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INNOVATIVE CURRICULAR PRACTICES IN DEVELOPING "LEARNING TO LEARN" COMPETENCE ON STUDENTS

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Abstract

The 21th century students competence frame request an innovative teaching and learning strategies and practices for the future school according to most educational policies, pedagogical theories and practitioners' views. "Learning - to – learn" competence has obviously different approaches due to the formal education context witch students are involved in different educational designed experiences. This study approach analyse the use of flipped classroom pedagogy model to develop the 'learning to learn' competence in preuniversity formal educational context. This study was based on a subject about a Teaching Flipped Clasroom Methodology Applied on preuniversity high school level pupils. A class/group of 25 students age of sixteen that participated in the proposed research and received an intervention based on the traditional method (face to face interaction for theoretical classes and related questions, then online classes) that received all the interventions using the flipped classroom method /model. The research analyzed the impact of self-perception ``learning to learn`` competence development level before and after the intervention period. This research analyzed the didactic design applied on the classes / groups that followed different types of teaching methods applied (traditional teaching vs. flipped classroom pedagogical model), the need of developing critical thinking ``Learning - to -learn`` competence of children before and after study research for three months. It is also revealed the student`s perspectives about pedagogical strategy they were applied on during the study applying. The final result of the study is presented and summarized including analyses of approaches and methodology of the study.

Keywords: Blended-learning, cognitive competences, critical thinking, flipped classroom innovative teaching practices, learning to learn competence

1. Introduction

A central place of the actual system educational targets is placed for the goals of student competences key frame being necessary as an efficient purpose with everyday life learning problems viewed as the ability to single-handadly run and for establish their life process of learning.

According to a main contribution for achieving the feature of learning and for applying pupils education performance in formal and nonformal education, self-regulated learning and "Learning - to – learn" competence has attain a key competence in system education.

"Learning - to -learn" as a definition context can be define as the ability to concern and to hold on learning, to organise one's own learning by assuring an effective time management and select information, individually in groups or pairs (Delors, 1996)

``Learning to learn`` competence integrates awareness for his own process of learning and educational needs as well, it consists in identifying opportunities and suitable strategies using the ability to win the obstacles for a successful learning.

"Learning - to – learn" follow learners to build learning and life benefits, experiencing in order to apply knowledges, skills, attitudes in a diversity of contexts: in work place, at school, with family and in education and training.

For assuring "Learning - to – learn" competence, motivation and confidence are essential and indispensable to each individual's competence.

In 2018 of May the Council of the European Union revised and adopted Recommendation on Key Competences for Lifelong Learning for framing out a marrow set of skills required to work and live for the 21st Century. The Recommendation aim is that everyone should have or develop an essential set of competences needed for personal and professional development and employment, active citizenship and social inclusion. (European Commission, 2017)

Due to these characteristics ``Learning - to – learn`` frame is explained as a meta-competence due to the relevant outcomes of both acquisition level and application of the other competences. That`s a certain cause that the European educational policies are concentrated on developing learning competence as the most important key competencies that every people/students/ should develop for global changes, suitable educational activities to train students for lifelong learning. (Recommendation of the European Parliament, 2006)

Apart from understanding and developing learning skills, ``learning to learn`` competence include attitudes, behaviours, beliefs and values that allow pupil to increase learning in a diversity of contextual flexibility, efficiency frameworks and self-organization in learning.

"Learning - to – learn" competence is viewed as a process that gives attention on student own's self-awareness, cooperation and motivation sustain of learning, established learning goals and suitable learning strategies along with other students.

"Learning - to – learn" competence involves awareness of the concept and the process of learning and also the adapting abilities if some limitations occur in the process. It implies getting deep into the meaning of a particular material during the learning process that leads to critical thinking of the rules, based on believes, cognitive experience, learning strategies and social needs.

This competence also relates first with getting motivation for learning connecting with learning goals and strategies, including cooperation learning with others and allows students to become more self-organized learners for adapting learning in a variety of contexts.

