

COGNITIVE ACTIVATION AS AN ASPECT OF LITERATURE INSTRUCTION

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Abstract

In this study, the concept of *cognitive activation* is used to assess and discuss teaching quality in Swedish and Norwegian lower secondary literature instruction. Drawing on video data from 49 classrooms, it investigates the cognitive activation potential (CAP) of tasks. It also investigates how and to what extent teachers, through their instructional support, increase or decrease the CAP of these tasks. The *objective* CAP of 174 tasks was coded into three different categories: 'Recall and share', 'Understand and explain' and 'Analyse and create'. This coding revealed that students were primarily expected to reproduce knowledge. They were seldom required to analyse, compare and interpret literary texts. As tasks are not always carried out in the way teachers initially intend, the *realised* CAP of all the tasks was also estimated. Mostly, it remained unchanged by teachers' instructional support, which suggests that there is room for teachers to improve and increase their interaction with students in ways that may enhance the latter's literary competence. Implications for students' learning and development of literary understanding are discussed.

Keywords: literature instruction, cognitive activation, tasks, teaching quality, lower secondary school

1. INTRODUCTION

In language arts, literary texts are often used to provide positive reading experiences, to contribute to students' personal growth and to promote their reading comprehension. Moreover, reading and working with literary texts can expand and challenge students' thinking. Still, teachers rarely seem to take this into account when planning their literature instruction. Previous research has, however, shown that so-called *cognitive activation* contributes to students' achievement growth; challenging tasks and problems have the potential to evoke students' high-level thinking skills, and help them develop an elaborate knowledge base (Klieme et al., 2009). Reproducing knowledge is not enough if young people are to learn how to solve complex problems. Therefore, lesson activities demanding interpretation, analysis and evaluation of information are necessary (Newmann et al., 1998). In literature instruction, reading, interpreting and criticising literary texts can help students develop critical thinking skills that are useful in all academic fields (Blau, 2003), for example, the capacity for sustained, focused attention, the capacity to deliberate layered or contradictory information, and a tolerance for ambiguity and uncertainty.

Literary texts can offer their readers resistance, and in a Norwegian study, Sønneland (2019) observed that students in lower secondary school actually found discussions of challenging literary texts meaningful; they were attracted to and engaged by particularly those aspects of the literary text that can be demanding for even experienced readers of literature. Yet, presenting students with complex texts is not enough. Equally important are tasks that stimulate students' thinking and require them to work with challenging problems and questions, that is, tasks that provide students with opportunities for interpretive and reflective thinking and learning.

In studies investigating teaching quality, tasks have often been used to operationalise the concept of cognitive activation (Praetorius et al., 2018). Previously, cognitive activation has been primarily linked to students' learning outcomes in mathematics classrooms (see, e.g., Kunter & Voss, 2013; Lipowsky et al., 2009; Praetorius et al., 2020; Sigurjónsson et al., 2022), but it has also been used when investigating teaching quality in other subjects. In a German study, Winkler (2020) demonstrated that the concept of cognitive activation is applicable when investigating and assessing literature instruction. She used a content-specific framework and distinguished between assigned task and task realisation to describe quality in literature classrooms.

In a Nordic context, however, there have been few, if any, attempts to investigate what kinds of challenges students meet in literature instruction. There is some research concerning questions and assignments in textbooks (Bakken & Andersson-Bakken, 2021; Lilja Waltå, 2016; Ullström, 2009), what kinds of questions teachers ask their students (Magnusson, 2021) and how students engage in complex literary texts (Gourvenec, 2016; Sønneland, 2019), but these studies do not reveal what levels of cognitive challenge different tasks and assignments in literature instruction invite. The aim of the present study is to contribute such knowledge. It relies on video

data from 49 Swedish and Norwegian lower secondary classrooms where students work with literary texts and assesses teaching quality based on the cognitive activation potential (CAP) of tasks that teachers present to their students. More specifically, the study examines:

- The cognitive activation of tasks as they are presented to students.
- The extent to which teachers, through their interaction with students as they work on a given task, increase or decrease the CAP of the task.

2. COGNITIVE ACTIVATION: A FRAMING OF THE CONCEPT

Cognitive activation is a key dimension of instructional quality and a condition through which students engage in knowledge construction (e.g., when challenging tasks are implemented at an appropriate pace). Furthermore, it indicates that students are engaged in higher-order thinking and required to provide reasons for their answers (Praetorius et al., 2018). Cognitive activation is a complex construct, and given that different learners have varying experiences and capacities, certain situations that require higher-order thinking from some students are not always as challenging for others (Lewis & Smith, 1993). For this reason, it is complicated, if not impossible, to make generalizable determinations of cognitive activation levels. Factors such as the experience, ability and prior knowledge of a person will inevitably affect the perceived cognitive demand posed by questions (and tasks) that this person faces (Nystrand et al., 2003). Different kinds of cognitive processes are required to achieve different kinds of knowledge, and some processes can be assumed to be more complex than others (Anderson et al., 2001). However, the difficulty of a task does not depend solely on what kinds of cognitive processes the task invites. There are additional influencing factors (e.g., text structure, the density of distracting information in the text and the plausibility of distractors) (Mosenthal, 1996). Consequently, cognitive activation and difficulty are not synonymous.

