p=0.007). For 50% of medical and 15% of natural science students, good grades were not important for motivation to learn. For only 1 medical (4%) and 4 natural science students (15%), good grades was very important for motivation.

Finally, the on average least important or maybe even demotivating factor for students' motivation to learn was the parameter *that what I have to learn is easy/straightforward* with a score of 0.45. Most students (61%) did not find it important for their motivation and only 3 (6%) found it very important.

Seven students wrote other factors of importance for their motivation to learn (Appendix B). Four of them emphasized inspiring teachers that are engaged in their teaching. One student stressed the importance of a good social environment and interaction between teachers and students. One student pointed out the importance of good and accurate wording in the study curriculum and another student thought it was very important that what he or she had to learn was "challenging but solvable". Another student wrote: "I get motivated by sitting in a room where other people are focused and are reading".

Demotivation factors for students' motivation to learn (Appendix C)

To get an overview of the results to the open-ended question about demotivation, all claims have been I organized into the following categories, inspired by student answers and Tinto 2017:

1. Teacher qualities (incl. preparation and feedback) (15)
2. Structure or overview of the class/course (12)
3. Quality and relevance of the curriculum (25)
4. Workload and stress (13)
5. Sense of belonging (learning community) (4)
6. Intrinsic/intellectual factors (5)
7. Other (8)

The number of claims for each category has been indicated to the right above and is presented in full in Appendix C. Clearly, the most demotivating factors among the 51 bachelor students were related to the quality and relevance of the curriculum (n=25). Here, most students seemed frustrated about a lack of purpose/relevance with what they learned or lack of information about what to learn. Likewise, many students were demotivated by a lack of structure or overview of the course or class (n=12). Unprofessional teachers/teaching (i.e. not engaged or prepared) were also commonly seen among the demotivating factors (n=15). Thirteen students were demotivated by too high workload; too much to read or lack of time to learn was mentioned by several students. Five students mentioned lack of interest as a demotivating factor and four students stated that being alone or lacking time with fellow students was demotivating. Corona and online teaching were among "other" factors.

Qualities of the teacher of importance for students' motivation to learn (Appendix D, Figure 2)

The third question about motivation focused on teacher qualities of importance for students' motivation to learn. Again, the students had three options to choose among for each of the five teacher qualities: not important, important and very important.

Among the five qualities stated, *enthusiasm* scored highest (1.75 out of 2). Enthusiasm was very important for motivation to learn for 39 of the students (76%). One student did not find it important. All students except one agreed that *competence in the subject: broad experience* was an important quality of the teacher (score 1.41). For 22 students (43%), broad experience was a very important teacher quality. Similarly, all students except three thought that competence in the subject: detailed knowledge was an important or very important (n=15) quality of the teacher (score 1.24).

Also, most students agreed that teachers showing *personality (personal stories, humor, etc.)* (score 1.12) and *caring and attentive qualities* (score 1.02) was important for their motivation to learn. Nine (18%) and ten (20%) students, respectively, did not find these more soft qualities to be important for their motivation to learn, whereas 15 (29%) and 11 (22%) students, respectively, choose personality and *caring/attentive* teacher qualities to be very important for their motivation to learn. Motivationally important teacher qualities were not significantly different for medical and natural science students.

Eight students specified other motivation qualities of importance for teachers (Appendix D): good communicator, adaptations to the need of the class instead of just following the study plan, the teacher's mood and helpfulness, good at listening and answering questions, structured teaching (read thread), flexibility and willingness to listen to feedback, that the teacher seems prepared. Two students pointed out the importance that the teachers shows that he/she really wants to teach. Finally, one student wrote that "highly authoritarian teachers are demotivating".

Teaching and study formats associated with motivation to learn (Appendix E, Figure 3)

How different study formats/environments are associated with students' motivation to learn was examined in the last question. Here, students could choose whether the study format indicated was not motivating, motivating or very motivating. Of notice, not all study formats were necessarily relevant for all students (i.e. clinical work and laboratory work).

