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TEACHERS' OPINION ABOUT DEEP LEARNING

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Abstract

Deep Learning is a very important and complex process involving internal and external factors. It cannot be reduced to the development of students' knowledge, skills and attitudes by relating knowledge, assuring a student centered learning, ensuring interactivity and group learning, using formative and self-evaluation etc. Deep learning is supposed to develop an integrated approach to learning, to promote authentic learning, students' metacognition and self-regulation and to develop inquiry, problem solving, project learning and communication skills. Teaching for deep learning has the holistic education as background, which means to develop students' intellectual, physical, emotional, social and artistic skills and behaviours. On the other hand, Surface and Strategic learning are characteristic of those who memorize knowledge and learn for getting good grades, complete a task or pass an exam. This research investigates how teachers relate to Deep Learning. The investigation was conducted in the school year 2019-2020. The respondents were teachers with different school experience. The investigation was based on Approaches and Study Skills Inventory for Student (ASSIST). The questionnaire searched to find out the teachers' opinion about: conception of learning, approaches to study and preferences for different types of teaching. The results show that the respondents' interest for Deep Learning, for practicing Deep learning and encouraging their students to learn deeply is very high.

Keywords: Deep learning, surface learning, teachers' opinions, survey

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1. Introduction

Teachers and researchers have been continuously preoccupied with identifying the characteristics of a learning environment that motivates students to learn and to obtain superior school performances. A solution identified by researchers and practitioners is the paradigm of deep learning. The founding of the concept is mainly owed to the researches lead by Marton and Saljo (1976), Biggs (1987; 1989; 1999), Entwistle et al. (1979). Many other researchers take over this concept and they develop it (Biggs & Tang, 2011; Entwistle, 2018; Hermida, 2015; Lublin, 2003; Matsushita, 2018).

Deep learning is centered on the student and on the learning process. Hermida (2015) defines deep learning as "a process of permanent knowledge construction" (p. 9), a process in which learners, colleagues and teachers participate. Deep learning has as its basis the identification of essential information and its understanding, the making of the connection between new knowledge and previous one or life knowledge (Ciascai et al., 2011). Through practising a profound approach, learning becomes meaningful and leads to mind restructuring, school progress and personal development (Lemnison as cited in Millis, 2010).

Jensen and Nickelsen (2008) mention some characteristics of those who practise deep learning: curiosity, interest, enthusiasm, perseverance, preoccupation with understanding knowledge, self-efficiency and optimism. Moreover, deep learners participate actively in activities, offer help to other learners, address questions, share opinions and results, do their homework or ask extra homework, they do not feel stressed and they are thankful for the learning opportunities.

The surface learning practitioners accept the information without analysing it critically, without being preoccupied about networking knowledge, about searching the meaning/understanding new knowledge, about memorizing information on a long term, but aiming only to promote evaluations/exams (Houghton, 2004; Millis, 2010).

Over time, these approaches have been diversified. Matsushita (2018) shows that through incorporating the theory of Pask (1976) about learning strategies, Entwistle (2000) identified two strategies of profound approach of learning: holistic and serialistic. The first one is centred on the making of connections between ideas and on the identification of the patterns of the general principles. The second approach is oriented on the search and the use of proofs and the examination of the logics of the argument. Moreover, Entwistle (2000) added to deep and superficial approaches the concept of strategical approach, characterised by the preoccupation about evaluation requests (Entwistle, 2000; Richardson, 2005).

Yew et al. (2016) show that teachers have to assure themselves that they know the way their pupils/students learn and that they monitor their cognitive development. Teachers can stimulate deep learning by creating challenging and motivating learning situations/contexts that connect the aims of teaching the school subject to the preoccupations and interests of the student, stimulating him/her to learn through engaging questions, problem-situations and through using adequate strategies and inductive thinking (Bain & Zimmerman, 2009; Hermida, 2015). Laurilland (1979, as cited in Richardson, 2005), Marton and Saljo (1976), Ramsden (2003), Richardson (2000) and Ciascai et al. (2011) show that a student can approach differently the solving of an assignment according to its content, context and requirements, his/her interests and motivation.

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2. Problem Statement

Faculties and schools concerned with ensuring a high quality education must know their teachers' approaches to learning and interest and skills for developing deep learning in their students. Teachers also need to be aware of their own approach to learning.

3. Research Questions

Teachers involved in this research have different teaching experiences and it can be assumed that their perceptions regarding the characteristics of surface and deep learning are different. The present research aimed to identify these opinions and experiences.

