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EDITED BY

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REVIEWED BY

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Cyprus
Frank Kyei-Arthur,
University of Environment and Sustainable
Development, Ghana

*CORRESPONDENCE

Kjersti Balle Tharaldsen
kjersti.b.tharaldsen@uis.no

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"They gotta understand why": Teachers' professional perceptions regarding the stimulation of academic motivation in upper secondary school

Kjersti Balle Tharaldsen*

Centre for Learning Environment, Faculty of Arts and Education, University of Stavanger, Stavanger, Norway

In recognition of the need for more research on teachers' perceptions of motivational work in the classroom, this study explores upper secondary school teachers' perceptions of how to stimulate academic motivation among their students at a school in southwestern Norway. The data were gathered in three steps. The school's primary teachers ($n = 33$) were interviewed by teacher champions ($n = 17$), that is, teachers that were team leaders for each of the school's educational departments that were given a specific role in the research in terms of initial data collection. This was followed by two extended focus groups with the teacher champions and member checks for each group. The data were subjected to conventional content analyses using NVivo 12. Then, a focus group was carried out with teacher coordinators ($n = 11$) aiming to refine preliminary findings. Summative content analyses were carried out, followed by deductive category application. The findings indicate that teachers perceive class management and strategies for supporting students' learning processes as well as key students as crucial for academic motivation. "Three motivational strategies" were developed. However, feedback and differentiated learning tasks, which are central aspects of motivational theories, received less emphasis. Further in-depth studies exploring concrete approaches to and the evaluating of using strategies for stimulating academic motivation are required.

KEYWORDS

academic motivation, teachers' perceptions, upper secondary school, motivational strategies, qualitative study

Introduction

Education is crucial, both for the individual in terms of future employment goals and adult life (Blossfeld et al., 2006; Seiffge-Krenke, 2012) and for society as a whole (OECD, 2020). As such, the completion of upper secondary school is essential. It is thus concerning that academic motivation declines rapidly between primary school and lower secondary

school in parallel with students' motivational climate experiences (Skaalvik and Skaalvik, 2011; Lüftenegger et al., 2012). Research further indicates that motivation decreases from a relatively high level between Grades 8 and 10 (Yeung and McInerney, 2005; Diseth et al., 2020). In the Norwegian context, fewer students express the desire to pursue higher education after upper secondary school (Bakken, 2019) and during the period from primary school *via* lower secondary school to upper secondary school, students may take school more seriously, as they are introduced to grades and subjected to higher academic demands (Skaalvik and Skaalvik, 2011). A WHO-study across European countries and in Canada indicates an increase in school pressure especially among older adolescents (Inchley et al., 2020). While school demands can increase student engagement, sustained high demands may contribute to stress, burnout, and a more cynical attitude toward school (Salmela-Aro, 2017). Research has identified strong links between academic stress and emotional problems (Tharaldsen et al., 2022), and among other adverse outcomes cynicism may in worst-case lead to drop out and depression (Salmela-Aro et al., 2016).

The stimulation of upper secondary school students' academic motivation is critical. Student motivation is influenced by both individual beliefs and the environment (Ames, 1992). Motivational research has long linked learning environment and goals with student motivational outcomes. It has been argued that classroom structures may influence a prominent goal and thus its adoption in the learning environment (Ames, 1992). However, goals are rarely reflected on explicitly by teachers and students in the learning environment and students tend to respond differently to goal messages (Urduan, 2004). Furthermore, both contextual factors, students' self-perceptions, goal setting, and various responses to success such as affective and behavioral responses need to be considered regarding conceptualizations of achievement orientations and aims (Urduan and Kaplan, 2020). Hence, the creation of such goals in the classroom has proved challenging (Ames, 1992; Urduan, 2004; Urduan and Kaplan, 2020), and practitioners often struggle to motivate their students (Diseth et al., 2020). The translation of motivational theory into practice may be further challenged by researchers' use of academic language and competing theories of motivation (Anderman, 2020). Several motivational theories and quantitative studies have sought to investigate how motivation can influence learning and academic achievement (Hattie et al., 2020). However, researchers have identified the need for more theory and research on motivational interventions that are appropriate in complex classrooms and schools (Urduan, 2010; Elliot and Hulleman, 2017; Urduan and Kaplan, 2020) in addition to qualitative methods that emphasize a situated perspective (Urduan and Kaplan, 2020). Research regarding teachers' perceptions of how to stimulate academic motivation in upper secondary students is also scarce. This study aims to add knowledge to this research gap by exploring teachers' professional perceptions regarding how academic motivation may be stimulated in the classroom. The study explores teachers' professional perceptions of appropriate strategies that

may promote intrinsic academic motivation among upper secondary school students and is guided by the following research question: How do teachers perceive that they can stimulate academic motivation among students in upper secondary school?