Cognitive activation is regarded as a generic aspect of classroom teaching (Praetorius et al., 2018). Nevertheless, it is related to the subject-content being taught (Praetorius et al., 2016). It is one of the dimensions in the Three Basic Dimensions (TBD) framework of teaching quality (Praetorius et al., 2018), where the two other dimensions are *classroom management* and *student support*. In TBD, all three dimensions can be divided into sub-dimensions (i.e. more specified practices of teaching that represent different aspects of the dimension). For cognitive activation, Praetorius et al. (2018) identified seven sub-dimensions: 1) Challenging tasks and questions, 2) Exploring and activating prior knowledge, 3) Exploration of the students' ways of thinking / Eliciting student thinking, 4) Receptive / transmissive understanding of learning of the teacher,¹ 5) Discursive and co-constructive learning, 6) Generic-Socratic teaching, and 7) Supporting metacognition. The TBD framework is not connected to any single instrument, as are many other frameworks (see Bell et al., 2019).

¹ *Negative indicator*

In previous studies, the concept of cognitive activation has therefore been operationalised in different ways; whereas some researchers rely on a large number of sub-dimensions, others just use 'Challenging tasks and questions' (Praetorius et al., 2018).

In the present study, the assumption that cognitive processes on different levels complement each other is an important cornerstone. This is in line with ideas expressed by Newmann et al. (1998): before students can solve complex problems, they need a basic foundation of knowledge and skills, but it is important that they also get the opportunity to engage in more cognitively demanding tasks. Thus, the present study focuses on how teachers provide opportunities for students' learning when they introduce challenging tasks and questions or when they elicit student thinking and encourage discursive and co-constructive learning. However, this does not necessarily imply that students make use of these opportunities for higher-order thinking.

Any study of cognitive activation in education must necessarily pay attention to its subject-specific qualities (Praetorius et al., 2014). In literature instruction, the act of reading itself often demands a great deal of higher-order thinking, and reading literary texts frequently invites advanced cognitive processes, such as analysis and reflection. When a text deviates from what the reader already knows, believes and understands, the reading process slows down. This leads to de-automatisation and (re)construction, which, according to Koek et al. (2019), correlate with critical thinking and promote student growth in terms of literary interpretation skills. In a literary text, some details of the story may be more salient to interpretation than others. Therefore, it is important for readers to learn how to pay attention to such details (Levine & Horton, 2015), particularly since such a focus may lead to de-automatisation and promote interpretation awareness (Koek et al., 2019), which tasks and questions can facilitate. Literary texts may also be read and understood in superficial ways, and weak readers primarily seem to rely on reading activities directed towards a basic (re)construction of the text (e.g., retelling and making inferences) (Janssen et al., 2006). Experienced readers, on the other hand, are more flexible in their reading and tend to change and adapt their reading activities (particularly with regard to problem detection and emotional response) both within and between literary texts (Janssen et al., 2006, 2012). Hence, depending on a reader's ability, the same literary text may be read and understood in various ways.

Although teachers may plan for tasks and questions to be challenging, these plans are not always realised in the intended way (Tengberg et al., 2022). Therefore, it is necessary not only to evaluate what kinds of mental processes a particular task stimulates, but also to investigate how the task is implemented and how the interaction between teachers and students affects the level of cognitive processing. When assessing cognitive activation in literature classes, Winkler (2020) distinguished between the *assigned task* and *task realisation* and observed that an assigned task was not always processed and discussed according to its assumed level of difficulty. Her analyses of literary discussions revealed that the depth of processing, as well as the

required cognitive process, of an assigned task were sometimes changed or modified. Weingartner (2021) talks about the *objective cognitive activation potential* (oCAP) and the *realised cognitive activation potential* (rCAP). She found that tasks were usually implemented and processed in the way they were first presented to students. Nevertheless, Weingartner identified a number of different manners in which the initial CAP of a task could be increased or decreased.

When tasks are presented to students, challenging and clarifying questions from teachers and peers can maintain or increase a task's rigour, whereas questions and comments focusing on rote or procedural aspects will downgrade an otherwise challenging task (Grossman, 2019). For this reason, it is critical to also study the interaction between teachers and students as they work on a given task. Literary texts often involve complex webs of meaning that invite various interpretations. Yet, when teachers present their own interpretations to students or accept students' initial, spontaneous interpretations of a text, they prevent students from deeper explorations of the literary text. In this way, the cognitive demand of an initially complicated task may decrease (Tengberg et al., 2022). However, the cognitive demand of a task may sometimes be increased when authentic questions and teachers' uptake prompt students to develop their thoughts and consider alternative understandings or contradictory information (Nystrand et al., 1997; Soter et al., 2008).