4. Purpose of the Study

The research was conducted to investigate primary school teachers' opinions on deep and surface learning: a) the preparation for learning/resolving the learning assignment; b) teachers' feelings throughout learning/resolving the learning assignment; c) strategies used to solve the learning assignments; d) other characteristic of deep and surface approaches to learning.

5. Research Methods

5.1. Research design

The research method was an inquiry who aimed investigating the opinion and experiences of 113 primary school teachers referring to of deep and surface learning. The filling out of the questionnaire was done in Google Drive, on a voluntary basis.

5.2. The research tool

The instrument was the ASSIST questionnaire, out of which the researchers selected and adapted 44 items. The questionnaire is composed by two sections. The first section contains demographic characteristics of participants and the second one items that refer to deep and surface learning. The respondents appreciated each item on a scale from 1 to 5, where 1 means total disagreement and 5 means complete agreement. The answers were processed through summing up the percentages of 1 and 2, respectively 4 and 5, the sums being interpreted as disagreement, respectively agreement. The average of the answers to each item was calculated, also the standard deviation, to interpret the results.

5.3. Demographic characteristics of the respondents

The great majority of the respondents come from "Babeș-Bolyai" University. 96.46% of the respondents are women, 77.11% have a license degree and 21.24% a master degree diploma and 3 respondents have the PhD title. 44.25% of the participants teach kindergarten level, 32.74% teach primary school level, 14.16% middle school level, 3 respondents teach high school and 1 respondent teaches

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university. 38.05% of the respondents have an under 5 years teaching experience; 9.73% between 5-9 years; 21.29% between 10-19 years; 19.46% between 20-29 years and 6.10% over 30 years. The majority of the respondents (77%) work in the urban environment.

6. Findings

The results of the survey were grouped into categories that describe deep and superficial learning practices.

6.1. Results concerning the preparation for achieving a learning assignment

The results regarding the respondents' preparation for achieving a learning assignment show that their work profile includes: organisation, systematic thinking, planning, a judicious use of working hours, constant effort and self-motivation (see Table 01).

Table 1. The respondents' responses regarding the preparation for achieving a learning assignment

Items	N	m	St. Dev	Disagreement (%)	Agreement (%)
I manage finding study conditions which allow me doing my work easily.	113	4.48	0.68	0.88%	93.81%
I organize my study time attentively to make the best use of it.	113	4.48	0.89	5.31%	88.50%
I think I am quite systematic and organized when it comes about to revising for exams.	113	4.15	1.02	8.85%	80.53%
I'm pretty good at getting down to work whenever I need to.	113	4.26	0.97	7.96%	84.07%
I work constantly throughout the semester instead leaving everything until the last moment.	113	3.73	1.19	19.47%	72.57%
I usually plan out my week's work in advance, either on paper or in my head.	113	4.04	1.16	14.16%	79.65%
I generally use my time well during the day.	113	4.05	1.08	10.62%	81.42%

The greatest disagreement (19.47%) is registered referring to the item "I work constantly throughout the semester instead of leaving everything until the last moment".

6.2. Respondents' experiences/feelings throughout the achievement of a learning assignment

When studying, respondents experience different feelings associated with deep, surface and strategic approaches to learning. For example, the respondents agree that they often doubt about the fact that the study really deserves the effort (32.74%); 53.10% often feel overwhelmed by the great amount of material to be studied. Referring to the achievement of the learning assignment, 33.63% of the respondents are worried that they will not take their work to an end. Almost equal percentages of respondents agree (40.71%)/disagree (47.79%) about the item "I often worry about whether I'll ever be able to cope with the work properly". A sibling result (49.56% agreement/ 45.13% disagreement) is registered about the item "I

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often seem to panic if I get behind with my work". 85.84% of the respondents agree that if they feel they get on well they put more effort in their work.

6.3. Results referring to the strategies used in the accomplishment of the assumed assignment

Table 02 shows the strategies used to prepare the study, during the study and at the end of the study. The respondents appreciate the majority of the statements in Table 02 with an agreement of over 80%. The respondents base their learning/work on understanding and on building meaning of new knowledge, on using proofs and arguments, on reflection made during and at the end of accomplishing the learning assignment. The exceptions of this majority agreement are the statements “I often doubt the things I hear in lectures or the things I read in books” (65.49% disagreement) and “I often have problems understanding the things I have to memorize” (69.91% disagreement). The first statement suggests that textbooks and teachers enjoy credibility on the behalf of the respondents and the second one suggests the fact that the respondents do not memorize without understanding.