The link between a motivational framework and learning environment dimensions

Although motivational frameworks share several commonalities, the notion is rich and diverse (Hattie et al., 2020). Theories emphasize processes that account for goal-oriented activities (Pintrich and Schunk, 2002), identify social-cognitive processes as key sources of motivation, and are frequently used to explain students' activity choices, persistence, help-seeking, engagement, and performance (Meece et al., 2006). Intrinsic and extrinsic motivation is often cited as reasons for engagement in learning behavior (Sansone and Harackiewicz, 2000). Intrinsic motivation causes the individual to perceive learning as rewarding in itself, while under extrinsic motivation; the desired outcomes are the goals of learning activities. However, the two are not necessarily mutually exclusive (Diseth et al., 2020). Macro-level and peer influence may both affect academic motivation, and significant others and contextual factors, such as school, home, and society, should be considered in motivational research (Hufton et al., 2003) along with cultural differences (Diseth et al., 2020). The following section emphasizes three main motivational theories that cover the core aspects of motivation and thus learning environment dimensions.

Motivating academic engagement

Self-determination theory (SDT) emphasizes autonomy, competence, and relatedness as crucial needs that should be supported in the classroom to stimulate intrinsic motivation and holds that teachers play a significant role in satisfying these needs (Niemic and Ryan, 2009). SDT suggests that teachers' instructional styles range from highly controlling to highly autonomous in terms of support, whereas an autonomy-supportive style stimulates student engagement by adopting the students' perspective in learning activities (Deci et al., 1981). Teacher-provided structure supports students in building skills and competence by allowing the students to exercise their initiative in learning activities based on the students' inner motivational resources through the use of non-controlling informational language that provides students with rationale for learning, and by acknowledging students' perspectives and feelings during learning tasks (Jang et al., 2010). Furthermore, to meet students' needs for relatedness, it is necessary to ensure good relations in the learning environment, both between teachers and students and among peers. However, students may also require assistance in managing their learning experiences by adequately

handling their thoughts, behavior, and emotions. Perceived self-efficacy—that is, an individual's assessment of their own capabilities to organize and perform actions in pursuit of educational goals—may influence coping behavior and thus motivation through perceived competence, including goal setting and self-evaluative reactions (Bandura, 1977). Self-regulated learning (SRL) assists students engaging in actions and learning processes to attain competence by gaining information or skills and adequately managing their thoughts, behaviors, and emotions (Zumbrunn et al., 2011). Goal setting (i.e., analyzing learning tasks and defining necessary goals), self-monitoring (i.e., applying strategies and observing their efficiency), and self-evaluating (i.e., evaluating performance that influences future goal setting and self-regulating processes) are the three main phases of the self-regulation process (Zumbrunn et al., 2011). This process facilitates learning (Schunk and Zimmerman, 2012) and predicts students' achievement trajectories and test scores (Zimmerman and Schunk, 2001).

In line with SDT, achievement goal theory emphasizes that motivation may be achieved through various means and that different types of motivation result in different learning and well-being qualities (Urdu and Kaplan, 2020). According to achievement goal theory, meaning, development, culture, identity, and context are key areas of concern with respect to two main goals: individual development vs. social comparison and competition (Urdu and Kaplan, 2020). Definitions of criteria for success have defined two main types of achievement goal: mastery goals, also called learning or task goals, and performance goals, also called ego or ability goals (Ames, 1992). The theory explores the purpose of engaging in, choosing and persisting in various learning activities (Lüftenegger et al., 2014) by focusing on two learning orientations: mastery orientation and performance orientation (Patrick et al., 2011). Mastery orientation is characterized by its emphasis on the learning process as a means of developing competence through social-comparative performance and through understanding rather than mere memorization as well as by the notion that success results from hard work and personal improvement (Patrick et al., 2011). In classrooms dominated by mastery orientation (i.e., mastery climates), students exhibit higher levels of personal mastery goal orientation, self-efficacy, effort in regards to learning, and more use of adequate learning and coping strategies (Patrick et al., 2011). Mastery climates have been shown to predict intrinsic motivation (Diseth and Samdal, 2015), stimulating motivational patterns that are conducive to long-term, high-quality learning (Ames, 1992; Lüftenegger et al., 2014). They are also positively associated with academic performances (Payne et al., 2007) and reduced academic stress (Tharaldsen et al., 2022). Performance orientation, however, focuses on extrinsic rewards resulting from learning, whereby success is attained by outperforming others (Patrick et al., 2011). Despite its positive association with performance when self-validation is prioritized over performance goals, performance orientation is associated with maladaptive learning behaviors, such as help-avoidance, cheating,

procrastination, low achievement and interest, and poor attitude toward school as well as negative academic outcomes, such as loss of self-worth, diminished intrinsic motivation, and lower grades (Grant and Dweck, 2003; Patrick et al., 2011; Lüftenegger et al., 2014; Urdu and Kaplan, 2020). In sum, motivational theories emphasize that the means used to stimulate motivation may influence engagement and thus academic performance. It thus seems appropriate to explore how teachers motivate students' academic engagement.