Developing "Learning - to - learn" competence includes also the ability of students to organize and structure their's own learning activity individual or in a group contexts and also the ability to effectively manage time and information using tasks and problem solving of new knowledges in different educational contexts.

For an extensive frame it` scope is to contribute to the professional and personal development of a citizen or pupils, students. It is obviously that this definition competence covers both cognitive and affective dimensions of it and indicates also its transversal dimension in assuring lifelong learning.

1.1. "Learning - to – learn" competence structural frame

It provides the framework of the ability of pupils / students to organize themes/ his own /her own learning individually or in group contexts. Students will also develop the ability to manage learning time using different methods or learning strategies as solving problems to assimilate, apply and evaluate new context of learning or the new knowledges as well as the transfer of acquired skills and knowledge in formal and nonformal educational frameworks.

Knowledge here relates with the meaning of the scientific context of learning along with the all the specific capacity of understanding fundamentally for applying in different learning context according to strategies, methods for identifying weaknesses and strengths of their learning skills and during the learning process. It also relates with educational opportunities for understanding and managing learning process to lead to next level of learning and also for new professional career or specialisation.

Abilities are defined in this context as positive attitudes for learning for establishing a next level of development ``Learning - to -learn`` competence along with self-confidence and motivation of his own learning success process in a diversity of learning contexts. It relates also with a positive attitude towards learning needs that has an impact for lifelong learning of all people /student as well as for making the initiative for the process of learning along with the adaptability for change as well in the learning process.

The attitudes key competence education of a competence based curriculum context can be associated in terms with knowledges, skills, values, behaviours to come together with the 21st century challenges with the requisit of a basic central curriculum that gives students a ``survival kit``in terms of values, knowledge and competences. (OCDE, 1994) So, the attitude can be consider as an integrated component of the ``learning to learn``competence due to fact that competences, capacities and skills are considered as three categories of complexity in the``know-how``learning process. (OECD, 2005)

Skills are defined here as the self-regulate learning ability with an efficient learning process management discipline and time and determination during the learning process. It includes the ability to focus and to keep motivation for learning in longer and shorter time periods of learning activities. It also values the ability of critically thinking and the awareness of the goals and the purpose of learning.

Another definition of competence aimed to define some 'key competencies useful for a successful life for individuals and a well-functioning society' So, key competencies are classified in three

comprehensive categories: "using tools interactively", "interacting in heterogeneous groups" and "acting autonomously". (Rychen & Salganik, 2003)

These elements of "learning to learn" competence indicate here a great complexity under the influence of an alert rhythm of contemporary social and economic changes so learning is no longer related to one time acquisition and then to keep maintenance of the already acquired knowledge. It takes a new context of an innovative and creative activity for adapt to his /her /own`s learning needs to a diversity context.

In conclusion, "Learning - to – learn" competence involves together students through several key factors as: school which provides students opportunities for learning; parents who encourage students to participate to the learning process with their innovative strategies and designed methods for students who are interested in developing on individual lifelong features practices.

2. Problem Statement

The Centre for Research on Lifelong Learning (CRELL) founded on 2005 (sponsored by the European Commission's Directorate General for Education and Culture EU (DG EAC) and co-ordinated by the Joint Research Centre of the European Commission (DG JRC), has been established in order to built new featured indicators and instruments for measuring achievement of transversal key competences as "Learning - to – learn" civic competences and creativity. (Hoskins et al., 2008)

Studies upon "Learning - to -learn" key competence for its elementary background characteristics and key structure parts for students developing has been updated for the last ten years. In this case The University of Helsinki has organized some studies regarding with Finnish project "Life as Learning" competence study.

Institute for the Protection and Security of Citizens of the European Commission - Centre for Research on Lifelong Learning EU as a structure of it have a debate refering to explain the "Learning - to – learn" starting from the concept of metacognition. (Delors,1996)

Metacognition approach viewed as a metacognitive knowledge and abilities of everyone cognitive self- regulation activity has a significant role in organizing how -to -learn ability. "Learning - to – learn" competence process emphasizes with the perspectives of meta-learning as the base feature of this competence, as long as meta-learning refers to learning "how to learn".

