Razvoj učnih spretnosti pri pouku likovne umetnosti: prednosti ozaveščenosti učiteljev

HELEN AROV & ANNA-LIISA JÕGI

Povzetek V raziskavi proučujemo razvoj učnih spretnosti učencev in zavedanje okvirjev učnih spretnosti pri učiteljih likovne umetnosti na srednji šoli. Ukvarjamo se tudi z odnosom med učnimi praksami, ki jih uporabljajo učitelji pri razvoju učnih sposobnosti, ter z učno motivacijo dijakov pri urah likovne umetnosti. V raziskavi sta bili uporabljeni kvalitativna in kvantitativna metodologija. Spremljanje pouka likovne umetnosti in intervjuji so bili izvedeni na vzorcu desetih učiteljev likovne umetnosti na estonskih srednjih šolah, vprašalnik o učni motivaciji, interesih in ciljih likovne umetnosti pa je izpolnilo 148 dijakov iz opazovanih razredov. Raziskava poudarja pomen učiteljevega zavedanja vrednosti učnih spretnosti ob specifičnih predmetnih znanjih, s čimer se izboljšujeta dijakova avtonomna motivacija in fleksibilno, prilagodljivo določanje ciljev pouka.

Ključne besede: • učne spretnosti • učna motivacija • načini poučevanja • srednja šola • likovna vzgoja •

NASLOV AVTORIC: mag. Helena Arov, Estonska akademija umetnosti, Oddelek za umetnostno izobraževanje Estonske akademije umetnosti, Estonia pst 7, 10143 Tallinn, Estonija, e-pošta: helen.arov@artun.ee, dr. Anna-Liisa Jõgi, višja raziskovalka, Univerza v Talinu, Fakulteta za naravoslovje in zdravje, Narva mnt 25, 10123 Tallinn, Estonija, e-pošta: aljogi@tlu.ee.

Supporting learning skills in visual art classes: The benefits of teacher awareness

HELEN AROV & ANNA-LIISA JÕGI

Abstract This study focused on middle school art teachers supporting the development of students' learning skills, specifically their awareness of the framework of learning skills. It also looked at the relations between the teaching practices teachers use for supporting learning skills and students' learning motivation in art classes. The study combined qualitative and quantitative research methods. The class observations and interviews were conducted with ten Estonian middle school art teachers. One hundred and forty-eight students from the observed classes filled out the learning motivation questionnaire about their interest and achievement goals in visual arts. The study draws attention to the importance of teachers being aware of and valuing learning skills alongside subject specific knowledge, as it could enhance students' autonomous motivation and support adaptive goal setting.

Keywords: • learning skills • learning motivation • teaching practices • middle school • art education •

CORRESPONDENCE ADDRESS: Helena Arov, MA (art education), Estonian Academy of Arts, Departmen of Art Education Estonian Academy of Arts, Estonia pst 7, 10143 Tallinn, Estonija, e-maila: helen.arov@artun.ee, Anna-Liisa Jõgi, Ph.D., Senior Research Fellow, Tallinn University, School of Natural Science and Healt, Narva mnt 25, 10123, Tallin, Estonia, e-mail: aljogi@tlu.ee.

Introduction

Learning skills are among the eight key competences described in the Estonian National Curriculum for Secondary Education, alongside mathematics, entrepeneurship, digital competence, values, social competence, communication and self-management competence. These key competences have been included in the national curriculum since 2011, and have spurred many discussions of how to support different key competences in various subject domains and school levels. This study focuses on teachers' actual in-class practices, as well as their awareness of learning skills in art classes. The second aim of the study is to explore relations between teacher practices and their students' motivation to learn art.

Research on promoting self-regulated learning in the classroom has revealed that teachers mostly support learning strategies implicitly - by arranging a study environment that enables self-regulation in such a way that students are not explicitly told to use learning strategies. However, students seem to benefit more from explicit strategy training: the a direct teaching of learning strategies (Kistner et al, 2010). Explicit training is more likely if teachers are aware of the framework of learning skills and believe that supporting students to be self-regulated learners benefits subject specific learning (Dignath-van Ewijk & van der Werf, 2012).

Learning Skills

Broadly defined, learning skills are the skills needed in the learning process. Learning skills integrate a variety of accordant cognitive skills and regulatory processes that enhance the effectiveness and efficiency of students' learning (Devine, 1987; Gettinger & Seibert, 2002). Here, we rely on the framework of self-regulated learning, which states that meaningful and effective learning must be based on the awareness of the learner him(her)self, his(her) goals, needs, prior skills and abilities, awareness of learning process and active regulation of all these by the learner. According to this framework, learning skills can be addressed as four areas of regulation: resource management, regulation of motivation and emotions, cognitive learning strategies and metacognition (Boekaerts, 1999; Pintrich, 2004).