Materials and methods

This study follows an exploratory qualitative case study design situated within an action research framework. A case study approach is appropriate when the study aims to explore the “how and why” of a phenomenon, when the behavior of participants cannot be manipulated, when contextual conditions must be considered, and when it is challenging to distinguish the phenomenon and context clearly (Yin, 2003). As the current study aims to explore teachers' perceptions of how to stimulate academic motivation within one upper secondary school in which the motivational work is based on the teachers' everyday practices, a qualitative case study design seemed appropriate.

Participants

Purposeful sampling was applied. The sampling strategy is especially useful when the number of persons that can serve as informants is limited due to the research design of the study. The sampling strategy seemed appropriate in the current study as the study has a case study design that explores teachers' perceptions on stimulating academic motivation in one upper secondary school. A vocational school in the researchers' network in southwestern Norway, with approximately 750 students and 200 employees, was invited to participate in the study. The teachers who participated were divided into four categories: *regular teachers* ($n = 100$), *primary teachers* ($n = 33$; 22 female), *teacher champions* ($n = 17$; 11 female), and *teacher coordinators* ($n = 11$, of which eight were female). The *primary teachers* were informants for the teacher champions. The *teacher champions* were all team leaders for each of the school's educational departments and collected data from the primary teachers in their respective teams. Following this, they participated in focus groups representing the perspectives on stimulating academic motivation of the teachers in their respective teams as well as bringing their own perspectives into the group discussion. The role of the *teacher coordinators* was to follow up the school's work on motivation and follow up data collection procedures. Accordingly, they served as informants in a focus group aiming to reflect upon and design strategies for stimulating academic motivation among students based upon findings from the previous interviews with the teacher champions. Hence, the roles of the teacher champions and teacher

coordinators were 2-fold; after an initial role as research assistants, they were informants in focus group interviews.

Data collection and procedure

First, the teachers attended three short seminars that introduced the main principles of SDT, SRL, and achievement goal theory as theoretical perspectives for stimulating academic motivation. The seminars were held in January, March, and August 2021, of which the first and latter constituted seminars with presentation of theories and the seminar in March was carried out as a workshop where teachers more actively engaged in discussions and learning tasks. The teachers were then asked to reflect on important factors for stimulating academic motivation in their students. Data collection was conducted in three steps in October and November 2021 and based on a semi-structured guide for exploring teachers' perceptions of what influences student motivation in the learning environment and what stimulates motivation academically in the individual student and in the learning climate. First, the teacher champions collected data from the primary teachers in their respective teams. The meetings were held at school during work hours. Subsequently, to increase the data's trustworthiness, extended focus groups (Berg et al., 2004) were held. Open-ended, semi-structured interview guides were developed for the interviews. Two focus groups were held with the teacher champions, who, having collected data from their respective teams of primary teachers, reflected on behalf of the primary teachers and themselves. The reason two focus groups were held was to maintain the number of informants within the guidelines for focus groups (Krueger and Casey, 2015). The interviews' main themes were teachers' overall perceptions and experiences of motivating students and creating motivational climates, what they find useful when stimulating academic motivation among their students and why and how they influence students' academic motivation. The focus groups were held in person at school during work hours. Based on findings from these interviews, a focus group with the teacher coordinators was carried out. After an open reflection on how to stimulate academic motivation among students, the teacher coordinators were asked to reflect on the motivational strategies that the teacher champions promoted. Finally, and based on the findings from the interviews with the teacher champions, the teacher coordinators were to design drafts of "three motivational strategies" for use in the classroom. This focus group was held digitally due to restrictions because of the COVID-19 pandemic. As data were gathered in a single context (school) by teacher champions, with some data collected prior to the interviews and extended focus groups and member checks, data saturation (Saunders et al., 2018), and appropriate information power (Malterud et al., 2016) were considered to provide sufficient descriptions of the phenomenon under study.

All interviews were recorded and later transcribed verbatim by the researcher.

Data analysis

The data were analyzed using NVivo 12. First, as the data from the first two focus groups were based on professionals' perceptions rather than pre-existing theory and/or research, conventional content analysis was applied. In line with this approach, labels for codes emerged directly from the text data, which were categorized based on their relatedness and organized into meaningful clusters, and code definitions were developed (Hsieh and Shannon, 2005). Second, summative content analysis is particularly adequate when the goal of the analysis is to validate or conceptually extend preexisting theory or research on a specific topic (Hsieh and Shannon, 2005). As the data from the third focus group (teacher coordinators) were based on findings from the first two focus groups (teacher champions), a summative content analysis was chosen to analyze data from the third focus group. After the conventional content analyses of the data from the focus groups with teacher champions and after the summative content analysis of the focus group with the teacher champions, member checks (Miles et al., 2019) were carried out with the groups to increase trustworthiness of the findings. No feedback was provided that led to changes in the suggested final findings. Following this, and through deductive category application (Mayring, 2004), the relationships between the variables were further analyzed and relationships between codes were identified. Key concepts and operational definitions were determined based on preexisting motivational theory, followed by a final refinement of the final findings, i.e., motivational strategies.