Among the nine different study formats, *research* was associated with very high motivation among natural science students: 18 (69%) found research very motivating and the average motivation score (1.68) was significantly higher than among medical students (1.25; p=0.008). On the other side, medical students had significantly higher motivation to do *clinical work* (score 1.42) than natural science students (score 1.04; p=0.048). Interestingly, many natural science students were also motivated to do clinical work: 7 were very motivated, 13 motivated and only 6 not motivated.

For both medical (1.42) and natural science students (1.40), *internship at a work place* was associated with high motivation: 51% were very motivated and 33% motivated to do internships (score 1.38). Seven students (14%) were not motivated for internships; the English student was one of them.

Most students were motivated (48%) or very motivated (38%) to do *problem based/case work* whereas 14% (6 natural science students and 1 medical student) were not motivated (score 1.26). Medical students at the 2nd semester (score 1.53) were significantly more motivated by problem based/case work than medical students at the 5th semester (score 1.00; p=0.021).

As expected, natural science students were more motivated to do lab work (score 1.24) compared to medical students (score 0.67). Among all

students, 38% were not motivated and 32% were very motivated to do lab work. The remaining students (30%) were motivated (average score 0.94).

Independent work was in general associated with less motivation (score 1.08) than *group work* and *project work* (projektarbejde) (both score 1.18; Appendix E). There was a tendency for natural science students to score higher on project work than medical students (1.31 vs 1.04; p=0.072) and for medical students at the 2th semester (score 1.33) to score higher on project work than medical students at the 5nd semester (score 0.89; p=0.060). One student stated that group work was particularly motivating with people he/she used to work together with (studiegruppe).

Clearly, the least motivating study format was *online/computer work* (score 0.57). Only two students found this very motivating whereas 47% of the students choose the "not motivating" category. There were no significant difference among the medial (score 0.71) and natural science (score 0.46) students.

Finally, one student highlighted the importance of being social for well-being and motivation: "*It's important to be supported by either a study environment or others. I am not capable of working at home. This lockdown (due to the COVID-19 pandemic, red.) has made that clear*".

Discussion

Here, I will discuss how I and other teachers at higher education can optimize students' motivation to learn based on the results of the survey.

The answers to the two first general questions about motivation and demotivation very much reflect each other. The most important factor for students' motivation to learn was the *interest* in the subject. This intrinsic motivational factor might not be possible for teachers to influence. The second most important factor for motivation and the without doubt most demotivating factor was *to be given clear information about what to learn* as well as *the relevance and quality of what has to be learned*. This information is fortunately relatively easy for teachers to make use of – and therefore important for us to be aware of – in order to stimulate our students' motivation to learn. A fundamental message about *why we teach what we teach* is something I will try to apply in all kinds of teaching and supervision. Moreover, I will make use of this result in my future planning of courses at higher educations.

In line with the importance of clarifying relevance, students found the more long-term, extrinsic motivational factor *to learn things that makes sense for the education and career* important. Interestingly, the other extrinsic motivational factor "to get good grades" did not seem as important, especially not to medical students, where three times as many choose grades to be of no importance for motivation compared to natural science students. This significant difference was surprising to me.

A *clear structure and overview of the course or class* also scored high on students' motivation to learn. Again, this information is relatively easy to apply for teachers, e.g. by introducing an overview in the beginning of each course/class and by providing a clear and logic structure of the content in the course/class. A thorough planning of the course and solid preparation of each class, with focus on the student-content perspective, is probably also of importance for optimizing of course/class structure.

Clarity of relevance, overview and structure of what to learn will possibly ease the students' feelings of being stressed and overwhelmed. Especially in combination with a reasonable curriculum that is not too massive, we might reduce the de motivation of a *too high workload* and *lack of time to learn*. When it comes to relevance of the curriculum, questions appear: "To what extent can teachers influence the curriculum?" and "How can we better convey the relevance of the curriculum to the students?". Here, clarity of both objective (education related) and subjective (student related) relevance are essential.