The learning environment and student autonomy in study situations both play crucial roles in developing self-regulated learning and therefore the willingness to invest in a deeper understanding of and competence in assignments (Bergsmann et al., 2013). To be self-regulated learners, students need to control the environment and their own actions by planning their time, focusing their effort, deciding to ask for additional help or planning the study process with fellow students (Pintrich, 2004). These kinds of resource management strategies can help students adjust to the learning environment as well as change the environment to suit their own goals and needs (Pintrich, 1999).

In the framework of self-regulated learning, motivation is considered to be a driving force behind the learning process. It is used in the context of describing actions that are purposefully initiated and directed (Boekaerts, 1999). Students themselveschoose

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whether and how much they are involved in learning, as well as choosing the orientation and direction of their goals (Elliot & McGregor, 2001). Striving to learn is influenced by many motivational beliefs – for example beliefs about the relevance of a certain task and the perception of difficulty. Equally important is knowledge of how to deal with negativity and anxiety in the learning process (Pintrich, 2004). Learning to regulate one's motivation is an inevitable component of the journey to being a self-regulated learner (Wolters, 2003).

Learning new things is easier if students' knowledge is more structured because this helps to add new information to the existing system and use the knowledge. Therefore, it is important for students to acquire cognitive learning strategies, i.e., how to organize and acknowledge already obtained knowledge. Learning cognitive strategies encompasses defining the markers of a good learning strategy: understanding how to use a certain strategy, what skills the strategy subsumes and what are the options for using a certain strategy (Montalvo & Torres, 2004). Effective use of cognitive learning strategies proceeds hand in hand with metacognitive skills (Pressley, Borkowski & Schneider, 1987).

Metacognitive learning skills consist of two wider subject fields: cognitive awareness of learning and its regulation (Schraw & Moshman, 1995). A person who knows how and when to use different learning strategies can better assess varied learning situations and therefore also choose more suitable learning strategies. Regulated learning mainly includes three stages: planning, observation and evaluation of the learning process. It is important to mention that knowledge of learning and observational skills increase with age, but even adults have difficulty controlling these in new situations (Shraw, Crippen & Hartley, 2006). Therefore, wide and thorough support of metacognition is needed for developing adaptive metacognitive skills (Veenman & Spaans, 2005).

It is widely acknowledged that learning strategies are largely domain specific (Alexander et al., 2011; Boekaerts, 1999). Students acquire and use certain strategies in certain contexts and do not tend to transfer learning strategies from one domain to another by themselves; hence, supporting learning strategies is most effective in a domain-specific context (Donker et al., 2010; Hattie, Biggs, & Purdie, 1996).

Supporting learning skills in the art classroom

The idea of learning arts has shifted from spontaneous expression and immediate activity to a viewpoint that creating artwork is a planned process that engages students on a personal and cognitively powerful level (Gullatt, 2008; Rabkin & Redmond, 2006). Students' art is an expression of their experiences and knowledge, which combines familiar visual imagery and the cultural values surrounding them (Bresler, 1994; Goodman, 1968). Davis (1999) describes arts as naturally synthetic – embodying a range of disciplines. She sees art education as a place for students with different learning styles to make meaning of the world and what is being learned (Davis, 1999). Still, the research on supporting students' learning skills in the context of art classes is surprisingly limited.

Ley and Young (2001) have described four principles that can be embedded into instruction and that are flexible within content material and learning context. These four principles are as follows: a) guide learners to prepare and structure an effective learning environment; b) organize instruction and activities to facilitate cognitive and metacognitive processes; c) use instructional goals and feedback to support students with learning progress monitoring; and d) provide learners with opportunities for self-evaluation (Ley & Young, 2001). These four principles also coincide with the four subsections of learning skills that form the backbone of this study (see Boekaerts, 1999, Pintrich, 2004). In the following sections, we will briefly explain the presence of these principles in the context of an everyday art class.

Creating a good learning environment in the context of art education can be seen as teaching the use of various techniques and mediums. The aim is to individually choose appropriate techniques and tools to reach your goal. Managing the environment and actions is related to art teachers' desire to offer students captivating assignments, so they will be eager to work for a longer period of time. Teaching students to keep the learning environment organized is also important. Students who have learned how to take care of tools and keep order have an opportunity to concentrate their minds on other more complex tasks (Winner et al., 2006).

Students are more motivated and learn to regulate their motivation in classrooms that are oriented towards mastery and self-regulation. In order to be motivated, students need to have more opportunities to take part in creating the learning environment and leading their learning process. In turn, this sets the focus more on gaining mastery, i.e. understanding and meaning making, than on external rewards (Ames, 1992; Roeser, Eccles & Sameroff, 2000). Generally, in art classes, constant reflection is used in order to guide students to observe and evaluate their learning process. Throughout the working process, students are led to explain their choices and to express their intentions. Teachers continuously give feedback to the students; this helps students to evaluate their own and their classmates' work. Students are often asked to self-assess and advise others (Winner et al., 2006).