3. (IMPLICIT) COGNITIVE ACTIVATION IN SWEDISH AND NORWEGIAN LITERATURE INSTRUCTION

Previous research on literature instruction in Sweden and Norway has paid little, if any, attention to different levels of cognitive activation. A few studies deal with aspects related to cognitive processing, and national curricula, as well as national tests, implicitly indicate the cognitive levels toward which Swedish and Norwegian teachers are expected to aim in their instruction. The Norwegian curriculum for language arts in lower secondary school states that students should be able to compare and interpret different kinds of literary texts and to reflect upon aspects such as purpose, content, genre conventions and literary devices (Ministry of Education and Research, 2019). The Swedish curriculum expresses similar ideas but is less detailed and only states that students should read and analyse different kinds of texts (Swedish National Agency for Education, 2022). Although the Swedish curriculum implicitly indicates that one purpose of reading literature is to learn how to analyse, understand and interpret literary texts, this is not reflected in the knowledge requirements (Gourvenec et al., 2020). In both Sweden and Norway, national tests are used to measure and assess students' reading comprehension according to curriculum goals. These tests include tasks that demand different levels of cognitive effort. In both countries, interpretive, reflective and analytical processes, rather than basic skills, are emphasised (Tengberg, 2017).

When investigating tasks related to literary texts in Swedish upper secondary textbooks, Ullström (2007) found that two different kinds of questions were common: control questions and open questions. Control questions assume that students have read the text and that they understand what the text says. There is, however, a risk that students may answer such questions without actually reading the text (Ullström, 2009), and Ullström (2007) argues that the use of control questions is problematic, since it might make students feel inferior as readers. Open questions may require answers based on the personal opinions of students. Often, these questions are neither about the text nor about the reader's understanding of it, but rather about something completely different. According to Ullström, tasks in textbooks seldom unite the text, the reader and the reading. More commonly, questions and tasks are loosely connected to the literary text and encourage readers to associate aspects beyond the text itself (Ullström, 2007). Bakken and Andersson-Bakken (2016) found that, in textbooks intended for language arts in Norwegian upper secondary schools, tasks related to literary texts are largely 'open'. This means that they can be answered or solved in different ways. Most of these tasks could be categorised as 'evaluative', which implies that students are asked to seek answers within themselves. In some cases, tasks are 'closed', and students are expected to either reproduce an answer that could be found directly in the literary text or find the answer through reasoning.

Teachers' questions about literary texts indicate what is important to pay attention to and shape students' reception of the text at hand. When investigating text-based discussions and situations in which fiction and/or non-fiction texts were read, Magnusson (2021) found that Norwegian lower secondary teachers predominantly asked text-dependent questions, which often guided students towards an understanding of the text. Some questions merely required literal comprehension, but the majority of them demanded some kind of interpretation. In a Swedish context, Tengberg (2011) analysed literary discussions in lower secondary classrooms and found that plot-oriented forms of reading were more common than other forms of reading. Teachers often asked their students what the story was about or encouraged them to discuss characters. This pattern has also been observed in other studies. For example, Nissen (2020) found that in literary discussions it seemed to be important for ninth-grade students to summarise what the story was about, and when writing about a short story that they had listened to, Swedish upper secondary students wrote content-related texts more often than did French students (Johansson, 2015).

To sum up, we know what Swedish and Norwegian curricula, national tests and textbooks prescribe when it comes to cognitive activation in literature instruction. Yet, we have only limited knowledge about the kinds of cognitive processes and challenges that students meet in their daily instruction, that is, the CAP of tasks as they are presented to students and as they work on them. This is the kind of knowledge that the present study seeks to contribute.

4. METHODS

4.1 Participants and data collection procedure

The present study is based on video data from Linking Instruction and Student Achievement (LISA) and draws on a sample of 49 lower secondary classrooms (Sweden: $N = 28$; Norway: $N = 21$) where students work on literary texts and solve various kinds of tasks related to these texts. The data are collected from a larger sample of 38 Swedish and 46 Norwegian classrooms that were sampled in order to match the national averages and distributions of variables, such as urban and rural areas, different socioeconomic backgrounds and varying achievement levels (for more details, see Tengberg et al., 2021 and Klette et al., 2017). All students participating in the study were 13-14 years old (grade 7 in Sweden and grade 8 in Norway).

In a Nordic context, large-scale video studies are rare, and the reason for using sub-samples from Sweden and Norway is twofold. First, data from a large sample result in more reliable conclusions. Second, cultural similarities across the Nordic countries, combined with national characteristics (for instance, policy development) (Reimer et al., 2018), make it interesting to analyse video data from these two neighbouring countries. When instructional traditions across cultural borders are contrasted, patterns and trajectories that might be taken for granted within a national context are made visible. Accordingly, it becomes possible to gain a deeper understanding of, for example, the quality of literature instruction.

