A CASE STUDY: PROMOTING SELF-REGULATED LEARNING IN EARLY ELEMENTARY GRADES[*]

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Abstract

This descriptive case study investigates how self-regulated learning is promoted by teachers when learning environment is effectively used. Data were collected from an elementary school in Newcastle, the U.K. The questionnaire, observation and document analysis enabled information to be gathered on self-regulated learning. It was concluded that self-regulated learning would occur when the teacher assumes the role of facilitator of knowledge, becomes a supporter of helping pupil self-responsibility, self-confidence and self-direction and creates a child-centered classroom which helps children to be independent or autonomous.

Keywords: Self-regulated learning, child-centered education, learning environment, classroom teachers

BİR DURUM ÇALIŞMASI: İLKÖĞRETİM BİRİNCİ KADEMEDE ÖZ-DÜZENLEYİCİ ÖĞRENMENİN DESTEKLENMESİ

Özet

Bu betimsel durum çalışması, öğrenme ortamı verimli bir şekilde düzenlendiğinde öğretmenlerin öz-sınıf içinde öğrencilerin öz-düzenleyici öğrenmelerini nasıl desteklediklerini araştırmaktadır. İngiltere'de bir ilköğretim okulunda yapılan bu araştırmada öz-düzenleyici öğrenme etkinliklerini derinlemesine incelemek için gözlem, çeşitli okul dokümanları ve anket kullanılmıştır. Araştırma sonucunda öz-düzenleyici öğrenmenin, öğretmenlerin bilgiyi kolaylaştırıcı rol üstlenmeleri durumunda; öğrencilerin öz-yeterlik, sorumluluk ve yönlendirmelerini desteklediklerinde ve öğrencilerin otonomilerini destekleyici sınıf ortamları yarattıklarında amacına ulaştığı görülmüştür.

Anahtar Sözcükler: Öz-düzenleyici öğrenme, öğrenci-merkezli eğitim, öğrenme ortamı, sınıf öğretmenleri

Introduction

In the literature related to self-regulated learning, much has been written about its definition and function, as well as about its direction and practice in schools (Lizarraga, et al., 2003). It is mostly seen in the literature as a desirable approach, especially in constructivist classrooms, that provides students with the skills to be self-regulated (Boekaerts, 1999; Weinstein & McCombs, 1995 in Slavin, 1997). Pintrich (cited in Mc Donough, 2001) defined self-regulated learning as "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment" (p. 323). According to Pintrich (1999) self-regulated learning is also the students' use of various cognitive and metacognitive strategies to control and regulate their own learning.

As parallel to these definitions, Chung (2000) states that the learners' role is assumed to be in a more active manner than passive, and active participation is highly emphasized nowadays in education. Chung also asserts that, therefore, self-regulated learning that creates opportunities for students to manage their own resources and to "become the subjects of decisions and performances in all learning process" has a vital role to play in all levels in schools (p. 56).

It is generally accepted that self-regulated learning consists of several key factors such as motivation, metacognition, and learning strategies (Chung, 2000). It is an approach to teaching and learning that actively engages students in the learning process for the purpose of acquiring outcomes at higher levels of cognitive complexity (Rallis, Rossman, Phlegar, & Abeille, 1995 in Borich, 2000). It is used to describe independent learning which involves metacognition, intrinsic motivation and teacher strategic action (Williams, 2000; Winne & Perry, 2000). The transition from conscious 'other regulation' (parents and teachers) to conscious self-regulation is stressed "as an important factor in allowing children to gain conscious control of their cognitive processing" (Cole & Chan, 1994, p. 411). In this respect, self-regulation is also an individual's conscious use of mental strategies for the purpose of improving thinking and learning.

Vygotsky (cited in Pollard, 1997) believed that learners could be supported by self-regulation in their zone of proximal development. According to the literature, developing metacognitive abilities in students seems to be a valuable educational goal, because it can help to become self-regulated learners. Self-regulated learners take responsibility for their own learning progress and adapt their learning strategies to meet task demands (Bruning et al., 1999; Rallis, Rossman, Phlegar, & Abeille, 1995 in Borich, 2000).

Miller (2000) reports that Bandura thought self-regulated learning skills as mostly linked to motivation and achievement of students. Bandura (1986) states that goal setting provides students with more manageable and less threatening opportunities on complex tasks. Cole and Chan (1994) see teaching self-monitoring in relation to self-regulated learning as very important. They assert that the teacher and students should have close partnership on defining criteria, establishing monitoring, assessment and

recording procedures. They also claim that self-regulation must be supported if students are to gain a useful repertoire of learning strategies for selection and implementation according to the demand of the tasks. So, students constantly monitor their use of strategies and take relevant action accordingly.