Ethical considerations

The Norwegian Social Science Data Services (NSD) formally approved the study. The participants' voluntary informed consent was obtained prior to data collection.

Findings

Findings from the focus groups with the teacher champions, from which the main dimensions "suggested strategies" and "students as motivators" were identified, are first presented below. Following this, findings from the focus group with the teacher coordinators are presented through the main dimension "three motivational strategies." The deductive category application merged the findings from the two first data collections with central theory on motivation, and was categorized by the names of the final strategies, i.e., "teaching structure," "student collaboration and relations," and "learning process and relevance." To ensure transparency, the findings are supplemented with quotations from participants. The quotations were obtained from as wide a range of informants as possible. To maintain anonymity, the quotations are referenced according to the informant and focus group numbers.

Focus groups with teacher champions

Suggested strategies

During the discussions, the informants reflected on motivational practices across the following seven sub-categories: class management, relational work, tuition planning, student participation, flexibility, goal setting and usefulness, and relevance.

Class management that creates a good learning environment was advocated:

“A good learning environment is what I work with most in the beginning. Setting boundaries, so that the class is a safe space (...) That there is an openness in the class and that they dare to ask (...). Many just sit there and do not want to ask anything, but I know that in the courses we teach, it’s all new to them and they gotta ask.” (4.2), and *“As teachers, we do all we can regarding variation, introducing topics, clear classroom structure (...).”* (7.1)

Building good relationships in the learning environment was emphasized as an important basis motivation:

“It [motivation] builds on good relations from the beginning” (6.2) and *“It [relations] are very important because we have to motivate different students in different ways. (...) It’s important to learn to know them enough to know what their goal is. What do they want?”* (3.2)

Preparation for sessions and the provision of clear introductions to the students were also advocated as a means of stimulating students’ motivation:

“I gotta have clear goals for the session (...) so I gotta have it planned from when I enter [the classroom]: ‘These are the elements I’m gonna work on in this subject today.’” (4.1) and *“Good planning. (...) Clear and distinct tasks, giving clear and distinct instructions at the beginning of the session.”* (3.1)

Motivating students by encouraging them to participate in decisions regarding their learning processes—for example, having a say in the topics that they study and how to proceed with learning tasks—were identified as important:

“You gotta motivate (...): ‘You [the student] gotta think through what you want, and you’ll get what interests you. If you wanna be a waitress, you’ll get loads on that. If you wanna be a meat cutter, you’ll get loads on that.’ And bring in motivation through their own participation.” (1.1) and *“In class, the students sit together in groups of four. They wanted to and I said, ‘Yes, be my guest.’ That’s democracy, right? (...). They were making a life cycle analysis (...). I said ‘you have got three days.’ (...) Yes, they [the students] are allowed to participate in decision making (...). I just helped them along, and it turned out great! They worked very*

independently; [I] just gave them some supervision every now and then.” (8.1)

In continuance of this, feedback and assessment were briefly mentioned:

“Assessment for learning is also motivating (...) with feedback that motivates further work.” (3.2) and *“They are motivated by good feedback. If you say ‘Now you did a good job,’ they are extra happy when they leave school [that day].”* (5.2)

Flexibility was a core tool in encouraging the students’ motivation:

“Regarding motivation, it’s very important to be flexible. I teach language and social science and in language [classes], I always bring a toolbox, with novels, for instance. Then, I was in another teacher’s class, and it almost went overboard. Then, we just sat down and read a novel about eating disorders. We sat in a circle and had a wonderful session. It was not what I had planned, but I think it’s very important to take the temperature on the class and have something up your sleeve.” (3.2) and *“Variation in the classroom, in the teaching (...), especially how to teach (...), perhaps presentations, that they [the students] can use filming, TikTok, podcasts, animations.”* (7.1)

The informants emphasized the importance of awareness and setting clear and realistic goals so that the students know what to do. Additionally, it was important that the teachers knew what the students’ goals and wishes were so that they could support them:

“Clear goals and also knowing what the individual students’ goals are. Motivation is always connected with goals everywhere and in society, motivation and goals are connected. You cannot have one without the other.” (3.2) and *“Setting sub-goals [is important].”* (5.1)

The teachers reported that it was essential to help the students recognize the usefulness and relevance of the different learning goals:

“I know that many struggle with ‘Why do I need to learn this?’ (...) They gotta understand why.” (5.2) and *“That what we are doing is close to practice and trustworthy. (...) speaking about theory when we are in the practice field that is very motivating. They [the students] think it’s very nice when they see the purpose of what we are doing. (...) they see the purpose of the knowledge.”* (6.2)

Students as motivators

The informants’ perceived what they called “key students” as crucial in promoting academic motivation. The main reason was

that, by influencing key students, the entire learning environment can be influenced. If used appropriately, key students could influence peers positively:

“There’s often a king or a queen in a class. (...) teachers have a good dialogue with this [student] who everyone follows. We speak with the student more than the rest of the class to get them all on board. It’s been of great help for me (...) to motivate the whole group, to get them all along.” (1.1); “Role models are important. If you get any of them in class and they are popular among circles of friends, of course, they take much of the load if you think that students motivate students.” (1.2); and “This year, I have discovered how important it is to use the students’ own resources in class. It helps a lot.” (6.2)

When asked to describe key students, the informants emphasized that the attributes of key students could vary a lot. Key students were described as academically and/or practically strong, but also curious, helpful, outgoing and responsible students:

“Sometimes we have the positive one that gets thing out. And it’s not a specific human type, but it’s often someone knowledgeable or curious. (...) it can be the calmest one in class (...) and it can be the most outgoing one.” (3.1); “Students who function better than others love to help those who are weaker, care for them and all that. So, we can use that. And those who receive help really appreciate the support and care” (1.2); and “In one class, it was a girl who was a ‘smartass’ who was funny but not so academically strong, but she was ready to strike and could be motivating as she got the others along. In another class, a student council representative was the key student who had this role and was good to make alliances [with]. I have a boy in class who is a bit older than the rest who takes responsibility, and I can lean on him.” (6.2)

The informants further emphasized that the key students may vary not only in terms of their personalities but also across subjects:

“It can vary a bit according to who they are and what we are working on” (4.1) and “Different students become role models in class.” (4.2)

The informants asserted that it is important to activate key students through positive communication and win them over to the teacher’s side. This was achieved either explicitly through conversations or by stimulating them during learning activities:

“There’s this boy in class that’s a bit older than the rest, and everyone looks up to him. He’s leader of the student council and they [the other students] do everything he says. I often have conversations with him before we start something and say that ‘Now we are gonna do this and that and you gotta contribute and pull a long this and this and this [student]. Because they bring in a lot of their personal lives into school (...) so try to make them focus here, knowledge, knowledge, knowledge. It’s here and now.’”

(1.1) and “I use these students and ask ‘work a bit with him’, and then you get motivation around in class. (...) And some have been working on it [the subject] for a while, and they are role models from early fall. And then I make them talk and suddenly another student has a moment of realization, and he can bring other students with him. It’s worked great.” (4.2)

Focus group with teacher coordinators

Findings from the focus group with the teacher coordinators were categorized in the dimension “three motivational strategies.”

Three motivational strategies

Regarding the strategies, the informants expressed that the seven strategies from the focus groups with the teacher champions should be compressed and integrated. Reason was that the strategies were complementary:

“Other strategies come almost automatically when you use some strategies. ‘Cause there will always be elements you just have to, it was not what you planned, so you gotta come up with something new to solve it as you go along. Often other strategies emerge because students are different, they differ regarding motivation.” (1.3)

The strategy “planning tuition and student participation” combined the two strategies with the same initial labels:

“We can merge student participation and planning tuition. (...) They [the students] often participate in making a test situation, they join in and structure what they find important in their work.” (7.3)

The strategy “structure and relational work” combined “class management” and “relational work”:

“Class management in combination with relational work is definitely the most important thing if you wanna have a calm enough class to receive attention and that they [the students] like you, not only to have respect for you [the teacher] as a professional.” (9.3)

The strategy “usefulness and relevance” combined “setting goals,” “flexibility,” and “usefulness and relevance”:

“Setting goals is a natural part of trying to motivate when they [the students] are going to define their goals or we [the teachers] help them in the process.” (5.3)

“We gotta be flexible and not follow the same plan year after year but think a bit ‘what is relevant for the students that are here and now.’” (6.3)

“It is the relevance of the course that is the foundation regarding the final goal.” (5.3)

Deductive category application

Based on the findings above “three motivational strategies” were deduced, of which two were aimed at supporting the teachers and one was directed toward the students.

The strategy “planning tuition and student participation” was further categorized as “planning tuition.” This teaching structure strategy works to promote motivation in learning activities. The strategy is based on teachers’ practice and competence in motivating promotion in the classroom. It may function as a structured planning tool for the teaching lesson. Structure as part of teacher’s instructional style may promote students’ engagement by providing concise and adequate information regarding goal expectations and learning processes (Skinner and Belmont, 1993; Skinner et al., 1998), and is supporting autonomy in the classroom (Jang et al., 2010) which is central in the SDT-framework. The strategy was finally labeled “teaching structure.” A model of the strategy was developed, which included a checklist for teachers that reminded them to introduce the session clearly (e.g., have and provide a clear structure for the session including purpose, relevance, and goals), adjust the learning activities (e.g., provide choices regarding tasks and use multiple working methods), ensure adequate collaborative learning (e.g., who works in pairs/groups, provide clear guidelines for the work to get the students started), and take a timeout when needed (e.g., play music and do an activity).