Professor Vincent Tinto emphasized self-efficacy, student goals and sense of belonging as important for student motivation (Tinto, 2017). These factors did not stand out clear as motivating. However, the low motivation score of *online teaching/computer work* together with students commenting on the lockdown as being demotivating indicated that *a lack of community* and *too much autonomy/alone time* was demotivating for many students. The accessibility of a tutor or mentor, as Rousseau emphasized, might be one way of improving the students' sense of belonging during higher education.

Research was a study format that highly appealed to the students' motivation. This is in line with the solid research-based evidence that inquiry-based learning, i.e. by allowing students to ask and research questions, stimulates student motivation and positive learning (Rienecker et al., 2015). This is again something that is relatively easy to apply in most teaching situations at higher educations.

Without doubt, *enthusiasm* and *will to teach/spread knowledge* are the most important teacher qualities for students' motivation to learn. Obviously, students can sense when teachers do not want to teach. Optimally, teaching at higher education should not be disturbed by other work related tasks such as research. When teaching, we should be present and connect with the passion of the subject.

As expected, there were no larger differences in motivational factors for medical students at the 2nd vs the 5th semester. The significantly greater motivation for project work and problem based work/cases among 2nd compared to 5th semester medical students might be due to the constellation of SAU groups.

There are several limitations to this study. Optimally, I would have performed interviews or ask the students to fill out the survey in class after ended teaching. This was not possible due to the pandemic. Instead, I sent out the survey after ended SAU12 teaching at the zoom chat to six different groups of medical students. Only a few filled out the survey after the session. Therefore, I reached out to other students with help from a teacher friend at the Dept. of Chemistry. This made the study population more diverse and analyses between different groups of students possible; something I also found interesting. Importantly, the lockdown might have affected the result of the survey, e.g. the students being more negativity towards online/computer work.

The survey conducted has a very broad focus: from general motivating factors to more specific teacher qualities and study formats. In retrospect, I would have added "pedagogic competence" to the teacher qualities and "lectures" to the study formats. Due to the relatively few answers of the survey, results might be biased and superficial. Students had only three options to choose among for most questions and average scores for each parameter make it difficult to capture nuances and or unforeseen aspects.

References

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A

Motivation til viden (Survey in Danish, also found at: https://da.surveymonkey.com/r/BDGQQY8)

1. Jeg studerer:

2. Hvad er vigtigt for at du skal føle dig motiveret til at lære?

1: Slet ikke vigtigt 2: Vigtigt 3: Meget vigtigt

At jeg er interesseret i det jeg skal lære
At få gode karakterer
Jeg har selv har valgt kurset/uddannelsen
Det giver mening i forhold til uddannelse og karriere
At det jeg skal lære er nemt/lige til
At det jeg skal lære er udfordrende
Der er nok tid til at lære
Selv at tage ansvar for indlæringen (hvornår og hvordan jeg lærer)
At jeg har fået tydelig information om hvad jeg skal lære
At lære for videns skyld (jeg bliver euforisk af at lære)
Fællesskabet – at jeg lærer det sammen med andre
Andet (angiv venligst)

3. Hvad demotiverer dig til at lære?

4. Hvilke egenskaber ved din lærer er vigtige for at du skal blive motiveret til at lære?

1: Slet ikke vigtigt 2: Vigtigt 3: Meget vigtigt

Entusiasme
Personlighed (personlige historier, humor etc.)
Omsorgsfuld og opmærksom
Kompetent i emnet: Bred erfaring
Kompetent i emnet: Detaljeret viden
Andet (angiv venligst)