Video recordings make it feasible for researchers to thoroughly document and observe different kinds of research items (Derry et al., 2010). The video design used in this study included two cameras, which recorded the same lesson simultaneously; one camera filmed the teacher, whereas the other one focused on the class. There were also two different microphones: one for the teacher and one for the class. In each classroom, four consecutive language arts lessons were recorded, and photos of whiteboard instructions, PowerPoints, students' assignments and other materials were collected. The lessons varied in length, but most of them lasted for 40-45 minutes.

All the teachers were encouraged to stick to their normal planning, which means that the study captures naturally occurring instruction. Due to the design, only a small sample of each teacher's instruction is represented. Since a large number of teachers took part in the study, the teaching methods, lesson content and literary texts vary. However, most teachers use texts from students' textbooks (Norway) or contemporary teenage novels (Sweden) (see Nissen et al., 2021; Gabrielsen & Blikstad-Balas, 2020). Classrooms also differ in how much time they spend on tasks related to literary texts, ranging from one to four lessons. Informed consent was given by the teachers, students and students' guardians. Not all the students wanted to take part in the research project, but since there were 'blind zones' in the classrooms, the teachers could still teach all the students at the same time.

4.2 Analysis

The study focuses on cognitive activation and estimates the CAP of tasks that students encounter in literature instruction. Tasks are defined as oral or written instructions telling students what to do or what to work with (e.g., to summarize plots, describe characters or discuss questions). Normally, all students worked on the same task. All instances where students were expected to work with literary texts in new ways and/or when the instructional format changed were treated as individual tasks. In an initial coding process, all situations where students worked with literary texts were identified. The number of tasks varied across classrooms (1-6 tasks per lesson), but most commonly, students worked with one task during the same lesson. In total, 174 tasks were identified (Sweden: $N = 87$; Norway: $N = 87$). These tasks varied considerably in length (see Figure 2). Mostly, less than 10 minutes were spent on one task (57% of all tasks), and students seldom worked on the same task for more than 20 minutes (18% of all tasks). There were more examples of short tasks in the Norwegian classrooms, whereas Swedish students more frequently worked on the same task for an extended period. The total amount of time spent working on these 174 tasks was 34 hours and 49 minutes (20 h 16 min in Sweden and 14 h 33 min in Norway). Lessons also included the reading of literary texts, oral book presentations, teacher lecturing and non-literary subject content; such activities were not considered in this study.

It is reasonable to assume that certain tasks are more challenging for some students than for others, but this study does not include data on how students themselves experienced the challenges posed by various tasks. Rather, the study relies on an analysis of the degree to which various tasks required students to make use of different cognitive processes when responding to them. In order to be able to estimate the objective cognitive activation potential (oCAP) (Weingartner, 2021) of tasks, a coding manual (see Figure 1) consisting of three different categories was developed. It was inspired by Bloom's taxonomy (Anderson et al., 2001) and based on the assumption that some processes (e.g., analyse, reflect and create) are more complex than others (e.g., summarise, explain and describe). When tasks involved cognitive processes from different oCAP categories, they were coded according to the most complex category. For example, when students were asked to choose (i.e. *recall or retrieve*) a memorable event from a novel they had read, *explain* why they chose it and *reflect on* what their choices tell about them as readers, the task was coded as 'Analyse and reflect'.

During the coding process, the ways teachers presented tasks to their students, orally or through written instructions, were noted. Subsequently, these descriptions of tasks formed the basis of the coding. The time spent on tasks was not taken into consideration. Therefore, 'long' and 'short' tasks could receive the same code. The oCAP coding exclusively relied on aspects clearly expressed in the instructions and visible to the coder. Generally, tasks were introduced in ways that made it possible to understand what was expected from the students, but there were also situations

where teachers' instructions were vague, for instance, when students were told to continue working on whatever they had been doing during a previous lesson. However, with one exception, it was always possible to assign an oCAP code to the tasks.

Figure 1. Coding manual: objective cognitive activation potentials (oCAP)

Objective cognitive activation potential (oCAP)		
Recall and share	Understand and explain	Analyse and create
This code was applied when students were expected to recognise, recall and retrieve information.	This code was applied when students were expected to describe, summarise, explain or represent their understanding of a literary text and/or to exemplify and classify aspects, e.g., related to the form and style of a literary text.	This code was applied when students were expected to compare, reflect on, evaluate or analyse literary texts.
Furthermore, it was applied when students had previously processed their understanding of a literary text and subsequently shared it with their peers.		Furthermore, it was applied when students were expected to use their understanding of the literary text and create something new, e.g., when turning a short story into a poem.

