

A RESEARCH STUDY ABOUT “REFLECTIONS OF TECHNOLOGY ENHANCED LEARNING AWARENESS”

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Abstract: TEL (Technology Enchanted Learning) helps students to take more control over their knowledge and help them to be more motivated, more self-directed, more organized and more strategic. A research study is carried out with 100 lyceum students in North Cyprus to drive information about their TEL awareness and reflect this about the metaphors. The results were on behalf of boys; they were more aware of TEL than girls. Students stated that; their parents do not let them to use technological devices. What is more, they claimed that TEL cannot be used in courses; because their teachers do not use them. Further research studies to find the reasons of students' claims are recommended.

Keywords: TEL, Students, TEL Awareness, TEL Reflection, Metaphors

1. Introduction

Metaphors are our eyes in our back. They see what we “do not see”. Metaphors help us to interpret and see unfamiliar circumstances in reference to a familiar one (Ortony, 1991). Abstract concepts may be perceptible by using metaphorical analysis tool. The use of this tool gives the interpreter free rein to break away from the limitations imposed by logical inference (Snodgrass & Coyne, 1992). Metaphors are mind funnels; they make you believe that a dream is real. It extends understanding and leads to the production of new insights, and innovative associated Lakoff & Johnson (1980), and Lakoff (1987; 1993) claimed that metaphorical structures are responsible for the construction and organization of the cognitive system. As such, metaphors allow the identification and categorisation of a problem and help to think about it.

Teachers should not use the same teaching method for all students. Students can use different learning styles to select different learning pathway through materials, accessing and processing information that influence the quality of learning (Ulueru, 2008). Technology Enchanted Learning (TEL) is integrating educational technologies into students learning environment. Some students may understand information better by watching or listening, others by reading, and others by doing and moving or through practical work in a hands-on environment (Cemal, 2008). Nonetheless, TEL has many opportunities for all students with different learning styles.

Within TEL environments, students' achievement is influenced by the extent and effectiveness of applied self-regulation techniques, or the ability to plan, monitor and evaluate their own behavior and learning strategies (Azevedo, 2004). In these environments' students have many opportunities; thus they are more successful. Students who regulated their knowledge by using effective strategies, monitored their brains, and adapted their time and effort, showed significant improvement in their learning (Azevedo, 2004).

Students should be encouraged also to metacognitive thinking. Students who are aware of their motives, responsibilities, individual cognitive processes have control over their learning strategies use metacognition (Phelps, 2002). It includes students' learning and awareness of their learning, how they control their strategy selection and change plans when needed (Phelps, 2002). In addition to these, metacognitive thinking includes TEL awareness. Different strategies and plans are essential for a continuous success. When students are provided with an opportunity to resubmit assessment tasks, they do benefit, provided that they are sufficiently motivated; clear, specific, constructive feedback is given; and tutoring is of a good quality (Dube, Kane & Lear, 2012).

Metacognitive thinking; focus on what the child is thinking about a content, focus on how the child is thinking about the content and focus on the child's thinking about his/her own thoughts about the content (Prumling, 1988). What does a child think about TEL? How a child thinks about TEL? What does he/she think about his/her thinking about TEL? Of course for answers of these questions, a research study should be carried out.

In order to empower teachers, the first phase aimed at understanding their unique challenges

and needs. Children may be aware of TEL. But how they express this? How can we get their reflections? There are different reflection types like self-reflection (Schön, 1991). Self-reflection is the best way of students discovering their own learning. Comparative reflection can also be useful; where the learner reflects on someone else's actions. Students reflecting their knowledge about TEL on their learning is harder than using TEL for other personal needs. Student teachers frequently reflected on handling indiscipline issues, procedures and outcomes of supervision, but less on their own learning (Roux & Mdunge, 2012). Sometimes, reflection may not be as much as needed. Thus you cannot have the wanted results. For example, inadequate reflection on their learning suggests that journal writing has not yet sufficiently promoted student teachers' professional growth (Roux & Mdunge, 2012).