There is no ultimate cognitive learning strategy, since successful students use and combine a range of strategies. The teacher's goal is to introduce different strategies and to help the students find the most suitable strategy for them (Kistner et al., 2010; Wayetens, Lens, & Vandenberghe, 2002). This should be handled simultaneously in all study subjects. In art classes, students are taught to broaden their observational skills – to concentrate on the color, lines, texture, shape and expression of their own work as well as their classmates'. This kind of detailed observation is also used when observing and depicting the environment. In addition to copying visible objects, visualization is used, e.g., students create from their imagination. The teacher guides students to visualize the next steps of their work and various solutions (Winner et al., 2006.).

In the context of metacognitive learning skills, analyzing and reflection are supported by examining the art world. Students learn to see art as a social and communicative action. Students are guided to empathise with being an artist and to relate to the art world itself.

They are taught how to present themselves as artists and are encouraged to think where they could belong in the world of art if they are interested in becoming an artist or an art-worker (Dinham, 2010; Winner et al., 2006). Great importance is given to experimentation and individuality. Art teachers guide students to generate their own solutions and learn via experimentation. Thus, making mistakes is viewed as normal or even appreciated (Winner et al., 2006). Herewith, art lessons offer a safe and accepting environment to analyze and overcome failure.

Learning motivation in art classes

In the current study we explore how teacher practices are related to students' learning motivation because creative solutions never reveal themselves without motivation. Having motivation to create is a prerequisite for expressing one's own creative abilities (Runco, 2005). Students' beliefs in their abilities largely define the students' initial involvement in art lessons. Students' conception of the value of art lessons depends less on external factors like parental endorsement but more on the internal delight that they receive from creating artwork. Therefore, the art teacher has an important role in generating student appreciation for art lessons and art in general. The teacher's competence and conscious focus on the learning process play an important role in motivating students and helping them set goals (Pavlou, 2006). Students with low motivation frequently seem indifferent, but that is often due to fear of failure. Therefore, those students need more captivating activities that would encourage them to participate in art activities (Pavlou & Kambouri, 2007).

We examine students' motivation by focusing on their interest in art and the goals they have in art classes. Interest is considered as a motivational variable or a psychological state that occurs when a person and the object of interest interact, and the outcomes include concentration and positive affect (Hidi, 2006). The best liked art activities are described as novel or unusual, responsive to student needs for a realistic outcome, tasks that are controlled by students or where the topics fit student interest, and tasks that allow collaboration. Hence, students engage in art activities that are perceived as being interesting, useful, important and worthy of their time and effort (Pavlou, 2006).

Student engagement also depends on the goals they want to achieve. Learning can be directed towards mastery or performance goals. This subdivision is also divided into either working towards the goal (gaining either mastery or performance), or working against not achieving the goal i.e. avoiding failure. People with mastery approach goals are eager to understand what they learn, to improve their skills and obtain new knowledge. People with performance-approach and performance-avoidance goals compare themselves with the achievements of others and concentrate on appraisal given by others. The difference in setting goals is based on different beliefs about what constitutes success (Elliot & McGregor, 2001).

Research aims and hypothesis

This study sought to examine middle school art teachers' knowledge of how to enhance learning skills, as well as their awareness of supporting the development of learning skills. In addition, associations between teacher practices and student motivation to learn in art class were investigated.

In particular, the following research questions were examined:

1. Which learning skills do middle school art teachers support, and what methods or teaching practices do they employ to support learning stills?
2. How aware are the teachers of the learning skills framework, and how do they reflect on their teaching practices that support learning skills? We had one hypothesis in mind combining the first two qualitative research questions; we assumed that teachers whose awareness of learning skills is better use more teaching practices that support learning skills.
3. What is the relation between teaching practices, teacher awareness of learning skills and student motivation to learn in art classes? We assumed that the number of activities supporting learning skills is positively related to student interest and mastery- and performance-approach goals, and negatively related to student performance-avoidance goals in art class, and that teacher awareness of learning skills goes along with higher student interest and adaptive achievement goals.

Method

Ten visual art teachers from public schools and their 148 students participated in the study. The teachers worked at many different schools, seven of them in urban and three in rural areas of Estonia. The average working experience was 18 years (Min=1, Max=29); seven teachers were female and three male. All teachers worked on the basis of the national curriculum. Schools specializing in the teaching of visual arts were not included in the study.

One middle-school (Grades 7-9) visual arts class per teacher was observed. Students who took part in the observed lessons were included in the student sample. The average class size was 14.8 students (Min=7, Max=25). Mean age of students was 14.1 years (SD=0.84, Min=13, Max=16). In further description of results, the classes are numbered (Class 1 … Class 10).
All teachers were first informed about the study in general terms and, following classroom observations, were provided with more detailed information. The consent forms from the teachers and the parents of participating students were collected prior to the observations.