Since tasks and teachers' intentions are not always carried out in the way they are intended, this study also investigated to what extent teachers increased or decreased the CAP of tasks. When the realised cognitive activation potential (rCAP) was estimated, only aspects that could be observed during a particular lesson were considered. The rCAP involved other sub-dimensions of cognitive activation than the oCAP (see Praetorius et al., 2018). It was coded on three different levels (decreased, unchanged or increased) and applied to all tasks. This coding was performed based on the assumption that some factors increase the CAP, whereas others decrease it, regardless of what kinds of cognitive processes a task invites (see Figure 1). For example, situations where many students are active and where teachers ask clarifying questions and encourage students to develop their ideas can be expected to increase in rCAP. On the other hand, in situations where teachers provide answers, simplify tasks or give unclear instructions, the rCAP can be expected to decrease. Moreover, in classrooms where students are unable to stay focused, for example, due to disorders, the rCAP most likely decreases. Thus, although the rCAP is primarily captured through aspects related to the dimension of cognitive activation (see Praetorius et al., 2018), it may also be affected by aspects related to classroom management, which has an impact on students' cognitive achievement and understanding since it is a precondition for students' time-on-task engagement (Klieme et al., 2009).

4.3 The coding process and reliability

The author of the paper developed the coding manuals and coded all the tasks. In order to determine whether the manuals could also be used by other coders and to

check for inter-rater reliability, 16% of all the tasks were double coded by a researcher colleague not associated with the study. Cohen's kappa between raters was 0.74 for the oCAP and 0.70 for the rCAP, which means that the inter-rater reliability can be described as *substantial* (according to Landis & Koch, 1977) and satisfactory for the purposes of the study.

5. RESULTS

This section consists of two parts. First, I present analyses related to the oCAP of tasks. Thereafter, I present analyses related to the rCAP of tasks and describe how the different levels of rCAP (decreased, unchanged and increased) relate to the oCAP categories, instructional format, literary discussions and extended writing assignments.

5.1 *The objective cognitive activation potential of tasks*

The oCAP of tasks was analysed in order to find out what kinds of cognitive processes tasks in these Swedish and Norwegian classrooms invited. It was found that tasks most commonly required students to 'Understand and explain' (51% of all tasks). As for the other two oCAP categories, students were more often asked to 'Recall and share' than to 'Analyse and create'. There were, however, some differences between the two sub-samples, and the distribution of tasks across oCAP categories was more even in Sweden than in Norway (see Table 1).

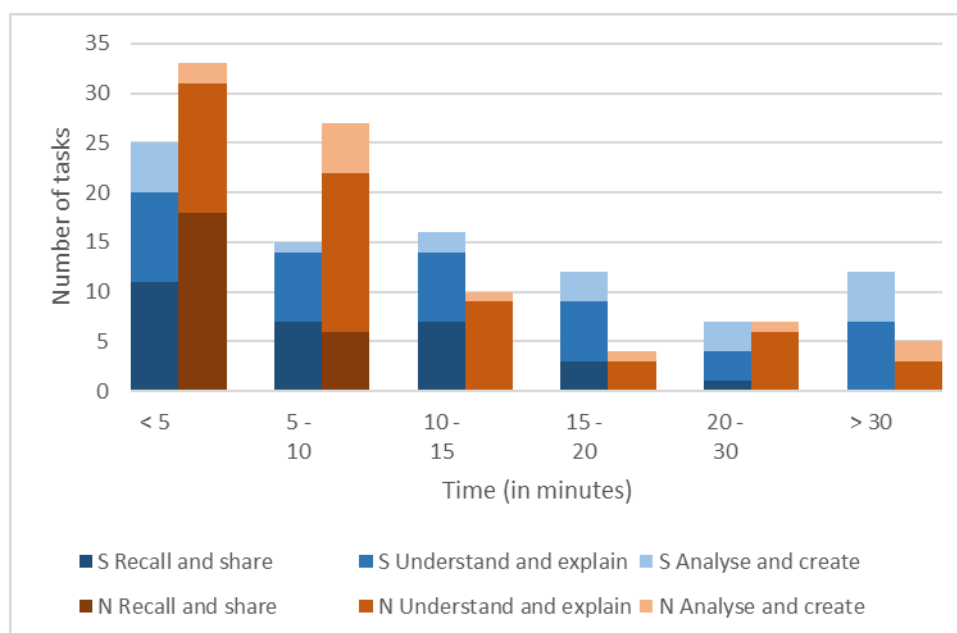
Table 1. Number (and %) of tasks in relation to oCAP categories

Country	Tasks	Recall and share	Understand and explain	Analyse and create
Sweden	N	29	39	19
	%	33.3%	44.8%	21.8%
Norway	N	24	50	12
	%	27.6%	57.5%	13.8%
Total	N	53	89	31
	%	30.5%	51.1%	17.8%

As previously mentioned, tasks varied in length, and shorter tasks were more common than longer tasks. Figure 2 shows the association between time spent on tasks and oCAP level. As displayed, both shorter and longer tasks required different kinds of cognitive processes. Shorter tasks were, however, more often coded as 'Recall and share' than were longer tasks. Tasks coded into this oCAP category usually involved some kind of oral interaction. Often, teachers would check students' understanding of literary texts by asking control questions (rather than encouraging them to exchange ideas). Students were then expected to recall details and brief information from the text or to share answers from previous tasks. Occasionally, students would

work with vocabulary related to a literary text or draw pictures visualising their understanding of individual episodes from a literary text.