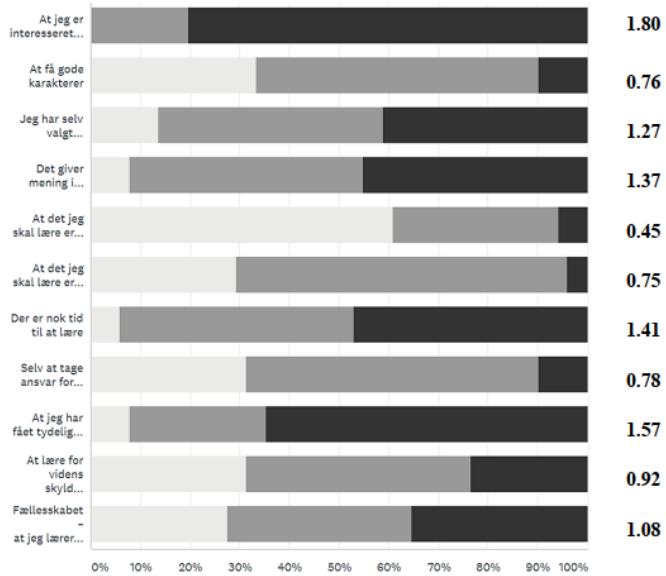
5. I hvilke studiemiljøer er du oftest motiveret til at lære?

1: Ikke motiveret 2: Motiveret 3: Meget motiveret

Selvstændigt arbejde
Gruppearbejde
Online/computerarbejde
Klinisk arbejde
Laboratoriearbejde
Projektarbejde
Problembaseret læring/Cases
Forskning/fordybelse i et emne
Praktik på en arbejdsplads
Andet (angiv venligst)

B

Figure 1. Factors of importance for students' motivation to learn.



Light grey: not important, score 0; Grey: important, score 1; Dark grey: very important, score 2. Average scores for all 51 students are indicated for each parameter.

At jeg er interesseret i det jeg skal lære	That I am interested in the subject
At få gode karakterer	To get high grades
Jeg har selv har valgt kurset/uddannelsen	I have choosen the course/education myself
Det giver mening i forhold til uddannelse og karriere	It makes sense for the education/careere
At det jeg skal lære er nemt/lige til	What I have to learn is easy / straightforward
At det jeg skal lære er udfordrende	What I have to learn is challenging
Der er nok tid til at lære	There is enough time to learn
Selv at tage ansvar for indlæringen	To take responsibility for my own learning
At jeg har fået tydelig information om hvad jeg skal lære	Be given clear information about what to learn
At lære for videns skyld (jeg bliver euforisk af at lære)	To learn for the sake of knowledge
Fællesskabet – at jeg lærer det sammen med andre	To learn together with others (social system)
Andet (angiv venligst)	Other (please specify)

 # ANDET (ANGIV VENLIGST)

1) jeg bliver motiveret at sidde på en læsesal hvor andre er fokuseret og læser
2) Inspirerende undervisere
3) At underviserne er engageret i deres undervisning, og at materialet er godt og præcist formuleret.
4) At der er et godt miljø i klassen eller mellem elev/underviser
5) engagerede undervisere
6) Når det er den perfekte balance mellem udfordrende men løseligt er meget vigtigt
7) Inspirerende undervisning af folk der synes det er spændende selv

C

Students' answers to "What demotivates you to learn?" have been organized into categories:

1. Teacher qualities (incl. preparation and feedback)
2. Structure or overview of class/course
3. Quality and relevance of the curriculum
4. Workload and stress
5. Social learning community
6. Intrinsic/intellectual factors
7. Other

1. Teacher qualities (incl. preparation and feedback)

Uengagerede lærere.
Mangel på forberedelse af undervisning.
Dårlig formidling fra underviseren.
Hvis læren ikke selv finder emnet spændende.
Dårlige undervisere.
Snæversynet undervisere ift konstruktiv kritik af deres undervisning.
Når der er mange lærere og de har hver deres måde at undervise på, så det ændrer sig næsten hver uge.
Dårlige forelæsere.
Mangel på entusiasme fra underviseren i at diskutere og belyse spørgsmål.
Dårlig forelæsning og umotiverede undervisere.
Inkompetente forelæsere.
Generel dårlig undervisning.
En forelæser/underviser, der virker ligeglad eller som bare læser op fra en skærm.
Dårlige forelæsninger.
Manglende mulighed for feedback og sparring.

2. Structure or overview of the class/course

Ustruktureret undervisning!!
Ustruktureret kursuser.
Mangel på struktur i kursusforløb.
Dårlig strukturering af undervisning.
Manglende struktur om, hvad man skal lære.
Dårlig planlægning.
Manglende overblik.
Uoverskuelighed.
Dårlige og ustrukturerede forelæsninger.
Dårlig struktur på kurset.
Hvis der ikke er klart definerede læringsmål!
Dårlig planlægning af kurser.