We used a mixed method research design, since it allows us to get the most comprehensive answers to our research questions. We used three different methods: classroom observation, a semi-structured interview and a survey.

Teaching practices that support students' learning skills in visual art classes were collected using classroom observation. The first author conducted the observations during a single lesson (45 minutes) during a regular school day. Teachers' approaches to the concept of learning skills and their awareness of ways to support learning skills in visual art classes were examined using semi-structured interviews. The first author conducted the face-to-face interviews following the class observations. Interviews lasted from 15 to 44 minutes. All interviews except one were audiotaped and later transcribed. One teacher disagreed with the recording, and this interview was written down as accurately as possible.

A motivational questionnaire was administered at the end of the observed lesson. Students were informed briefly about the aim of the study and the rules of data manipulation. It took approximately five minutes for students to fill in the paper and pencil questionnaire.

Coding scheme for the observations

A coding scheme was developed drawing upon the framework of self-regulated learning (Boekaerts, 1999; Pintrich, 2004). Based on the learning skills literature (e.g. Ley & Young, 1999; Pavlou, 2006; Winner et al., 2006) and personal experience as practitioners, we developed a coding scheme for the observations. Categories and subcategories for supporting learning skills and short examples of their appearance in instruction were described on rating sheets that were filled out as checklists during the observations (see Table 1). There was also plenty of extra space on the rating sheets to add notes and write down instruction that did not fit into any of the existing categories. Instruction that did not fit into any of the existing categories was also recorded.

Table 1. Categories of learning skills for which support was sought during the observation.

Category of learning skills	Example of teaching practices that support particular learning skills
Resource management strategies	
a) Learning environment	Guiding students to keep their art tools in order.
b) Time planning	Guiding students to manage their time during longer projects.
c) Effort regulation	Encouraging students to work persistently. Encouraging students not to give up when experiencing difficulties
d) Peer learning	Organizing learning in groups or pairs. Guiding a learning process in groups or pairs.
e) Help Seeking	Encouraging students to ask for help if needed.
Regulation of motivation and emotions	
a) Opportunities for self-expression	Guiding students to express their personal meaning for things or things that cannot be touched (e.g. feelings, smells)
b) Self-control	Guiding students to use positive speech instead of negative. Guiding students to visualize their successes.
c) Recognition of trying novel and innovative solutions	Appreciating student experimentation.
Cognitive learning strategies	
a) Using novel practices	Encouraging students to use novel practices and create new connections between ideas or objects.
b) Elaboration skills and critical thinking	Guiding students to discuss the meaning of art and the role of an artist. Guiding students to look for connections between learning art and everyday life.
c) Rehearsal and organization skills	Reminding students what has been learned earlier. Emphasizing the most important ideas or practices that are learned during the class.
d) Visualization skills	Guiding students to use their imagination to visualize what cannot be seen. Guiding students to create their work on the basis of imagination.
Metacognitive skills	
a) Planning one's own work of art	Guiding students to plan different stages of their work of art.
b) Evaluating one's own and peer work	Giving students an opportunity for self-evaluation. Asking students to collect their works into a portfolio.
c) Experimentation skills	Encouraging students to experiment with their ideas.
d) Reflection skills	Guiding students to reflect on their working process, decisions and further plans. Asking students questions about their working process.

Semi-structured interviews

The interview questions were developed according to our research questions. Teachers were asked how aware they were of learning skills, what kind of learning skills are the most important in the context of art classes, whether and how they planned on supporting student learning skills, whether and how they assess student learning skills, and whether and how they explain to students the purpose and usefulness of developing learning skills. Understandability of the interview questions was piloted with one art teacher, who was not included in the sample.

Motivational questionnaire

Students' subject specific interest and achievement goals were assessed by self-report questionnaires. The Estonian version of the Task Value Scale for Children (three items; Aunola, Leskinen, & Nurmi, 2005; Jõgi, Mägi, & Kikas, 2010) was used to measure students' interest in the visual arts. Mastery-approach (four items), performance-approach (three items) and performance-avoidance goals (three items) in visual arts were assessed with statements adapted from the Patterns of Adaptive Learning Survey (Midgley et al., 2000) and the achievement goal questionnaire (Elliot & Church, 1997, Mägi, Häindkind, & Kikas., 2010). Students were asked to indicate to what extent each statement applied to them, using a five-point Likert scale (1 - "the statement does not apply to me"; 5 - "the statement applies to me). The internal reliability of all motivational constructs was very good (Cronbach's α = .73 - .88). The mean value of each scale was used in further analysis.