In addition to the theoretical background of our research topic, recent investigations (Neumann, 1996; Perry, 1998; Turner, 1995, cited in Perry & VandeKamp, 2000) also provide evidence that young children can and do regulate their involvement in learning process, if the necessary conditions are provided in an effective learning environment.

In the light of the substantial research literature in the field, this study examines how teachers support self-regulated learning in early grades of an elementary school applying 'child-centered' ethos.

Method

In this research, case study was considered an ideal method to enable the researcher to explore, in a practical, real life situation to portray a holistic picture of the school in depth (Bell, 1993; Best 1989; Best & Khan, 1993; Hammersley, 1994; Merriam, 1998; Patton, 1987; Yin, 2003). The school was purposefully selected because of its strong commitment to child-centered ethos. This philosophy is strongly emphasized in all school documents and by the teaching staff. The staff is relatively new to teaching. In fact, eight teachers have 1 to 5 year teaching experience, and seven of them have 5 to 10 year teaching experience. Two of the teachers are male and the rest is female.

In this qualitative research, the researcher employed observation and document analysis and a questionnaire for teachers that aimed to collect information from the teachers about whether they support pupil self-regulation within the context of school ethos or not, and how they support it. Through this triangulation, the ongoing process of the school, backed up by quantitative information from the teachers through a questionnaire, which was developed by the researcher, was explored.

As Measor suggests (1985, in Gundogdu, 1997) a qualitative methodology is firstly based on an attempt to observe people. Therefore, observation was used as a first step in the data collection process. The researcher undertook a non-participant observer role and took running records and field notes throughout the research. Patton (1987) states that field notes are the description of what was observed. The observation period lasted approximately three months. Observations were all noted down by the researcher. Prior to entering the research field, two of his colleagues helped him to pilot the observational process. Then, the researcher coded the observations according to emerging categories using a starting list as was described by Miles and Huberman (1994). Specifically, data analysis process in this study involved working with and organizing the data, breaking the data into manageable units, synthesizing them, searching for certain patterns, deciding on vital aspects and dissemination of the findings (Bogdan & Biklen, 1998). Therefore, the presence, meanings, and the relationships of the words or concepts related to self-regulated learning were explored and noted down. They were all broken down and coded into manageable categories. Themes and recurring patterns were identified in order to reach the meaning and themes.

Then, a questionnaire consisting of thirty closed (scaled response: 1= Rarely, 2= Sometimes, 3= Often, 4= Frequently, 5= Always) and five open-ended questions seeking for physical, instructional, and social process in the school was administered to 15 teachers in the school. Before doing this, expert opinions were collected and a pilot test with two teachers in a different elementary school was carried out for the purpose of getting the 'bugs' out of the instrument. They also helped on clarity of the instructions, rephrasing some of the questions, removing confusing English terms, and suitability of the structure and format of the questionnaire. The participation was voluntary in responding the questionnaire; however, all classroom teachers in the school completed them. Since there was a small number of participants for the questionnaire, only frequencies and percentages of them were considered in analysis and presentation of the data.

The teachers responded to both open and close-ended questions on various aspects of promoting self-regulated learning, like individual goal setting and planning; learning strategies and personal commitment; cooperative learning; self-monitoring and assessment. All statements reflecting these dimensions can be found in the tables along with pie-charts that represent the degree of teachers' attitudes towards promoting self-regulated learning.

The school documents and physical artifacts were also used to strengthen the credibility of the study. Gay and Airasian (2000) point out that triangulation is a form of cross validation by employing different data gathering methods to identify the results. The data collected through documents were all analyzed using content analysis technique. As was stated by Merriam (1998), all qualitative data is based on content analysis, because the major purpose of the researchers is to analyze the content of interviews, field notes, and documents.

Consequently, regarding the observation schedule, the observations were used to match up what was seen in the classrooms to the policy documents available to parents. Statements, which were seen to be relevant to self-regulated learning in the policy statements, were identified and discussed with examples from the observation. Responses to closed questions in the questionnaire were analyzed and presented in tables and pie charts, using Microsoft Word and Excel programs. Thematic categories were established to analyze the data collected through open-ended questions and observational data. Responses were categorized according to the main themes identified, then all open-ended data and observation results were coded and analyzed according to these categories.