On the other hand, in the collaborative reflection involves individual reflection, sharing individual understandings, establishing a shared understanding and construction of knowledge (Prilla, 2011). Students should be encouraged to reflect critically on what they are doing, and why, but the issue is how? A possible way is using metaphors. Are students aware of TEL and how they reflect these on their TEL metaphors? The relevance of redirection for research has long been recognised, and there is a strong body of theoretical work on reflection. However, there are extremely rare researches about using metaphors as reflections. Metaphors provide a way to reflect on research itself (McClintock, 1996).

Purpose

The purpose of this study is to drive out the technology enhanced learning awareness of lyceum students and, to find out their TEL metaphors.

2. Method

Population

The study group consisted of 50 randomly selected boys and 50 randomly selected girls who are studying at Kurtuluş Lycee in Güzelyurt. Their ages differed between 15 and 17.

Instrument

An assessment tool called "TEL Awareness" consisting of 50 questions was developed by researchers. The questionnaire consisted of questions like "Have you heard about smart boards?"; "Have you ever used a PDA?"; "In which courses can you use TEL?"; "In which courses you cannot use TEL?"; "Can Mobile-telephones be used for education?" And "Can courses be delivered outside of classrooms?"...

TEL Metaphors survey consisted of questions like "What is the first three things that come to your mind, when one mentions about TEL?" Students are allowed to write whatever they think. They are ensured that the outcomes of this study will only be used for this research study.

To evaluate the items in the questionnaires, experts' analysis ($n = 7$) was taken. An expert group of instructional technologists evaluated the data-gathering scale, both individually and collaboratively. Under the suggestions of the experts, necessary corrections were made to the draft form of the questionnaire. Thus, the content validity was maintained with the help of the educational technologist experts.

Procedure

"TEL Awareness" and "TEL Metaphors" online Surveys were first distributed online in January 2011, second remarks were distributed in February 2011 and then third time they were distributed in March. By April, a total of 100 questionnaires were collected.

Data Analysis

Descriptive statistics were used to analyze and to describe the data gained from the questionnaires. The frequencies and percentages were used for data analysis.

3. Results and Discussion

According to the student answers to the questionnaire, and according to the student interviews, results were driven. Some of these are listed below following a discussion: TEL Technologies; TEL Usability and TEL Metaphors as Reflection.

TEL Technologies

An important concept below TEL awareness is TEL technology awareness. If students are aware of these, they will use them more beneficially and give their TEL decisions more correctly. Students answers to questions about their own TEL technology experiences are given in Table 1. Here, the devices that they have heard before they have actually seen before, they had personally owned before and used before are listed. Some of the fascinating results are explained.

All of the girls and boys answered that they have heard, and they have actually seen "Computers", "Laptops", "Smart Board", "Projector" and "Printer". What was fascinating was that boys are personally owned more TEL devices than girls. For example, the %98 of the boys who have computers, and %70 of the girls have computers.

The devices like Harddisk Joystick, Harddisk, Voice Recorder, PDA and Tablet PC were hardly heard, seen, owned or used. However, it was particularly pleasing that all of the students were aware of the "Mobile-phone" and "Head-phones"; what is more they have heard about them, seen them, personally owned them and used them. All of the students have accepted to the internet in their lives although they do not have this opportunity in their homes.