Figure 2. Numbers of tasks and oCAP categories in relation to time



Tasks coded as 'Understand and explain' often asked students to summarise or retell the plot; this was the case in 43% of such tasks. This could be done orally or, more often, in writing. Furthermore, students were frequently asked to explain, for example, why certain things happened in the text. Additionally, there were tasks where students were required to classify literary devices and genre features or to describe characters and settings.

A limited number of tasks (17.8% of all tasks) of different lengths were coded as 'Analyse and create'. Tasks in this category most often entailed some kind of analysis or reflection, but students were sometimes expected to make comparisons, either between texts or in relation to their own experiences. For example, in one Norwegian classroom, students compared the ways fathers were described in two different texts, and in one Swedish classroom, students were encouraged to compare the main character's experiences to their own experiences. Moreover, this code was used when students in one Swedish and one Norwegian classroom adapted a literary text from one genre to another, thereby creating something new.

5.2 The realized cognitive activation potential of tasks

The rCAP of tasks concerns their implementation in class. An analysis of all the tasks showed that, most commonly (63% of tasks), the rCAP remained unchanged. This was true for all categories of oCAP, except for 'Analyse and create'. When rCAP was investigated in more detail, it was found that the distribution of rCAP varied depending on the category of oCAP (see Table 2). Figure 3 shows that the rCAP changed more (decreased or increased) depending on the category of oCAP, which reflects how teachers interacted more with their students when they worked on tasks demanding complex cognitive processes. It is, however, important to remember that the distribution of tasks across the different categories of oCAP was uneven and that rather few tasks were coded as 'Analyse and create' (see Table 1).

Table 2. Distribution of the rCAP in relation to the oCAP

		Decreased	Un- changed	Increased	Total
Recall and share	Sweden	5 17.2%	20 69.0%	4 13.8%	29
	Norway	2 8.3%	19 79.2%	3 12.5%	24
Understand and explain	Sweden	6 15.4%	24 61.5%	9 23.1%	39
	Norway	9 18.0%	36 72.0%	5 10.0%	50
Analyse and create	Sweden	10 52.6%	5 26.3%	4 21.1%	19
	Norway	2 16.7%	6 50.0%	4 33.3%	12
Total	Sweden	21 24.1%	49 56.3%	17 19.5%	87
	Norway	13 15.1%	61 70.9%	12 14.0%	86 ²

The rCAP seldom changed for tasks coded as 'Recall and share' (30% of all tasks) and 'Understand and explain' (51% of all tasks). However, when the rCAP did increase, an initially simpler task evolved into something that was more cognitively challenging, primarily thanks to teachers' interaction with the students. There were also a number of tasks where teachers answered the questions themselves or gave confusing or unclear instructions. Consequently, the rCAP decreased. For all oCAP categories (and for tasks of different length) the rCAP more frequently changed in the Swedish sub-sample than in the Norwegian one, and for Swedish tasks coded as 'Analyse and create', the rCAP decreased more often than it remained unchanged (see Table 2).

² For one Norwegian task, it was not possible to decide the oCAP.

When students worked on tasks related to literature instruction, there often occurred some kind of cooperation, either in whole-class instruction, groups or pairs (64% of all tasks). In these situations, the rCAP most often remained unchanged, but decreases or increases were not uncommon (see Table 3). Among the different tasks coded as 'Understand and explain' or 'Analyze and create', there were 35 discussions about literary texts lasting more than 5 minutes (Norway: $N = 22$; Sweden: $N = 13$). In these discussions, it was common for teachers to ask clarifying questions, encourage multiple solutions or make sure that many students participated, which increased the rCAP. When teachers simplified the tasks and questions or presented the answers and solutions themselves the rCAP decreased.