British perspective "Teaching and Learning Research Program" project, released a series of interrogations connected to ``learning to learn`` competence. The University of Bristol during the "Efective Lifelong Learning Inventory" (ELLI) project, pointed to explain a personal point of respondents linking to ``lifelong learning`` as well as ``Learning - to -learn`` (Pollard, 2007)

This new approach regards``learning power`` state is used in the project to point familiar that`s implies aspects of life experience, attitudes, values, beliefs social relationships or disposition that can influence a person's individual troth for different opportunities or junctures for learning.

British Learning Campaign have other attempts as well to define and shape "learning to learn" competence viewed as a planning process of findings of learning for capacitate students to improve learning effectively. (Hautamäki et al., 2014)

British Leaning Campaign defines ``Learning - to - learn`` competence as e knowledge of cognition result (knowledge of students that ``know`` and ``do``) and self-regulatory learning process mechanisms (suchlike deciding the learning process, examine outcomes /findings outcomes from the request of an individual strategy learning evaluation of the results with the reviews of the improved project to enhance the learning featured process).

The expression / collocation ``self-regulated learning``is cited this way when it comes to a particular way of defining competence. (Rychen & Salganik, 2003) Also, critical thinking empowers people to apply minding to move beyond the rubbings and barriers that interferes cooperates necessary for innovation.

Self-regulated structure`s learning as a particular kind of competence, links as a part-component construction dimension: as a complete set of events, self-initiated learning process that involves motivational, cognitive, metacognitive systems and behaviour adaptation frame of learning situations for achieving students goals highlights self-regulation learning including metacognition, as an important feature of the learning process for developing ``learn competence`` (Bakračević et al., 2006).

A certain meta-learning element like planning activity in learning process is defined as self-regulation process. Self-regulation phrase is to extend metacognition since it already includes self-control processes (affective, behavioral and motivational covering).

The theoretical aspects of the constructivism aproach as an education learning perspective is also used of students to develop or to increase their own concepts understanding throughout a blend of their knowledge and new learning experiences for developing "learning to learn" competence.

In this case students who effectively participate in their own learning is viewed as one of the main concentrated theme of science education, according to most teachers that keep a constructivist beliefs. Teachers guided learning in a constructivist setting approach rather than just conveying knowledge to the students.

This study reveals the flipped classroom model approach which represents this type of learning by removing the traditional lecture from the classic classroom and stipulates students with increased opportunities for active participation on learning process. The benefits for students in their own learning and self-regulation are the opportunities that are created to build and to achieve their understanding of concepts and knowledge to apply this in a bearing examine setting by their teachers.

Critical thinking ability authorize students to apply intending to move beyond the disagreement and obstacles that encumber cooperation required for innovation.

Related to personal development "Learning - to -learn" implies: resources, like a cognitive dimension problem-solving skills metacognitive dimension aptitudes, and the use of different learning methods, self-awareness and self-assessment of knowledge, affective and motivational dimension, the motivation to learn, and the regulation of the emotions occurring by the learning activity, learning dispositions, critical curiosity, a size mind-sets, creativity and also resilience.

Related to the social domain ``learning to learn`` engages social, economic, cultural aspects of the environment in which learning occurs. The social dimension of ``learning to learn` also influence the pertinence of the perception of bearing from suggestive others the competence to learn with peers and in groups, and the circumstances support as well as the social values inside the fellowship.

3. Research Questions

The study question like "learning to learn" is confering skills to identify student`s own capacities to reflect critically and to make decisions for organise persevere and evaluate oneself learning using critical thinking methods?

Flipped Classroom is a useful critical thinking method to ensure students of sixteen years old confidence in the ability to experience his own learning and to desire to employ first learning then the curiosity and the positive attitude encouraging learning motivation?

Is "Learning - to -learn" assigning knowledge of student's preferring learning strategies or competence's fields that need to be developed, how to do it and the corroborating seizing education and training?

The efficiency of school learning is qualified by the "learning to learn" competency. It is a basic and fundamental acquisition which accommodates us to a pair of interrogations as:

Is it a relative driver for change in grown up student`s stage further to competitiveness?