Table 2. Strategies to accomplish the assignments

Items	N	m	St. Dev	Disagreement (%)	Agreement (%)
I analyze the evidence carefully and try to reach my own conclusion about what I’m studying.	113	4.16	0.97	8.85%	84.96%
I try to relate ideas I come across to those in other topics or other courses whenever possible.	113	4.57	0.77	3.54%	92.04%
When reading a paper/book I try to find the meaning of what the author wanted to say.	113	4.35	0.97	7.08%	86.73%
I usually set out to understand for myself the meaning of what we have to learn.	113	4.55	0.78	3.54%	94.69%
It is important to me to be able to follow the argument or to see the reason behind things.	113	4.13	0.98	8.85%	83.19%
When I’m working on a new topic, I try to see in my own mind how all the ideas fit together.	113	4.56	0.75	2.65%	94.69%
Often, I find myself questioning things I hear in lectures or read in books.	113	2.42	1.13	65.49%	21.24%
When I am reading, I stop from time to time to reflect on what I am trying to learn from it.	113	4.35	1.01	6.19%	85.84%
Before starting work on an assignment or exam question, I think first how best to tackle it.	113	4.58	0.83	4.42%	92.04%
When I read, I examine the details carefully to see how they fit in with what’s being said.	113	4.38	0.78	3.54%	91.15%
Before tackling a problem or assignment, I first try to work out what lies behind it.	113	4.04	0.87	7.08%	83.19%
I often have trouble in making sense of the things I have to remember.	113	2.17	1.19	69.91%	18.58%
When I finish a piece of work, I check it through to see if it really meets the requirements.	113	4.46	0.93	5.31%	87.61%
I revise attentively my work to check my thinking and if it makes sense.	113	4.32	0.91	5.31%	87.61%

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The highest average is that of the statement "When I read, I examine attentively the details to see the way they fit with what was said" (4.58). The following two averages (4.57 and 4.56) are of the items regarding knowledge networking. There is a significant / moderate to good correlation between the items "When reading a paper/book I try to find the meaning of what the author wanted to say" and "When I read, I examine the details carefully to see how they fit in with what's being said" (0.566, $p<0.01$). The correlation coefficient is lower than 0.5 between the items "It is important to me to be able to follow the argument or to see the reason behind things" and the two items mentioned above.

6.4. Result concerning general characteristics of deep learning

The results show that practising deep learning has long term effects. Consequently, the respondents agree that: they reflect on the new ideas (59.29%), even after the end of the lecture (47.79%) and they read the resources recommended by the lecturers (82.30%). Studying the academic subjects/the recommended lectures sometimes seem quite interesting (88.50%)/pleasant (82.30%). Furthermore, the respondents agree with the statements: " I like to play around with ideas of my own even if they don't get me very far" (65.49%) and " I sometimes get 'hooked' on academic topics and feel I would like to keep on studying them" (73.45%). The motivation of the effort made during learning has its roots in the desire of getting on well in examination (87.61%).

6.5. Results regarding the practice of superficial learning

Referring to superficial learning, the results show that the great majority of the respondents agree that they concentrate their learning on what teachers say during a course (80.53%), on what lecturers consider important (78.76%) or the one who settles the homework considers important (87.61%) and on what seems to be necessary to be known for doing homework and for exams (81,42%). 83.19% of the respondents want to get details on what they should do in essays or other homework and 62.83% admit that when they work at some homework they aim to impress the receiver as much as possible. Respondents disagree with the following practices of superficial learning: "I think I have to concentrate only on memorizing a great deal of what I have to learn" (60.18%); " I gear my studying closely to just what seems to be required for assignments and exams" (76.11%) and "I concentrate on learning just those bits of information I have to know to pass" (32.73%). 82.30% of the respondents agree that "A great part of what I study makes no sense: they are like some parts and pieces with no connection". The results of this item suggest that teachers have to be trained to approach a topic from an integrated perspective (as a hole).

7. Conclusion

The results allow us to pencil, in the light of the participants in the inquiry, the practice of deep and surface learning. So, people practising deep learning want to study in optimum conditions, they organize their time efficiently, they plan their works, they study throughout the semester and they are able to self-motivate. Also, it is important to them to feel that they get on, they are interested in important themes discussed in courses even if they sometimes panic if they fall behind with homework. Those who learn deeply are interested in new ideas, they search arguments, reasons, causes, they give personalized

interpretations on things, they are interested in the message of the author, in the correlation between ideas and they operate on their own ideas. Alternatively, surface learners are interested in getting high grades, they learn selectively, generally what seems to be necessary for homework/exams, they want to impress; they prefer to be told what homework/essays have to contain.

The results are in agreement with the domain literature approaching deep and surface learning.

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