Results

Results of the Observations and Documents in Relation to Self-Regulated Learning

The School is an elementary school in the North East of England, offering education to 334 children from Reception to Year 6. It also has a 'Nursery' which is integral to the school buildings.

The School is situated in quite an affluent looking area but many of the children come from more disadvantaged neighborhoods. The effects of this can be seen in the fact that 107 children are eligible for free school meals. The School is housed in a single storey building with wide corridors and spacious classrooms. It has a welcoming atmosphere. There are sitting areas and notice boards in the entrance area and information about the school, its policies, who is who, where information can be obtained etc. are clearly set out. This theme of sitting areas is copied throughout the school wherever space allows. For example, there are sitting areas with settees and chairs linked to groups of classrooms which can be used for specific curriculum activities - such as listening to music or videos or for quieter activities by the children themselves. Throughout the school, children's work is attractively and informatively displayed. Resources for whole school use are placed in selected areas around the school. For example, junk materials for art and projects are to be found in an open area of corridor, neatly organized and immediately accessible to children and teachers.

The first notable aspect of this for the visitor is that curriculum areas for working are color-coded in each classroom and that all of the classrooms share this common practice. For example, the working areas for English are colored yellow - all displays, work books and storage containers feature this color prominently. Science and Technology [blue], Maths [green] and Art and Music [red and pink] are identified in the same way. Reading and information books in the library area are identified in the same way. This has the advantage that children know which area they are to work in the class without having to ask. Also because all classrooms use the same system, children moving to other classes for the new school year do not have to waste time getting used to a new system of organization. What the researcher observed in the classrooms was clearly spelled out in the School Policy documents. For example, the Teaching and Learning Policy [Ensuring Policy] states that it is the School's purpose "to develop an effective learning environment; by having a consistent approach throughout the school with regard to storage, furniture, resources, display and the use of space" (Teaching and Learning Policy, 1996, p. 2).

The reasons for the consistent approach to the organization of the learning environment are detailed in several school documents. The School clearly explains all procedures promoting self-regulation in children by ensuring consistency in many areas of organization in all classrooms.

From the observations, the children appeared to use the environment confidently. They got on with their work, knew where to sit [sometimes in a group with other children who also knew where to sit], they knew where materials were and selected them for themselves both at the beginning and during the activity. They were able to do this quickly and efficiently and without bothering the teacher who could then concentrate on responding to learning needs rather than organizational needs. The school feels that the opportunity to learn to make considered choices and the freedom to operate choices within the classroom is very important. The School's Social Development Policy was comprehensive and focused on developing in children the responsibility for their own decisions and actions. This appeared not as a separate and isolated social activity; on the contrary, helping children to do this was part of everything that the children do.

The philosophy of the school in respect to children's decision making is evident even in the Nursery. The School document, Early Years Policy, is a good example of this attitude. The Early Years document explicitly outlines the philosophy of the school in relation to children as more independent learners. More specifically, the document points out that the learning environment is divided into well-defined work areas, with materials logically arranged and labeled so as to encourage independence to children and to introduce them to the idea that they can have some control over their learning and environment. It says that "we aim to provide an aesthetically pleasing work space and encourage the children to take responsibility at all times and at all levels" (Early Years Policy, 1996, p. 8).

In the Nursery, for example, there seem to be many opportunities for the children to make decisions for themselves. Here, of course, classroom routines are important way of ensuring that children feel comfortable in the learning environment. Regarding routines, there is a whole school timetable which identifies the times when school begins and ends, when there will be assemblies and other activities. The Early Years Policy; document recognizes this saying

> *Although it is necessary to be flexible in the management of time in order to meet the; needs of the children, it is also important that the children become familiar with a routine and pattern to encourage both security and a sense of time. The framework always includes the following essential elements: children's own planning time; small group time; and circle time. (Early Years Policy, 1996, p. 9)*

It was evident from the observations that there were several daily routines [circle time, lunch time, tidying up] but within these routines there were plenty of opportunities for the children to choose their own activity from a range of things to do. Some major decisions were left to the children for themselves to decide. For example, morning milk and fruit/biscuits could be taken when the child wanted to have them, not when the teacher decided. So instead of all children drinking their milk at a fixed time, the milk [with a picture-label] was placed on small tables and children drank their milk when they wanted to.