Table 1. TEL Technologies Awareness

TEL Technologies	GIRLS				BOYS			
	Heard	Actually Seen	Personally Owned	Used	Heard/Seen	Actually Seen	Personally Owned	Used
<i>Computer</i>	%100	%100	%70	%100	%100	%100	%98	%100
<i>Hard Disk</i>	%6	%6	%6	%6	%16	%16	%16	%16
<i>Headset</i>	%100	%100	%60	%90	%100	%100	%100	%100
<i>IPAD</i>	%50	%50	%2	%4	%80	%60	%10	%20
<i>Joystick</i>	%6	%6	%0	%6	%16	%16	%0	%16
<i>Laptop</i>	%100	%100	%80	%100	%100	%92	%92	%92
<i>Notebook/ Netbook</i>	%20	%20	%0	%0	%50	%50	%0	%50
<i>Printer</i>	%100	%100	%60	%60	%100	%100	%70	%70
<i>Projector</i>	%100	%100	%0	%40	%100	%100	%0	%50
<i>Scanner</i>	%60	%60	%60	%60	%70	%70	%70	%70
<i>Smart Board</i>	%100	%100	%0	%10	%100	%100	%0	%10
<i>USB Memory</i>	%90	%90	%80	%86	%98	%98	%90	%90
<i>Voice recorder</i>	%10	%10	%0	%10	%20	%20	%2	%20
<i>Internet</i>	%100	%100	%80	%100	%100	%100	%90	%100
<i>Pointer</i>	%0	%0	%0	%0	%0	%0	%0	%0
<i>PDA</i>	%6	%0	%0	%0	%0	%0	%0	%0
<i>Cell Phone</i>	%100	%100	%100	%100	%100	%100	%100	%10
<i>DVD Player</i>	%60	%60	%10	%60	%70	%70	%20	%70
<i>Tablet PC</i>	%10	%10	%0	%10	%50	%50	%0	%50

Although TEL technologies are not restricted with the above listed in the Table, in the questionnaire it is agreed that these are the ones that they may be aware; since only these are used in as classroom technologies in most of the schools in North Cyprus.

More boys are aware of TEL technologies than girls. More boys have heard about these, have seen these, have owned these; and even though they do not accept themselves, they have used these. A further discussion follows about the opportunities given to boys seems more than the ones given to the girls. This is another research subject that will be carried out by the researcher.

TEL Usability

Another issue in the research study was usability of TEL in courses. Students were asked to write the courses that they can use TEL and courses that they cannot use TEL for their own learning. Also, their reasoning for their answers was wanted from the students. %5 of the students answered that TEL technologies cannot be used in Turkish Lessons; %10 of the students answered that TEL technologies can be used in Social Activity Lessons; %40 of the students said that TEL cannot be used in Geography courses; %50 of the students said that TEL cannot be used in history courses; %70 of the courses cannot be used in Mathematics Courses. When researcher asked about the reason of not using, students gave intensely appealing. A majority of them (%80) answered “My teachers does not”; some of them (%30) said “Because it is not usable with these” and some of them said “Because my parents would not allow me to, they think TEL is a waste of time (%40)”

All of the students answered that TEL can be in Computer and Instructional Technology Courses, they can be used at home (Some students have written to the explanation part “but not in my home”, my parents do not trust me that I am doing a learning, they think that I am playing computer games, so I go to my friend’s house if it TEL is necessary for my courses”. Figure 1 illustrates this case.