Analysis strategy

Results from the observations were gained by counting the teacher activities that were recorded under each category of learning skills. The interviews were analyzed using content analysis. We looked for teachers' awareness of different aspects of learning skills as well as supporting students' learning skills systematically, and drawing students' attention to the development of learning skills along with domain-specific skills. We used analysis of variance (ANOVA) in the statistical package SPSS Statistics 18 to examine the relations between the teachers' teaching practices, awareness of learning skills and students' interest and goals in art classes.

Results

Teaching Practices for Supporting Learning Skills

A range of learning activities were planned in the classes that were observed. In some classes students were painting or drawing; in others they were learning origami, ceramics or textile printing. A common characteristic for all the classes observed was an emphasis on practical activities: these children were creating something.
Most of all, teachers supported cognitive learning strategies, especially rehearsal and organization strategies (38 times in total for 10 observed classes, for example "I purposely

haven't shown you the previous works, because that could lead to imitativeness. /.../ You are the author and you make the decisions, I can only give you some tips!"). Less attention was paid to resource management skills (16 times, for example "You only have today for the drawing part of the task!") and to metacognitive skills (18 times, for example "Are you planning a rectangular cup? Why don't you cut /the clay/ directly from here?"). Regulation of motivation and emotions was the least supported during these classes. Teaching practices that support student motivation or emotions were detected only eight times (for example "Great, everything is correct! We are on schedule and we will finish on time!").

About half the practices that supported student learning strategies were directed to the whole class. Another half of the practices guided a single student or a small group of students. This means that not all the students in these classes were involved in these practices.

Teacher Awareness of Learning Skills

The interviews revealed that teachers' perception of learning skills is often confused with domain-specific skills. Teachers expressed disorientation in explaining their notions of learning skills. When discussing learning skills both in general and in the context of art education, it was mostly abilities associated with cognitive learning skills that were mentioned.

Two teachers out of ten gave a wider explanation of learning skills. For example, one of these teachers described learning skills as follows: "How someone plans their learning, how he(she) takes him(her)self into consideration – what kind of a learner he(she) is. Or for example, if a person has to remember something, which strategies or techniques he(she) uses. Or let's say, organizing what has been learned or finding information about something… The ability to work independently and also the ability to work in a group".

When planning how to support student learning skills, the teachers emphasized that learning skills are a natural part of the process. Teachers pointed out discussions with students and observation of working process as the main methods for assessing students' learning skills. Interviewees stated that they supported learning skills rather subconsciously. Also, most teachers did not acknowledge the need to support the development of student learning skills. Only three teachers said that they deliberately supported students' learning skills.

Teachers said that they were aware of that student passivity possibly reflected struggles due to a lack of learning skills. Behind indifference could be a fear of failure, not a negative attitude towards the subject or general lack of interest. High anxiety also prevents students from taking responsibility for their learning. The factors that were described by teachers that most often obstruct support for learning skills, like lack of time and means, or too many students in a classroom, are only indirectly connected with learning skills.

Students' Learning Motivation and Its Relation to Teaching Practices and Teacher Awareness

The students' learning motivation in art classes was evaluated as their interest and achievement goals. Descriptions of and interrelations between measured constructs are presented in Table 2. Student interest was positively related to mastery-approach and performance-approach goals. Students who liked art classes more wanted to gain mastery and get good results in their art classes. A positive relationship was also found between mastery-approach and performance-approach goals and between performance-approach and performance-avoidance goals. The latter means that those students whose goal is to get good grades and show their competence in comparison to others are at the same time oriented to avoid failure.

Table 2. Descriptions of and interrelations between student interest and achievement goals in art classes.

Motivational constructs	Mean	SD	Correlations		
			1.	2.	3.
1. Interest	3.26	1.06	-		
2. Mastery-approach goals	3.34	0.83	.67*	-	
3. Performance-approach goals	2.17	0.95	.32*	.38*	-
4. Performance-avoidance goals	1.72	0.83	.03	.11	.41*

Note. SD – standard deviation
* p < .001

Comparing students' learning motivation in different classes, we conducted four analyses of variance with Games-Howell post hoc tests. Results indicated that class had a major effect on students' interest, $F(1, 147) = 2.96$, $p = .003$, $\eta^2 = .16$, mastery-approach, $F(1, 147) = 4.25$, $p < .001$, $\eta^2 = .22$ and performance-avoidance goals, $F(1, 147) = 2.09$, $p = .034$, $\eta^2 = .12$. No class effect was found on performance-approach goals. Post hoc analyses revealed that student interest was significantly lower in Class 1 (M = 2.53, SD = 1.38) than in Class 4 and Class 10 (M = 3.91, SD = 0.85 and M = 3.87, SD = 0.82, respectively). Students from Class 1 also set themselves fewer mastery-approach goals (M = 2.58, SD = 0.92) than students from Class 3 (M = 3.42, SD = 0.67), Class 5 (M = 3.79, SD = 0.73), Class 7 (M = 3.91, SD = 0.94) and Class 10 (M = 3.70, SD = 0.60). Less mastery-approach oriented were also the students from Class 2 (M = 3.11, SD = 0.20), compared to the students from Class 10. Although a statistically significant class effect on performance-avoidance goals was found, a post hoc test did not reveal any pairwise differences between the classes. This can be explained by the fact that pairwise tests are more conservative, i.e. they have less statistical power compared to ANOVA (Field, 2005).
Next, we analyzed the teaching practices that supported learning skills from the observational results. We focused on teachers whose students' mean interest and mastery goal orientation differed significantly. Students from Class 1 and Class 2 were considered to be less motivated, and students from Class 3, Class 4, Class 5, Class 7 and Class 10 were considered to be more motivated. Surprisingly, we did not find any interpretable