Are students aware of their own learning?

Do they know how to learn efficiently?

How do they adjust their learning?

Are we responsible as teachers for their`s learning?

How can we help our students to improve learning, ``how to learn``?

Is ``learning to learn`` a competence that can be develop throughout the life span?

4. Purpose of the Study

The purpose of this paper is exposing an example of pedagogical learning strategy that increase the students interests and motivation for "Learning - to -learn" adapting in different learning contexts.

This paper proposes "flipped classroom" learning model that should expose different context and opportunities for improving ``learning to learn` student`s competences.

"Flipped classroom" approach pedagogically method will adapt student`s understanding and knowledge to different contexts of learning for activating metacognition and critical thinking.

Developing "Learning-to -learn" competence is setting up an innovative teaching and learning methods, life arrangements and research, activating multidisciplinary learning climates, pliant curricula and entrepreneurship that can be associated with student`s innovation competences as creativity critical thinking, initiative, teamwork and networking.

5. Research Methods

The learning activities designed in this study for the development of students competences, have to inquire some questions so they must interogate why are they learning and how the process learning can be transfer or apply in different learning or life contexts and how the new learning experiences are corresponding to their needs for learning.

Another organizational conditions should be taken for creating basic learning opportunities like preparation of the learning materials and class environment, the survey of the learning content, and organizing the planning activity of the set up time.

In the Flipped Classroom model students involve with lectures or to analyse other learning materials outside the class to compound for an active learning experience back in the classroom.

The actual practices term of ``flipped`` is mostly associated with students involving with online materials followed then by ``in-class tasks`` that implies peer to peer learning or small-group activity learning.

Many methods of the flipped class such as debates, discussions, "Q&A", demonstrations, clicker questions simulations, peer-to -peer tutoring, feedback offering, and role playing are used in-class activities step.

Teachers may choose to flip just a few classes a term, where the concepts afford themselves to dispose learning experiences, or to flip all grades. So, all class planning designs and the objectives formulated of the class had to before proposed of the activities are planned. This stage is followed by the planning work based on the tasks.

In order to measure the comprehending ``Learning-to -learn`` competency, there are some evident aspects including as they are performing in the 21st century learning framework. So learning and essential skills contain three categories of abilities as: innovation and creativity, problem solving and critical thinking, judgments incomes, making decisions, collaboration, communication, communication with others (Villalba, 2008)

The Design of the Flipped Classroom applied in this study consists of the follow steps lesson plan during the class activities and out-class activities and tasks: identifying the new conceps, intended learning outcome(s), introducing the out-of-class task, out-of- class tasks, assessing what they have learned from the out-of-class tasks, in-class activity.

Out-of task activities step consisted in: introduce the out-of class task (set the stage, communicate clear expectations, time management and commitment, degree of challenges for the students individual level; out-of-class task (suppose the media choice resources, open resources, guiding questions, means for students to ask questions; another step was `assess their learning ``that consists in (evidence of student preparation, self assessment, formative feedback given, low stakes in-class assessment) and the last step ``in-class activity`` that consist of next task (activities linked to course objectives and assessments peer-to-peer dialogue proposal, initiative to collaboration and application, student-instructor dialogue and the teacher implication in JITT, Just-In-Time-Teaching strategy .

Introduce the task step implies in establish the goals of this stage of the flipped class is to increase student implication, clearly readiness for the activities they will be doing online and in-class traditional learning.

Teachers introduced the tasks clearly explaining and assuring of students study group of their learning needs to be ready for the in-class activities. Students have to explain what they will be doing or being fit for the in-class activities step. For some students, active learning in the classroom was considered new experience approach that reduced the viable feeling about participation to the learning approach.

5.1. In-Class activities

It includes the most effective activities designing for encouraging and engaging deep learning for every student able to identify and create his own opportunities for peer-to-peer learning or increasing student to instructor dialogue and creating opportunities for an active learning. The scope for these activities must be linked to the theme or to the design plan objectives and assessments categories.