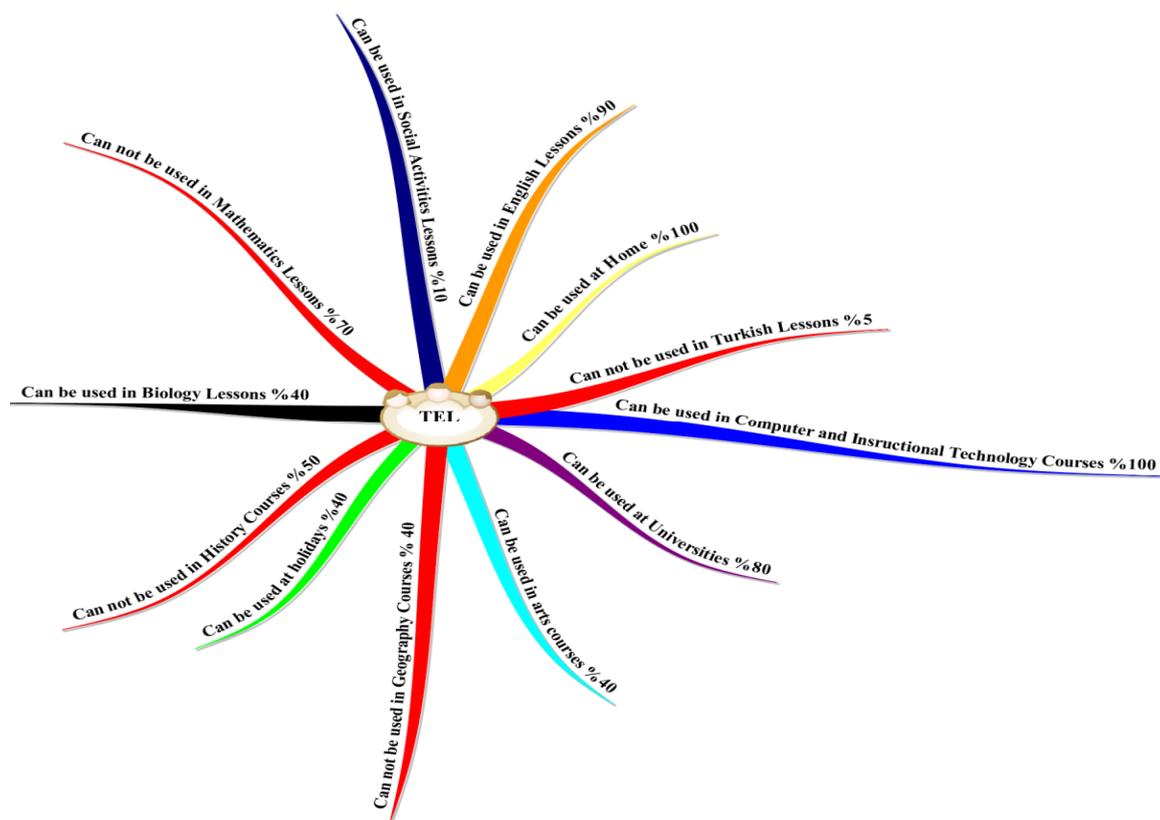


Figure 1. TEL Usage

Majority of them answered (%90) that TEL can be used in English courses. Their reasoning was: “Our teachers use TEL in classrooms, and they gave we exercise CD’s, we have to listen them in our homes and write compositions about them”. Discussion here will follow that; to what extend teachers are essential in being aware of TEL ? To what extend parent is effective in their child’s metacognition awareness? Are teachers more valuable at this stage, or are parents more powerful? Or both? Does workshops make teachers aware of TEL? What kind of studies are necessary for

having teachers reflecting these? On the other hand, how can one make parents aware of TEL? How can parents be aware of TEL; thus they will not prevent their children using them? Are parents afraid of something, is it the reason that they are not allowing their children to use TEL technologies even though they have it in their own homes? Is this because of the fact that they do not feel themselves comfortable with these? All these seem terribly fundamental issues. New projects should be made to make these teachers and parents aware of TEL.

4. Metaphors for Reflecting

Metaphors can be used to drive out students reflections about TEL. Interesting answers were given to the question “What are the first three words that come to your mind when one says TEL?” There was not a significant difference in boys’ answers and girls’ answers. Some of the students’ answers are given in the mind map below.