differences in the quantity of activities supporting various learning skills between teachers of the less and more motivated classes. Teaching practices intended to support various learning skills did not reveal any systematic patterns.
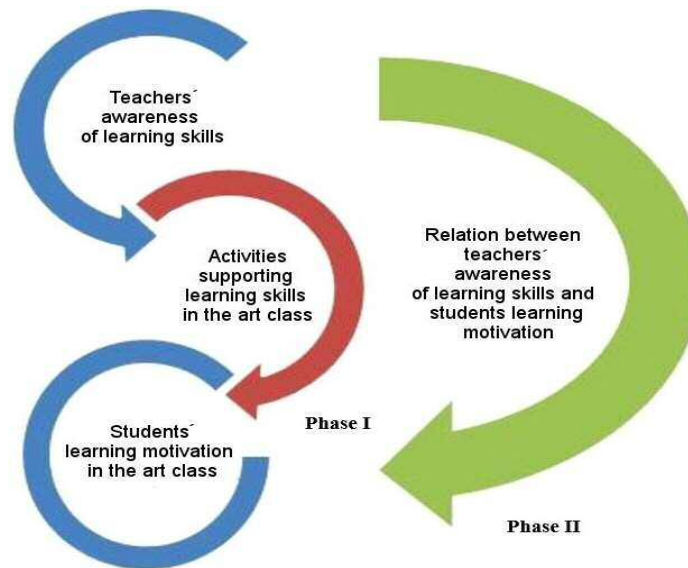

Figure 1. Steps in exploring relations among research results.

Taking into account the finding that teaching practices had no direct effect on the students' interest and mastery goals, we reanalyzed the results of the interviews (Figure 1). We analyzed the comprehensiveness of teachers' explanations, and we also considered how broadly they described learning skills. This analysis came up with a systematic pattern of differences between the teachers of the less and more motivated classes. Teachers of Class 1 and Class 2 did not define learning skills as a key competences; instead, they described art specific skills. When they were asked about learning skills that are essential in art classes, they pointed out cognitive strategies, like observation and elaboration skills.

On the other hand, the teachers whose students were more interested and mastery oriented, pointed out the distinction between learning skills and domain-specific skills in their answers. They also mentioned several aspects of learning skills, like cognitive strategies, planning, regulation of learning environment and metacognitive skills. Teacher of Class 10 emphasized regulation of motivation and metacognitive skills in addition to cognitive strategies and resource management. The teacher of Class 7 was the only one who claimed to systematically support and assess students' learning skills. Therefore, we started to see a stronger connection between teachers' awareness of the different areas of learning skills and students' wish to gain mastery of and achieve performance in art education.

Discussion

The results from class observations show that cognitive and metacognitive learning skills are mainly supported during art classes. Interview results illustrate that teachers confuse learning skills with domain-specific skills, and teachers acknowledge that they rarely support learning skills consciously. Our findings resonate with previous findings from Math and Language classes. The self-regulation strategy instruction is mainly implicit, and the potential of explicit training is rarely used (Kistner et al., 2010). In the observed art classes, the instructional practices that these teachers used could have been implicit and not supported by their awareness of learning skills or systematic planning to support such development. Moreover, most teachers have quite a narrow view of learning skills (Wayetens, Lens & Vandeberghe, 2002). Our interviews revealed that teacher awareness of learning strategies concentrates mainly on concepts of cognitive strategies and time planning and the learning environment.

Our findings on the relations between teaching practices, teacher awareness of learning skills and student motivation imply that an awareness of different aspects of learning skills could be even more beneficial for student motivation than direct activities that support learning skills. The number of activities supporting learning skills was not connected with student motivation to learn. Surprisingly, in classes with more activities supporting learning skills, learning motivation was not higher than in classes with fewer activities supporting learning skills. Thus, the number of supporting activities does not guarantee greater interest in a subject.