Figure 3. The rCAP (in %) in relation to the oCAP (for 173 tasks)

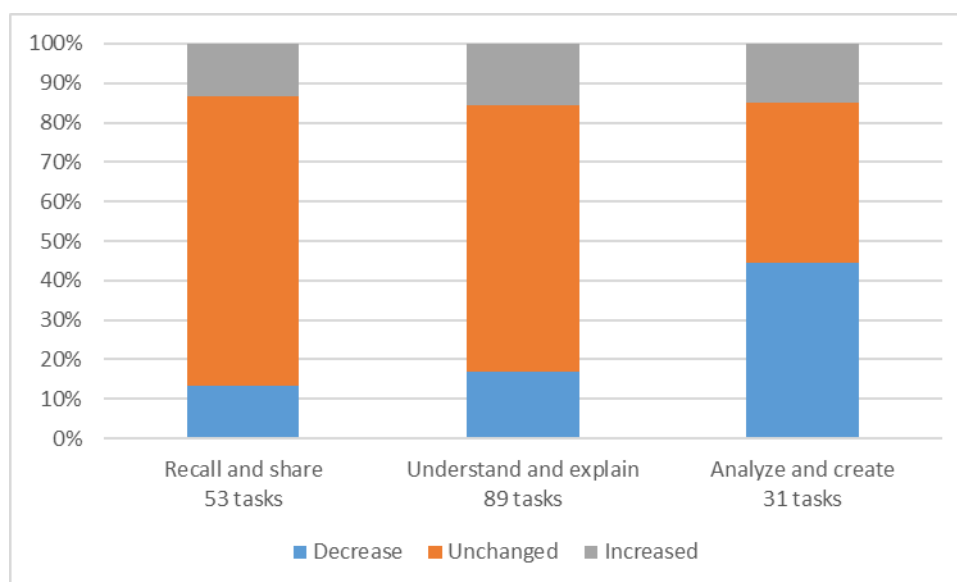


Table 3. rCAP in relation to the instructional formate

rCAP	Whole class, group or pair		Individual seatwork	
	Number of tasks	% of tasks	Number of tasks	% of tasks
Decreased	18	16,1%	16	25,8%
Unchanged	70	62,5%	41	66,1%
Increased	24	21,4%	5	8,1%
Total	112	100,0%	62	100,0%

Individual seatwork was less common (36% of all tasks). When students worked on their own, the rCAP mostly remained unchanged. In both countries, there were few examples of situations (9% of all tasks) where students wrote about literary texts for

an extended period of time (more than 10 minutes). These tasks were coded as either 'Understand and explain' ($N = 7$) or 'Analyse and create' ($N = 8$). Writing activities coded as 'Understand and explain' primarily implied that students were to summarise the plot of a text they had read. For these tasks, the rCAP mostly remained unchanged, but for all writing assignments coded as 'Analyse and create', the rCAP changed. In three Swedish classrooms (6 tasks), students' writing involved analyses and comparisons, but the rCAP for these tasks decreased because the instructions were unclear or because teachers told students what to write. It also seemed difficult for students to stay focused, perhaps because they were expected to work on the same cognitively demanding task for quite a long time (30-55 minutes). However, one Swedish and one Norwegian teacher supported their students in terms of their writing (tasks coded as 'Analyse and create') in ways that can be expected to increase the rCAP.

6. DISCUSSION

In the present study, the oCAP of 174 tasks related to literature instruction was assessed and estimated. An analysis revealed that these tasks most often implied cognitive activation coded as 'Recall and share' or 'Understand and explain', comparatively low-level cognitive processes. This is in line with the findings of previous research (see, e.g., Tengberg et al., 2021; Weingartner, 2022). Students were seldom expected to analyse, compare or interpret texts that they had read.

In literature instruction, tasks from different oCAP categories can help students develop their understanding of literary texts. Since different tasks serve different purposes, it is reasonable to presume that students sometimes work with activities that are not very cognitively demanding. As Newmann et al. (1998) point out, it is important that students practise basic skills as well as develop abilities that are complex and intellectually challenging. For example, vocabulary is important for students' understanding of texts (Roe, 2014), especially for second language learners (Nation, 2013). Accordingly, it might be relevant for teachers and students to pay attention to difficult words in literary texts ('Recall and share'). Asking control questions about a text can be a way for teachers to find out if students remember what has previously happened in a story ('Recall and share'). When this takes place before a new part of a story is read, students are presented with (or reminded of) relevant contextual knowledge that will help them understand the text (cf. Bransford & Johnson, 1972).

In this study, it was found that students were frequently asked to summarise the plot of a story or to describe characters and settings ('Understand and explain'); previous research suggests that this focus is rather common, at least in the Swedish context (Johansson, 2015; Nissen, 2020; Tengberg, 2011). Tengberg (2011) observes that teachers often want to know how students have understood a text, either to check if they have read it or to use their understandings of the text as a starting point for more in-depth discussions. In this study, however, few tasks asked students to,

for example, analyse and create, which implies that teachers and students seldom went beyond representing, paraphrasing or summarising the content of a literary text. Thus, rather than worrying about the fact that tasks are sometimes assigned low levels of oCAP, it is more critical to pay attention to the fact that, when students actively work with literary texts, tasks that require explanations and representations of understanding seem to dominate literature instruction in Swedish and Norwegian classrooms. The students who participated in this study were quite young (13-14 years old), but if they are to learn how to interpret, compare and analyse literary texts, it is important that they get the opportunity to practise this at an early age. The fact that these skills are emphasised in language arts curricula and national tests in both countries (Gourvenec et al., 2020; Tengberg, 2017) supports the notion that tasks and assignments that require higher-order thinking ought to be included in literature instruction.