In the rest of the school, there was ample evidence of routines which the children managed for themselves without the intervention of the teacher. For example, children were involved in taking the register and collecting money for drinks. Regarding lunch arrangements, outside the classroom there was a display chart where children would indicate first thing in the morning whether they were having school lunch, packed lunch or were going home. A member of the kitchen staff would collect this information during the morning. This seemed a very efficient use of time. The children were being responsible and neither the children, nor the teacher or the kitchen staff had to waste any time getting together to sort out this routine. This is just one example, but there were many around the school.

Another area of routine setting was starting children off on the learning tasks of the day. The routine seemed to be that children would sit in the carpet area [in Key Stage 1] and around tables in Key Stage 2 while the teacher explained the routines of the day. These might be to allocate established groups to different activities and explain the rota system for the day [which would then be pinned up in the classroom]. When the teacher had finished, the children then went to the curriculum area [color coded], looked at the task and collected the resources. In every class children spent some time working in flexible groups. However, there were more permanent groupings related directly to the established organizational routines. For example, in one class, the groups [Elephants, Frogs, Bears and Owls] were called to different activities [tidying up, going for lunch, getting ready for P.E.]. Again this saved children's and teachers' time and effort, rather than the teacher calling out the names of individual children, the group itself was named.

One interesting event during the register in some of the Key Stage 1 classes was the use of that time for reinforcing positive communication among the children. The children would greet the teacher and the class and say something positive about another child or the whole class. The teacher explained that this focused children to be positive and that it also enabled each child to have a fresh start each day no matter what had happened the day before. This fits very well into the school's Social Development Policy which states that

> *we want to develop in the children a positive self-concept, in order that they can feel happy and confident in valuing their own and others' efforts and achievements and thus become successful learners who grow into caring and responsible adults (Social Development Policy, 1996, p. 1).*
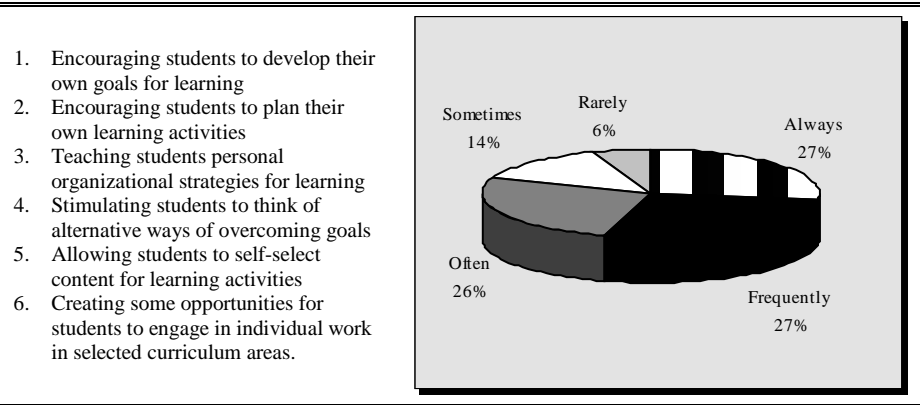
The Social Development Policy document also states that "we encourage the children to be thoughtful decision makers, empowering them as much as possible in school life. (Social Development Policy, 1996, p. 2)

Certainly the way in which the classrooms are organized and the decisions taken by teachers to encourage children to develop the confidence and ability to make decisions for themselves in relation to learning would seem to suggest that teachers are supporting the philosophy of the documents in relation to the classroom environment.

Results of the Questionnaire for Teachers in Relation to Promoting Self Regulated Learning

Promoting goal setting and planning are important aspects in self-regulation. Table 1 shows the responses of the teachers related to their attitudes concerning students' individual goal setting and planning in classrooms. The importance of self-planning should come first in creating an effective classroom environment. The teachers participated in the research stated that they always, frequently or often try to encourage students to develop their own goals for learning. They commonly shared the idea that if students set their own learning, then they will more likely engage in further higher order instructional activities, as was stated by Pintrich (1999).

Table 1.   Teachers' Attitudes toward Promoting Students' Goal Setting and Planning in Classrooms

1. Encouraging students to develop their own goals for learning
2. Encouraging students to plan their own learning activities
3. Teaching students personal organizational strategies for learning
4. Stimulating students to think of alternative ways of overcoming goals
5. Allowing students to self-select content for learning activities
6. Creating some opportunities for students to engage in individual work in selected curriculum areas.