Coming back to the interviews and class observations, we were surprised that supporting motivation and regulating emotions were the least often mentioned in the interviews and the least supported in the lessons observed. As with the criteria for tasks most liked by students in art classes (Winner et al, 2006), our results from teacher interviews point out that open-mindedness, offering choices and alternation are most definitely the key aspects in supporting learning skills. The more choices the students have throughout the tasks, the more control is given to students to decide which learning skills to use in a given context. Assignments that give students the feeling of success are also very important; this raises their self-esteem and gives them courage to experiment and take responsibility for their learning

We are aware of two limitations of our study that need to be considered when discussing our results. First, because our goal was to gather data with various methods to obtain a broader and more detailed picture of teacher opinions and practices, we had to sacrifice depth of data collection and were able to conduct observations in only a single lesson per teacher. Therefore, our data concerning teaching practices that support students' learning skills might have been influenced by the learning objectives and methods used in that particular lesson. Secondly, the number of classes participating in the study allowed us to interpret relations between students' interest and mastery approach goals and teachers' teaching practices and awareness qualitatively, but not to draw generalized conclusions about these relations.

Largely based on previous studies, we see an urgent need for further research in the field
of supporting key competences in art education, using both qualitative and quantitative
analyses. Determining teaching practices that have the strongest effect on the
development of adaptive learning skills in the context of art education would have great
value for scientists and practitioners alike. Additionally, a multilevel longitudinal
research design would offer an opportunity to understand the long-term impact of
teaching practices on student motivation in art education.

Conclusion

This study views the topic of learning skills from both the teachers' and the students'
points of view. It draws parallels between teacher awareness of the framework of learning
skills, teaching practices and student motivation to gain mastery and good results in art
classes. Our findings coincide with previous studies in self-regulated learning suggesting
that teachers support learning skills rather implicitly. Interviews with ten Estonian middle
school art teachers showed that teachers acknowledge learning skills as a natural part of
the learning process in art classes, but seldom apply such teaching practices intentionally.

Results showed that teachers are mostly focused on supporting cognitive learning
strategies, followed by regulation of the learning environment as well as metacognitive
strategies. The study revealed a remarkably interesting pattern: awareness of the
framework of learning skills and the potential for supporting students' learning
competences were positively related to students' mastery goal orientation and interest in
art.

Purposeful planning for supporting learning skills means interpreting the learning activity
and concentrating more on the process than on the outcome. In conclusion, our study
reveals a relation between the teachers' awareness of learning skills and the students'
interest and orientation towards the mastery-approach. Therefore, effective support for
learning skills requires a profound understanding of learning and learning skills.

References:

Alexander, P. A., Dinsmore, D. L., Parkinson, M. M. & Winters, F. I. (2011). Self-regulated learning in academic domains. In B. J. Zimmerman & D. H. Schunk [Eds.] *Handbook of self-regulation of learning and performance* (pp. 393–407). New York, NY: Routledge.

Ames, C. (1992). Classroom: Goals, structures, and student motivation. *Journal of Educational Psychology*, *84*(3), 261–271.

Aunola, K., Leskinen, E., & Nurmi, J. E. (2006). Developmental dynamics between mathematical performance, task motivation, and teachers' goals during the transition to primary school. *British Journal of Educational Psychology*, *76*(1), 21–40.

Bergsmann, E. M., Lüftenegger, M., Jöstl, G., Schober, B. & Spiel, C. (2013). The role of classroom structure in fostering students' school functioning: A comprehensive and application-oriented approach. *Learning and Individual Differences*, *26*, 131–138.

Boekaerts, M. (1999). Self-regulated learning: Where we are today. *International Journal of Educational Research*, *31*(6), 445–457.

Bresler, L. (1994). Imitative, complementary, and expansive: Three roles of visual arts curricula. *Studies in Art Education*, 90–104.

Davis, J. H. (1999). Nowhere, somewhere, everywhere: The arts in education. *Arts Education Policy Review*, *100*(5), 23-28.

Devine, T. G. (1987). *Teaching Study Skills. A Guide for Teachers*. Allyn and Bacon, Longwood Division, 7 Wells Avenue, Newton, MA 02159.

Dignath-van Ewijk, C. & van der Werf, G. (2012). What teachers think about self-regulated learning: Investigating teacher beliefs and teacher behavior of enhancing students' self-regulation. *Educational Research International*, *2012*, 1–10.

Dinham, J. (2010). *Delivering authentic arts education: Visual arts, drama, music, dance, media*. South Melbourne, Vic: Cengage Learning.

Donker, A. S., de Boer, H., Kostons, D., Dignath-van Ewijk, C. C. & van der Werf, M. P. C. (2014). Effectiveness of learning strategy instruction on academic performance: A meta-analysis. *Educational Psychology Review*, *11*, 1–26.

Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, *72*(1), 218–232.

Elliot, A. J., & McGregor, H. A. (2001). A 2× 2 achievement goal framework. *Journal of Personality and Social Psychology*, *80*(3), 501–519.

Field, A. (2005). *Discovering statistics using SPSS* (2nd edition). London, UK: Sage Publications.