3. Quality and relevance of the curriculum

Utydeligt pensum.
Dårlig litteratur, hvor man skal læse 40 sider og kun bruge 5 af dem til noget.
For overskuelig mængde læsning, hvor man ikke føler, at man får meget ud af teksten.
For højt eller lavt niveau.
Usandsynlige krav, alt for svært eller alt for let.
Ikke udfordrende nok.
Hvis jeg ikke ved hvor jeg skal starte og pensum (eller programmet) er for uoverskueligt.
Hvis det er uinteressant materiale.
Hvis det bliver forklaret uden man kan se anvendelsesmuligheder eller meningen med hvorfor man skal lære det mangler.
Når jeg ikke kan se, hvad emnet er relevant for.

Hvis det er uklart hvad formålet med formålet/litteraturen/opgaven er.
Hvis jeg slet ikke kan se noget mål, det behøver ikke at være det endelige mål dog.
Manglende formål med det lærte, ikke nok information om hvad man skal lære.
Hvis det ikke er klart hvorfor materialet er relevant
Hvis jeg ikke kan se formålet med det (læring for læringens skyld).
Dårlig information om hvad der forventes og ikke forventes at kunne.
Hvis det ikke er relevant for eksamen/uddannelsen.
Hvis emnet virker uvæsentligt.
Følelsen af at det ikke er relevant
Uklare mål.
Ikke klar beskrivelse af studiemål
Manglende information.
Dårlig information.
Mangel på information angående hvad, man skal lære.
Manglende viden om, hvad man skal lære.

4. Workload and stress

Meget læsestof.
For meget læsning til kurset.
Jeg bliver hurtigt demotiveret hvis opgaven virker uoverskuelig på forhånd fx med for meget læsestof til én forelæsning.
Deadlines, løbende evaluering og krav som skal opfyldes for at blive godkendt til eksamen.
Når jeg er stresset.
For stor arbejdsbyrde.
Hvis jeg er forvirret og overvældet.
For stor arbejdsbyrde.
Tidspres.
Dårlig tid.
At være bagud.
Når der er ALT for meget læsning kan det virke demotiverende.
Manglende tid.

5. Sense of belonging (learning community)

Mangel på samvær med mine medstuderende.
Når jeg skal lære noget alene.
At sidde alene med emnet.
Manglende fælleskab.

6. Intrinsic factors

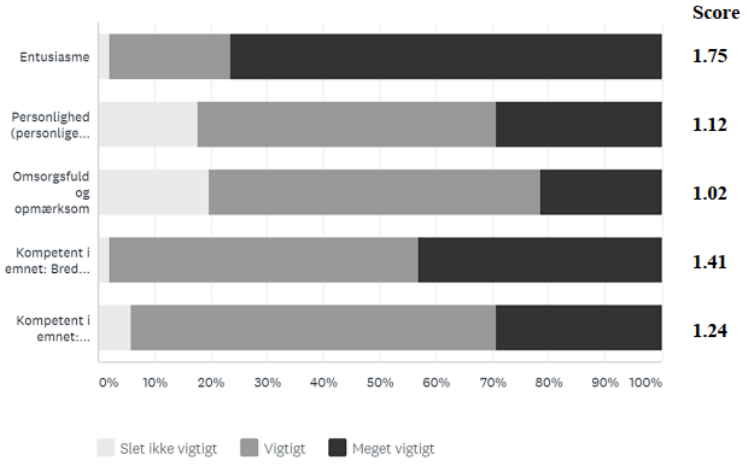
Interesse, mål om fremtiden.
Hvis jeg ikke synes det er spændende eller ikke kan lide uddannelsen.
Hvis det er interessant.
Manglende interesse
Hvis emnet er meget uinteressant

7. Other

Obligatoriske fremlæggelser, Angst=ikke produktivt.
Summative eksaminer.
Dårligt miljø.
Corona.
At det foregår online.
Forelæsninger kl 16.
Religiøs indoktrinering.
Når it-systemerne ikke virker.