In line with the literature, teachers reported that teaching personal organizational strategies for pupil learning has a vital importance for pupil learning because it can help to teach children how to organize their own learning in relation to self-regulation. As can be seen in Table 2, knowing how to manage time, decide on resources and how to tackle a task are all part of personal organizational strategies.
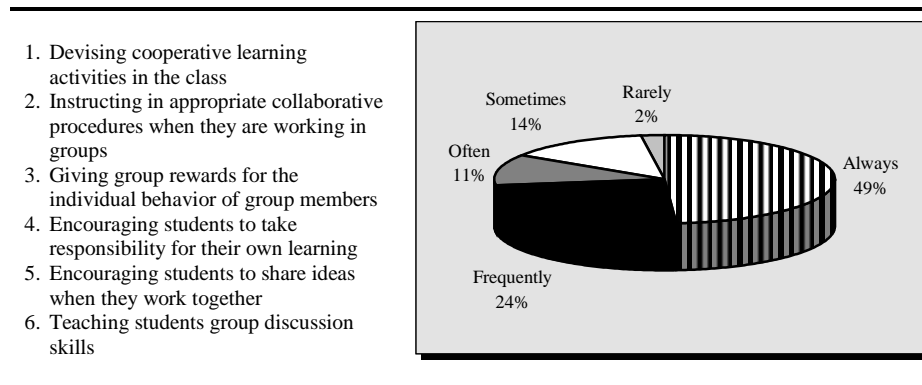
Table 2.   Teachers' Attitudes toward Teaching Students about Learning Strategies

1. Teaching students to use a range of specific strategies for their learning
2. Teaching students to use effective study skills
3. Showing to the students appropriate strategies for independent learning
4. Encouraging students to monitor their own learning
5. Encouraging students to evaluate the products of their own learning
6. Promoting students confidence in themselves as learners
7. Encouraging children to use their previous knowledge by transfer and generalization
8. Encouraging students to use the library to support their work
9. Encouraging children to monitor their learning in school procedures
10. Encouraging students to reflect on their own ideas
11. Encouraging students to reflect on the ideas of others

Teachers also stated that they try to teach children to use learning strategies and encourage children to self-monitor their learning as always, frequently and often in a great percentage (%88). Rubin (1987, cited in McDonough, 2001) asserts that monitoring is one of the very important cognitive strategies used by learners in line with several others.

In self-regulatory classrooms, teachers teach children to be cooperative and to reinforce appropriate skills of cooperation, because self-regulated learning is not an isolated learning. From the Table 3, we can see that nearly half of the teachers "always" try to devise and think of alternative ways of promoting cooperation in the learning activities. Other responses vary in different frequencies.

Table 3. Teachers' Attitudes toward Promoting Cooperation among Children in Classrooms

1. Devising cooperative learning activities in the class
2. Instructing in appropriate collaborative procedures when they are working in groups
3. Giving group rewards for the individual behavior of group members
4. Encouraging students to take responsibility for their own learning
5. Encouraging students to share ideas when they work together
6. Teaching students group discussion skills

Assessment and record keeping have always been a part of a primary teacher's work. In addition to the questions asked in the questionnaire, we understand from the open-ended responses related to the teachers' assessment procedures that every single teacher assumes that assessment and keeping-record of the pupils is important and that they use different kinds of assessment styles. While the teachers apply mostly their own check-lists to keep a record of their pupils, some of them state different instruments (children check-lists, daily planning sheets/morning task, timetable; close observation, weekly planning sheets, key experiences and skills book, collecting samples of children's products, achievement record sheets). Keeping a close eye on children who might have difficulties in learning is very important in a self-regulatory classroom. Teachers do not want children to slip through the net and not have their difficulty recognized and dealt with. They state that they try to develop opportunities for peer tutoring. We see that the majority of teachers identify all of them as part of their practice in school life.

***Results of the Open-Ended Questions in Relation to Promoting Self-Regulation
Among Students***

As the school applies a color-coded system throughout the school, the researcher
asked the perceptions of the teachers related to this system and its contributions to self-
regulated learning at elementary level. As can be seen from Table 4, the major
advantages of color-coding in child-centered learning environment in this school is seen
as easy access and storage of the materials. For example, the working area for English is
colored yellow-all displays, workbooks and storage containers feature this color
prominently. Science and Technology [blue], Maths [green], Art and Music [red and
pink]. Reading and information books in the library are also identified in the same way.
Almost all of the teachers felt that promoting pupil independence, taking initiative and
responsibility for their learning and in-school consistency are the most important effects
of this kind of learning environment.