The strategy “structure and relational work” was further categorized as “structured relational work.” Student collaboration and relationships are an important part of motivation- and mastery-promoting work. Autonomy is also a main principle from the SDT-framework, as is relatedness (Niemic and Ryan, 2009). Student collaboration and relationships are continuously ongoing work and is based on the teacher’s daily practice. This strategy systematized the work and can be used as a starting point for planning, mapping, and implementation of measures related to further development of relationships in the classroom. The strategy was finally labelled as “student collaboration and relations.” A model of the strategy was developed, which included a checklist for teachers that reminded them to explore who their students are academically (e.g., ensure that those in need receive help, use key students to promote motivation), socially (e.g., who do they prefer to be with, ensure that they receive social and emotional support), and to use the information appropriately (e.g., put them in pairs, inform other teachers).

The strategy “usefulness and relevance” was further categorized as “goal processes, relevance, and student participation.” Through this strategy, the students contribute to identifying assessment goals and evaluate their own progress in relation to the goals. The strategy may thus help students to divide

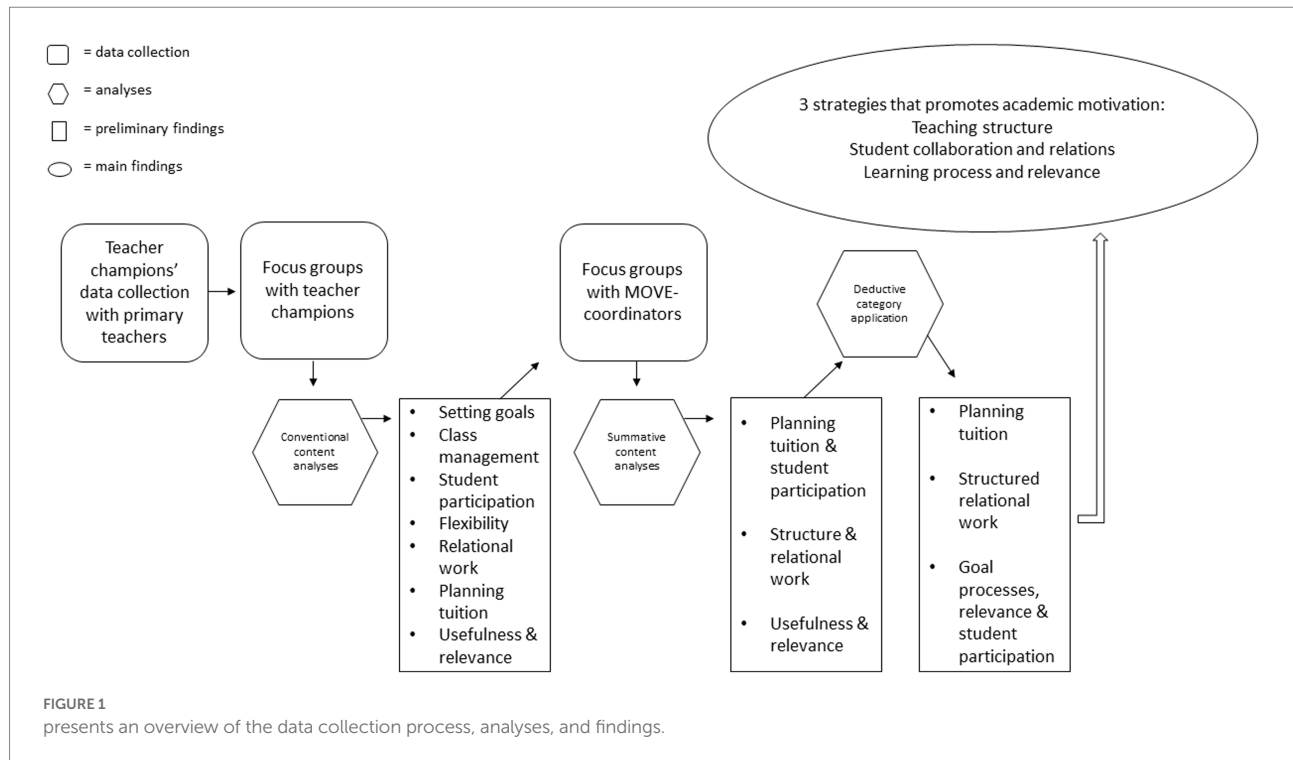
larger learning goals into more meaningful and clearer units, which may be beneficial for the students to stimulate intrinsic academic motivation. This is in line with self-regulated learning (SRL) of which goal-setting, self-monitoring, and self-evaluating are central (Zimmerman and Schunk, 2001) in that it aids students in involving actions and learning processes to obtain competence through gaining knowledge or skills by handling thoughts, behaviors, and emotions appropriately (Zumbrunn et al., 2011). Competence is also a main principle for increasing autonomous engagement in the SDT-framework (Niemic and Ryan, 2009). The strategy was finally labelled “learning process and relevance.” A model of the strategy was developed. The model illustrated a path with the starting point being the student’s level of knowledge prior to a learning activity and the final point being the overall learning objective. Then, the student should, with support from the teacher, define subgoals that may lead from the starting point to the final learning goal (Figure 1).