In the in-class activities time management was used to encourage students to identify his needs for learning, to be creative and to make his own decisions, to collaborate and to communicate with others using critical systems to increase deeper learning on cognitive, affective and metacognition dimensions.

5.2. Motivation

An experienced teacher creates connects students to a creative atmosphere in class that motivates student participation an efficient learning. Student` motivation, which maintain the entire learning process may be influenced by the designing plan. So, activities were designed to challenge students for motivate their learning for developing metacognition, cognitive and affective learning dimensions.

Students were motivated in their`s own learning or in per-to peer activities with finding personal values meanings of the new learning material and to aware in the relevant of the design course linked to their future learning success.

Flipped Classroom offered the forming metacognition preconditions of one's own learning linking where children developed specific learning strategies. Once student`s metacognitive perceptions are achieved, that will be setting a transfer of knowledge from a topic to another topic or from one situation to another context one.

Four elements for assuring an effective transfer of learning metacognition: student`s knowledges as a common ones from new to old task, his own abilities and skills applied on a new task learning habits adjust and students' profile for improving learning process and also developing competencies and comport in learning.

6. Findings

This paper study released the outcomes of ``Learning-to -learn`` competence of students achievements and developing theirs`s learning process by applying for 2 weeks Flipped Classroom model for the 25 group /class students selected. The studied themes were regarding the curricula for the class students of sixteen age.

The study also identified this pedagogical blended learning type as one the ways and the level of students' enhance of awareness of the need and process of developing critical thinking skills in classroom learning.

This study applied in the Pandemic COVID context highlights the use of flipped classroom method model along with the didactic and methodology content designed to focus both the teacher-learner, peer-to-peer collaboration, team collaboration specifically stating that every student had the opportunity to be able to know, to do, and to value the learning outcomes by the end of the time.

430

It reveals that instructional formulated aims or goals lean to focus on ``what / how we will do`` as teachers and students for the learning opportunities created for students:

Most of students realised the opportunity to participate to a real dialog about the impact of technology on modern actual society inclusive even in the pandemic context.

The pedagogical Flipped Classroom model applied focus on what learners achieved, where can shift the focus of instructional design efforts to student learning.

They can always ask us on "What assignment or learning activity will help them to reach the intended learning outcomes of the course". The goals strived in the designed lesson plan ensured the outcomes:

- to develop the skill to formulate and to announce ethical and personal perspectives setle on knowledge and their`s individual experiences;
- to evaluate the respect in their dealings with others;
- to learn to accomplish researches, studies working independently and also in collaboration with others;
- to develop filling curiosity for learn desire;
- to develop abilities and skills to learn to listen, to have a critical opinion and to propose some reason discusses in order to use student`s knowledges as a useful tool to convey hypothetical tests and the ability to problem solve.
- to express on their life span experiences to do critically debrifing and value the environments announcement for the relationship context;
- to receive different knowledge and experience contexts to do well reasoned choices for feature education and for vocational orientation;
- to experience taking individual responsibility for working environments and for studies that gradient increase more influence on their own field education;
- to learn to have principles for democratic rules understanding and to develop their skills to work democratically appointed as to treat with respect every intrinsic value of other people or fellows;
- to develop empathizing with the situations of people cases for showing polite behaviours for the environment;
- to experience and to develop his own way /strategy of learning;
- to learn to develop self-confidence;
- to acquire learning experience to be able to survey different decisions of different people; to be able to make decisions dealing with their future plans;
- to experience the ability to evaluate their`s own fundings of learning process and outcomes;

7. Conclusion

Key competence ``Learning how to learn`` represents a in the actual educational policies important opportunities for ensure efficient learning in different learning environments, school and personal development both for students of sixteen age and also for adults.

The study practices enhanced students to appreciate the role of science /integrated lessons designed for learning how to solve real life problems by understanding the relate knowledge and its features for their personal and social development.

Still, in order to maximize the character of ``how to learn`` key competence, it is recommendation that creates students different possibilities to act different roles as to be active to address questions, to communicate personal ideas and to collaborate with others during the lessons. From the teacher's perspective there are some welcome changes in the teaching practices according to students needs for learning.

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