Table 4. The Advantages of Color-Coding System in Learning Environment

Responses of the Teachers	Frequencies & Percentages
Easy access and storage the materials	11 (73%)
Promotion of children independence, confidence, initiative and taking responsibility	7 (47%)
Consistency throughout the school	6 (40%)
Making children organized	5 (33%
Easier for visiting teachers and staff	2 (13%)
Continuity on children progress	1 (7%)
Secure learning environment	1 (7%)

Note: In this table and the following tables, the sum of the teachers exceeds the
number of responses since multiple responses were given.

In response to exploration of the relationship between curriculum areas and creating
opportunity for pupil autonomy, seven teachers mentioned that pupils could make
decisions for themselves in all areas of the curriculum (see Table 5). The rest of the
teachers identified some specific lessons or areas (science/ design and technology, art,
role play/ drama, religious education- choices/discussions- and English) in which
children can lend themselves more to this kind of decision taking. The significant
reason of choosing the answer of 'all areas' by the teachers is perhaps that decision
making relates to generic skills rather than just the curriculum.

Table 5. The Relationship between Curriculum Areas and Self-Regulation of Students

Responses of the Teachers	Freq. & Percentages
All areas	7 (47%)
Science/ design and technology	6 (40%)
Art	2 (13%)
Role play/ drama	2 (13%)
Religious Education (choices/ discussions) and English	1 (7%)
Open- ended question and debates	1 (7%)

Note: In this table and the following tables, the sum of the teachers exceeds the number of responses since multiple responses were given.

In response to how teachers see their relationship with pupils, seven teachers see themselves as facilitators of knowledge. Mutual respect, rule setting and drawing the boundaries clearly between them and pupils are other comments on this issue. Nursery/Reception teachers mostly see themselves as builders and supporters of pupil learning. 'Fair and equal treatment' is the other response provided by two teachers (see Table 6).

Table 6. Teachers' Perceptions Toward Relationship with Students

Responses of the Teachers	Freq. & Percentages
Facilitating the knowledge	7 (47%)
Mutual respect	6 (40%)
Setting the rules and boundaries clearly	5 (33%)
Building and supporting pupil learning	3 (20%)
Fair and equal treatment	2 (13%)

Note: In this table and the following tables, the sum of the teachers exceeds the number of responses since multiple responses were given.

Discussion and Conclusion

In this research, teachers appeared to be concerned to encourage creativity, reflection and problem-solving. These are strongly supported by the teachers through establishment of effective classroom environments. In fact, in addition to the content of the curriculum, they actively support the development of the processes of learning. Teachers recognized that self-direction does not mean isolated learning, as was stated by Haines (1988).

A 'whole school' approach to the learning environment in this school seems to be crucial since it helps children, particularly when they move classes, to be independent and confident learners because all learning environments have features which are always familiar to them. Regarding this approach, the school employs classroom routines [circle time, lunchtime, tidying up, morning milk, taking attendance and collecting money for drinks…etc.], color-coding and use of technology as important ways of ensuring that children feel comfortable in the learning environment. Employing routines for effective classrooms would help any educator working at early grades of elementary schools (Cruickshank, Jenkins & Metcalf., 2003; Hoover &Kindsvatter, 1997).

Through the questionnaire, the researcher received vital responses from teachers who revealed the necessity of allowing children to make their own decisions in parallel to a balanced curriculum. The results of the questionnaire, in line with the literature, clarified that goal setting and planning, teaching personal organizational strategies and monitoring learning, cooperation and assessment are at the heart of promoting self regulated learning. Teachers strongly emphasized that they [always, frequently and often] encourages students in their classrooms to be independent, autonomous and self-directed through following the philosophy and mission of the school.

As a result, the results show that if teachers want to teach children to be self-regulated, self-directed and independent they should provide pupils with a learning environment in which active exploration and high degree of participation is available. In this sense, the school's mission and philosophy, which is reflected in the hidden curriculum, should fit into the official curriculum through daily instructional practices.

The results of the research indicated that child-centered philosophy aims to produce creative, collaborative, problem-solving thinkers who are confident in their learning who will most likely to be productive citizens for democracy. Therefore, promotion of self-directed learning along with employing a child-centered philosophy throughout the school would help educators to educate young at elementary level with a high level of democratic awareness. The literature (Boud, 1988; Darling, 1994; Haines, 1988; Nixon, Martin, McKeown, & Ranson, 1996; Thomas, 1988) supports this view that self-regulated learning is not the isolation in the learning environment; on the contrary, it requires a high degree of participation, cooperation and problem solving through a constructivist environment.

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