D

Figure 2. Qualities of the teacher that affect students' motivation to learn.



Light grey: not important, score 0; Grey: important, score 1; Dark grey: very important, score 2. Average scores for all 51 students are indicated to the right.

Teacher qualities:

Entusiasme	Enthusiasm
Personlighed (personlige historier, humor etc.)	Personality (personal stories, humor etc.)
Omsorgsfuld og opmærksom	Caring and attentive qualities
Kompetent i emnet: Bred erfaring	Competence in the subject: broad experience
Kompetent i emnet: Detaljeret viden	Competence in subject: detailed knowledge
Andet (angiv venligst)	Other (please specify)

 # ANDET (ANGIV VENLIGST)

1) vigtist af alt. en god formidler!!!
2) En lærer som gerne ændrer i undervisningen for sin klasse, hvis klassen f.eks. har svært ved et bestemt emne i stedet for at følge en studieplan til punkt og prikke.
3) Min lærers humør og hjælpsomhed. Og forståelse for, at man kan synes, det er svært
4) God til at lytte og svare på spørgsmål, samt at lære fra sig fordi de gerne selv vil.
5) Struktureret fremgangs/gennemgangsmetode
6) Fleksibilitet og villighed til at lytte til feedback.
7) At læreren virker forberedt og udviser at han/hun har lyst til at undervise.
8) Meget autoritære undervisere er demotiværende

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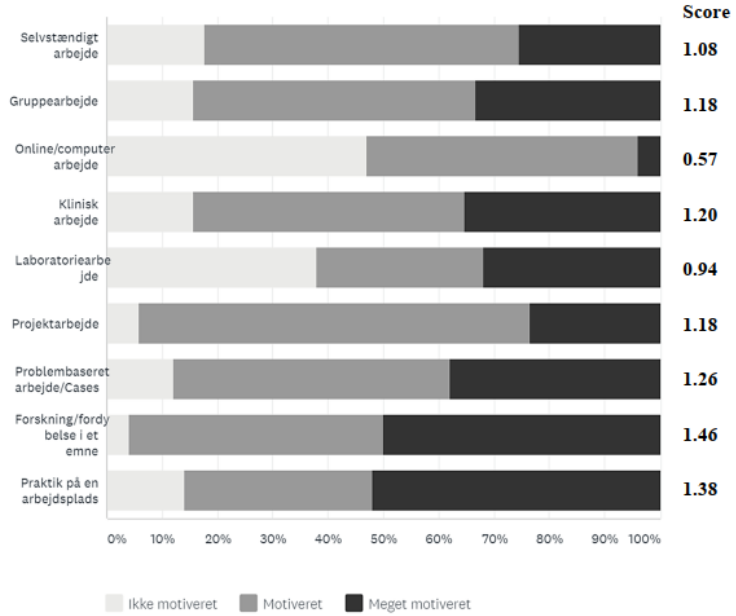
Figure 3. Study formats associated with students' motivation to learn.



Light grey: not motivated, score 0; Grey: motivated, score 1; Dark grey: very motivated, score 2. Average scores for all 51 students are given to the right.

Teaching and study forms in the survey:

Selvstændigt arbejde	Independent work
Gruppearbejde	Group work
Online/computerarbejde	Online/computer work
Klinisk arbejde	Clinical work
Laboratoriearbejde	Lab work
Projektarbejde	Project work
Problembaseret læring/Cases	Problem based work/cases
Forskning/fordybelse i et emne	Research
Praktik på en arbejdsplads	Internship at a work place
Andet (angiv venligst)	Other (please specify)

 # ANDET (ANGIV VENLIGST)

1) Det er vigtigt at blive holdt oppe af enten et miljø eller andre, jeg duer ikke til at arbejde hjemme. Det har den her lockdown bevist.
2) Hvis det er gruppearbejde, så føler jeg mig mest motiveret hvis det er med min studiegruppe.
3) Der mangler en "ikke relevant" valgmulighed...