Discussion

This study explored teachers’ professional perceptions of how upper secondary school students’ academic motivation could be stimulated. The findings suggest that teachers perceived class management and relational work, planning, and tuition—including student participation and flexibility—and supporting students’ learning process through goal setting, usefulness, and relevance, as key to motivating academic learning. The findings further indicate that, in addition to teachers, key students are crucial in promoting academic motivation in the learning environment.

Class management and relational work

The findings suggest that, to stimulate academic motivation in the classroom, the teacher must exercise appropriate classroom management and adopt a conscious approach to the students both as individuals and as a group. Behavior management is one means by which student engagement may be stimulated. This entails promoting positive behavior and preventing or eliminating misbehavior in teacher–student interactions (Pianta et al., 2012). Engagement has thus been recognized as a relational process (Pianta et al., 2012). Hence, relationships are central. The creation of a safe and transparent learning environment through the establishment of good classroom relationships may foster a sense of safety. This is important, as social support influences mental health and well-being (Thoits, 2011) and may function as a buffer against perceived academic stress. Emotionally supported students trust their teachers and are confident that their teachers believe in them and care for them (Pianta et al., 2012). This may assist the teacher in grouping students appropriately to facilitate adequate learning processes and stimulate good relationships, both between teachers and students and among peers. This is in line with SDT,



which emphasizes relatedness as a key principle of intrinsic motivation (Niemiec and Ryan, 2009). Relatedness can internalize students' motivation and increase autonomous engagement (Niemiec and Ryan, 2009) and can be facilitated by emotional support from the teacher, which is critical in ensuring social and emotional functionality in the learning environment (Niemiec and Ryan, 2009; Pianta and Hamre, 2009). Furthermore, perceived emotional support from the teacher has been negatively associated with intentions to drop out of school, whereas loneliness among peers has been positively associated with intentions to drop out (Tvedt et al., 2021). Relational work thus emerges as important in stimulating academic motivation.

Planning and tuition

Regarding teachers' preparation for lectures, findings indicate that to stimulate academic motivation, it is important that a clear teaching structure is implemented. The teacher should have a clear plan for the lesson, with clear associated instructions. Structure promotes students' engagement by clearly delineating the appropriate amount of information that teachers should relay to students, thus managing expectations, and how educational goals may be efficiently achieved (Skinner and Belmont, 1993; Skinner et al., 1998). Structure may be facilitated by considering students' future behavior, by recommending stepwise approaches to learning activities with clear and logical directions, by guiding ongoing learning activities and affording student's leadership in their learning, and by providing appropriate feedback, thus aiding students in identifying and applying their skills and competences

(Jang et al., 2010). As such, planning and tuition support autonomy in the classroom (Jang et al., 2010), which occupies a central position in the SDT framework. Hence, the different methods applied should be alternated so that the students can work in whichever manner they prefer while also experiencing new learning methods. The facilitation of fruitful collaborative learning is an extension of this, as some students prefer to work alone while others favor peer collaboration. School curricula are typically founded on the principle that learning occurs in interaction with others and that the ability to solve tasks through collaboration is a crucial skill of the future (Chalkiadaki, 2018). The facilitation of collaborative learning may thus become central to teaching structure where relevant.

Supporting students' learning processes

The findings indicate that, to stimulate academic motivation, students must learn to identify learning objectives with associated sub-goals and focus on the learning process itself. Breaking larger learning goals into smaller units can contribute to a better overview and more efficient execution of tasks by completing one sub-goal at a time while simultaneously encouraging them to focus on learning as a process. As mastery orientation emphasizes the learning process as a means of developing competence through understanding and regards success as the result of hard work and personal improvement (Patrick et al., 2011), this seems to support this orientation. Additionally, as students often perceive school as irrelevant (Pianta et al., 2012), the relevance of the topic at hand and student participation through autonomous learning processes

are key in stimulating intrinsic motivation. This is in line with identified and integrated regulation, which some regard as a form of external motivation that leans more towards autonomy through its internal perceived locus of causality (Niemi and Ryan, 2009). Regarding both appropriate psychological and academic functioning, students' internalization of extrinsic motivation is critical and particularly evident in educational activities that students do not naturally regard as compelling (Niemi and Ryan, 2009). Furthermore, when students have well-internalized extrinsic motivation, they learn more effectively and enjoy better psychological health (Niemi and Ryan, 2009).

The findings also indicate that one objective of this means of stimulating academic motivation is to assist students in assessing and evaluating their learning processes. This is in line with SRL and its focus on goal setting, self-monitoring, and self-evaluating (Zimmerman and Schunk, 2001) and competence enhancement by handling thoughts, behaviors, and emotions adequately (Zumbrunn et al., 2011). Competence is also crucial for increasing autonomous engagement in accordance with the SDT framework (Niemi and Ryan, 2009). Evaluation of the learning process may offer a meta-perspective on the students' learning process (Ames, 1992). As stimulating students' needs for autonomy and relatedness can help students to internalize their motivation and increase their autonomous engagement (Niemi and Ryan, 2009), it is important that these are supported. This may be achieved by reducing evaluative pressure and coercion, ensuring student participation in academic activities, giving a meaningful rationale for the usefulness of a learning activity, and providing the students with optimally challenging learning activities and adequate tools and feedback to ensure that they achieve a sense of mastery (Niemi and Ryan, 2009). The findings thus indicate that supporting students' learning processes may contribute to the students' experience of independence and autonomy in assessment processes and hence stimulate academic motivation. However, it was somewhat surprising that feedback and differentiated academic tasks, which are central to several motivational theories, were not emphasized. This may be because the study sample comprised teachers with professional backgrounds who may be less concerned with motivating students in the learning environment and more concerned with teaching their subjects. Further research on this issue is required.