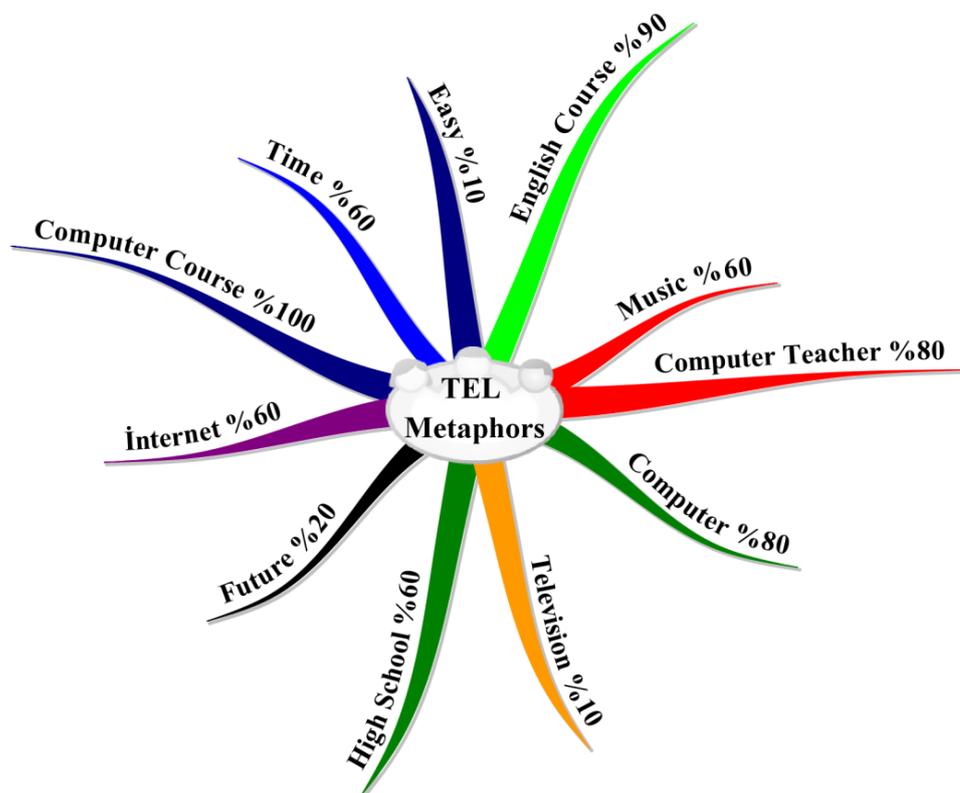


Figure 2. TEL Metaphors

%100 of the students said “Computer Course”, %90 of them said “English Course”, %80 of them said “Computer Teacher”, %80 of them said “Computer”, %60 of them said “High School”, %60 of them said “Internet”, %60 of them said “Time”, %60 of them said “Music”, %20 of them said “Future”, % 10 of them said “Television” and %10 of them said “Easy”.

Students’ answers to the answers of these questions were various. And the captivating ones were:

- It comes to my mind “Computer”, since for delivering TEL one needs to have a computer”.
- It comes to my mind “high school”. I think it’s because of the fact that my friends are doing TEL at high school.
- “It resembles me “music” because, in English courses, when our teachers do TEL we all listen to music”.

Just one word or a phrase sometimes gives us a decisive hint to understand the students thoughts. Metaphors is extremely useful in this sense. Instead of asking students which teachers are

doing these and which do not, or asking them facts about their parents and their relationships, asking them only three words, seemed like a game. They were not afraid of saying the facts.

TEL is useful in every course and should be encouraged to be used. However, according to this study results it is used in some courses like Computer, English and Music. As a result of these, how can one expect students reflect their TEL effectively? They are not experiencing themselves as they should be in all of the courses.

5. Conclusion

In this research study, it is seen that boys are more technologically aware than girls. Students who have participated to this study claimed that TEL can be used in Computer and Instructional Technology courses, at home, at English courses, and they claimed that it cannot be used in courses like mathematics, history and geography. Nonetheless, the results were on behalf of boys; they were more aware of TEL. However, girls and boys reflections on metaphors were same and supremely engaging. Students claimed that their parents do not allow them to TEL. They said that TEL cannot be used in some courses because their teachers do not use it. Common TEL metaphor among students was “Computer Course”.

100 lyceum students have answered the online questionnaires’, and it was extremely appealing to find that they think TEL was for “high school students”. TEL awareness is a pertinent topic that should be put stress on by the community. It is extraordinarily helpful to students learning, to teachers teaching and to parents following their children learning. Further researches should be delivered to find out the reasoning under students claims is necessary. TEL is necessary in order to become reflective thinkers, awareness of what is known and what is needed is essential to bridging the gap between learning situations (Sezer, 2008).

Recommendations

As a result of the current study, the following recommendations can be given:

- Seminars should be organized regularly to make the students and teachers aware about the latest technological changes; and latest TEL trends.
- Flavell and his colleagues Elbers (2003) suggest this metacognitive ability changes with age, and that older children are more successful learners because they have internalised a greater quantity of metacognitive information. Another research study should be delivered with secondary school and high school students.
- Immersive simulated environments for experiential learning are growing in popularity and will play a key role in tomorrow’s technologies for adult learning (Pammer,2011). Therefore, TEL awareness of parents is a crucial issue. Workshops about TEL awareness should be carried out for Parent; thus they will reflect this by allowing their children to use TEL.

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