Gettinger, M., & Seibert, J. K. (2002). Contributions of study skills to academic competence. *School Psychology Review*, *31*(3), 350–365.

Goodman, N. (1968). *Languages of art: An approach to a theory of symbol*. Indianapolis: Bobbs-Merrill Company.

Gullatt, D. E. (2008). Enhancing student learning through arts integration: Implications for the profession. *The High School Journal*, *91*(4), 12-25.

Hattie, J., Biggs, J. & Purdie, N. (1996). Effects of learning skills interventions on student learning: A meta-analysis. *Review of Educational Research*, *66*, 99–136.

Hidi, S. (2006). Interest: A unique motivational variable. *Educational Research Review*, *1*(2), 69–82.

Jõgi, A.-L., Mägi, K. & Kikas, E. (2011). Maths-specific performance goals, interest and self-concept, and their relationship to previous task-avoidant behaviour and maths skills. In J. Mikk, M. Veisson & P. Luik [Eds.] *Preschool and primary education. Estonian studies in education,* (pp. 106–120)*. Frankfurt am Main: Peter Lang GmbH.

Kistner, S., Rakoczy, K., Otto, B., Dignath-van Ewijk, C., Büttner, G., & Klieme, E. (2010). Promotion of self-regulated learning in classrooms: investigating frequency, quality, and consequences for student performance. *Metacognition and Learning*, *5*(2), 157–171.

Ley, K., & Young, D. B. (2001). Instructional principles for self-regulation. *Educational Technology Research and Development*, *49*(2), 93–103.

Mägi, K., Häidkind, P. & Kikas, E. (2010). Performance-approach goals, task-avoidant behaviour and conceptual knowledge as predictors of first graders' school performance. *Educational Psychologist, 30*, 89–106.

Midgley, C., Maehr, M. L., Hruda, L. Z., Anderman, E., Anderman, L., Freeman, K. E., & Urdan, T. (2000). *Manual for the Patterns of Adaptive Learning Scales (PALS)*, Ann Arbor, MI: University of Michigan.

Montalvo, F. T., & Torres, M. C. G. (2004). Self-regulated learning: Current and future directions. *Electronic Journal of Research in Educational Psychology*, *2*(1), 1–34.

Pavlou, V. (2006). Pre adolescents' Perceptions of Competence, Motivation and Engagement in Art Activities. *International Journal of Art & Design Education*, *25*(2), 194–204.

Pavlou, V. & Kambouri, M. (2007). Pupils' attitudes towards art teaching in primary school: An evaluation tool. *Studies in Educational Evaluation*, *33*(3), 282–301.

Pintrich, P. R. (1999). The role of motivation in promoting and sustaining self-regulated learning. *International Journal of Educational Research*, *31*(6), 459–470.

Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, *16*(4), 385–407.

Pressley, M., Borkowski, J. G. & Schneider, W. (1987). Cognitive strategies: Good strategy users coordinate metacognition and knowledge. *Annals of Child Development, 4*, 89–129.

Rabkin, N., & Redmond, R. (2006). The arts make a difference. *The Journal of Arts Management, Law, and Society*, *36*(1), 25-32.

Roeser, R. W., Eccles, J. S., & Sameroff, A. J. (2000). School as a context of early adolescents' academic and social-emotional development: A summary of research findings. *The Elementary School Journal*, 443–471.

Runco, M. A. (2005). Motivation, competence, and creativity, in A. J. Elliot & C. S. Dweck [Eds.] *Handbook of competence and motivation*, (pp. 609–623). New York, NY: Guilford Press.

Schraw, G., Crippen, K. J., & Hartley, K. (2006). Promoting self-regulation in science education: Metacognition as part of a broader perspective on learning. *Research in Science Education*, *36*(1-2), 111–139.

Schraw, G., & Moshman, D. (1995). Metacognitive theories. *Educational Psychology Review*, *7*(4), 351–371.

Veenman, M. V., & Spaans, M. A. (2005). Relation between intellectual and metacognitive skills: Age and task differences. *Learning and Individual Differences*, *15*(2), 159–176.

Waeytens, K., Lens, W., & Vandenberghe, R. (2002). 'Learning to learn': teachers' conceptions of their supporting role. *Learning and Instruction*, *12*(3), 305–322.

Winner, E., Hetland, L., Veenema, S., Sheridan, K., Palmer, P., Locher, I. & Leontiev, D. (2006). Studio thinking: How visual arts teaching can promote disciplined habits of mind, in P. Locher, C. Martindale, L. Dorfman, & D. Leontiev [Eds.] *New directions in aesthetics, creativity, and the arts*, (pp. 189–205). Amityville, NY: Baywood Publishing Company.

Wolters, C. A. (2003). Regulation of motivation: Evaluating an underemphasized aspect of self-regulated learning. *Educational Psychologist*, *38*(4), 189–205.