Another aspect of importance is whether teachers actually take advantage of the oCAP of tasks, or if the rCAP is too often decreased. In the present study, the rCAP primarily remained unchanged, which corresponds to the findings of Weingartner (2021). In some cases, this might reflect a deliberate decision made by the teacher. For example, in a test situation, it is important that students work independently, and it can certainly be relevant for students to ponder the meaning of a text individually or in discussions with peers before they share their understandings with the teacher. However, the fact that the rCAP remains unchanged might also suggest that interactions between students and their teachers are merely based on practical issues, which impedes students' opportunities to develop their literary competence. It was found that Swedish teachers more often changed the rCAP-level than Norwegian teachers did. The larger number of short tasks in the Norwegian classrooms could not explain this difference. Consequently, the present study suggests that other factors, for example instructional traditions, teacher training and professional development courses, presumably have an impact on the way teachers interact with their students as tasks are implemented in the literature classroom.

Previous research has suggested that teachers often adapt their instruction and feedback to a particular group of students and to their abilities and need for support (Ayalon & Even, 2016; Praetorius & Charalambous, 2018). Therefore, the fact that some teachers decrease the rCAP might imply that certain individuals or groups of students are not ready for the cognitive challenges that a certain task demands. Nevertheless, it is problematic when teachers facilitate tasks or present answers or solutions rather than provide students with tools and strategies that can help them work independently. In the present study, the rCAP often decreased for tasks coded 'Analyse and create'. There were, however, also a number of examples where teachers managed to increase the rCAP for tasks from this category, which implies that it is possible for teachers to support their students in ways that teach them how to solve cognitively challenging tasks. Findings from previous research have shown that explicit teaching and modelling and the provision of guided practice in terms of strategies, as well as involving students in collaborations with peers and teachers, are

important factors that can help students develop into competent readers and writers (Grossman et al., 2013; Olson & Land, 2007). Therefore, it is important that teachers reflect not only upon what kinds of tasks they present to their students, but also on how the intellectual rigour of these tasks can be maintained or increased.

Some limitations of this study must be acknowledged and discussed. The concept of cognitive activation is in itself problematic. Previous research has shown that it is difficult to measure cognitive activation with sufficient generalisability (Taut & Rakoczy, 2016), and there is little consensus on how it ought to be operationalised (Praetorius et al., 2014). In the present study, cognitive activation was measured in two different ways (oCAP and rCAP), but it is a complex concept that includes even more aspects and perspectives. The cognitive challenges that a task involves depend on the individual student and his or her capacity, conditions and qualifications (Lewis & Smith, 1993). Moreover, individual students respond differently to cognitively activating stimuli, such as tasks and questions from teachers and peers (Groß-Mlynek et al., 2022). In the present study, tasks coded into the same category of oCAP might also vary in difficulty, which is a different problem. For example, summarising a text might imply that the reader either synthesises the plot or presents the different events in the same order as they occur in the story (Johansson, 2015). Furthermore, in this study, oCAP was merely estimated based on what kind of cognitive processes tasks invited. There are additional aspects that could have been taken into consideration, for example, the structuredness and complexity of tasks (Jonassen, 2000), the plausibility of distractors when searching for answers (Mosenthal, 1996) and the difficulty and complexity of literary texts.

The concept of cognitive activation was used to highlight a critical aspect of quality in literature instruction, but there are also other ways to capture this. However, since cognitive activation involves and embraces other elements related to teaching quality (e.g., the use of authentic texts and high-quality discussions about texts), it can be argued that it is especially valuable to focus on cognitive activation in literature instruction. When doing so, it is relevant to consider what motives lie behind teachers' choices and what factors influence their instruction, but it was not within the scope of the present study to find out why each individual teacher chose to work with literature in a certain way. In addition, only four lessons from each classroom were video recorded; thus, the video data did not always reveal how the teaching projects related to literature instruction were introduced and/or brought to an end.

Yet, despite its limitations, this study contributes valuable information about cognitive activation in Swedish and Norwegian lower secondary literature instruction. The most important finding was that, across the two countries, the oCAP of tasks was primarily coded as 'Recall and share' or 'Understand and explain', which implies that, in literature instruction, students in these two countries are primarily expected to reproduce knowledge. There were also some interesting differences between the two sub-samples: shorter tasks were more common in Norwegian classrooms, and

Swedish teachers changed the level of rCAP more often than did Norwegian teachers. Presumably, both these aspects have an impact on teaching quality, but this is an issue that will need further investigation.

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