Key students as motivators

The findings indicate that the use of key students is crucial in stimulating academic motivation. This is supported elsewhere (Hufon et al., 2003) and is in line with research emphasizing that cultural contexts should be considered regarding motivation (Diseth et al., 2020). The findings further suggest that the use of key students to motivate peers may be regarded as an aspect of teachers' class management. Regardless, when using key students in the learning environment, teachers should ensure that this practice is in accordance with a mastery orientation perspective

aimed at stimulating learning processes and does not promote comparison of academic performance among peers.

Exploring teachers' perceptions of student academic motivation

This study used a case study approach to explore how teachers believe that academic motivation can be stimulated among their students in an adequate manner, and why. Through participating in three seminars the teachers were introduced to the main principles of SDT, SRL, and achievement goal theory as theoretical perspectives for stimulating academic motivation. As such, the seminars gave the teachers some input on how to reflect on own practices regarding motivational work in the learning environment prior to the data collection where their perceptions and reflections were discussed. This approach may have influenced the teachers in their reflections regarding motivational work among their students. For instance, some teachers mentioned the presented theories during the focus group discussions. However, no rigid guidelines on how to explore academic motivation were presented in the seminars, merely central theories on the topic. Hence, the teachers could reflect freely based on own practice together with new knowledge on motivational theories. Other approaches or methods could have provided even more exploratory data. An example could be to explore teachers' perceptions without introducing them to theoretical perspectives on motivation and hence contribute to theory building on motivation through a grounded theory approach. Other methods, such as more quantitatively driven approaches, could have provided more accurate feedback on the degree that the seminars influenced the teachers' perceptions of motivational work as well as to what degree the teachers tried out the suggested strategies before reflecting on them. As such, various methodological approaches may influence the result and is therefore important to reflect on in future studies on stimulating academic motivation among students.

Strengths and limitations

Scholars have argued that teachers' perceptions represent merely partial data and that further explanation and contextualization of such opinions are required (Hufon et al., 2003). This study aimed to do so by exploring teachers' perceptions of the means used to stimulate their students' academic motivation. This approach represents one of the study's strengths.

The sample, which comprised vocational teachers in one upper secondary school, represents a limitation, as the findings may not necessarily be applicable to other teachers and their perceptions of their students' academic motivation. This study's findings should thus be interpreted with caution. Nonetheless, given the paucity of studies exploring teachers' perceptions of how academic motivation may be stimulated, the present study may

be regarded as a step in this direction. Further research on teachers' and students' perceptions of how to stimulate academic motivation is warranted.

Concluding remarks

This study indicates that teachers have many approaches at hand to stimulate their students' academic motivation. The means emphasized align with SDT's focus on autonomy, relatedness, and competence (Niemic and Ryan, 2009) and with SRL's focus on supporting students' learning processes through monitoring and evaluation (Schunk and Zimmerman, 2012). A mastery orientation perspective (Ames, 1992) also appears relevant here. The findings thus suggest that a more eclectic approach to stimulating academic motivation may be adequate. However, certain aspects of motivational theories were lacking. As motivation is a multidimensional construct determined by both internal and external factors (Hattie et al., 2020), a more contextualized understanding may be warranted. Implications from this study to the field of education is among others that it may increase teachers' awareness regarding how they implement class management and relational work in the learning environment as it seems to be of importance regarding student academic motivation. Furthermore, student participation and flexibility regarding learning activities as well as setting clear goals and explore the usefulness and relevance of subjects and learning tasks should be emphasized by teachers as these seem key to motivating academic learning. Finally, the study implies that teachers should be aware of key students that can be crucial in the learning environment when it comes to promoting academic motivation as such students can either stimulate or in fact reduce academic motivation among their peers. Further studies are required to explore concrete approaches to stimulating academic motivation, and both teachers' and students' perspectives should be foregrounded. This should include various research approaches, different methods, and perhaps also several motivational theories.

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Data availability statement

The datasets presented in this article are not readily available because only narratives in the form of transcribed interviews are available. These are not to be distributed as it would involve to share the whole dataset. Requests to access the datasets should be directed to Kjersti Balle Tharaldsen, kjersti.b.tharaldsen@uis.no.

Ethics statement

The studies involving human participants were reviewed and approved by Norwegian Centre for Research Data. The patients/participants provided their written informed consent to participate in this study.

Author contributions

The author confirms being the sole contributor of this work and has approved it for publication.

Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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