Creative Thinking and Student Centred Learning in UG classroom: A Small Survey

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1. INTRODUCTION

Society now has changed beyond recognition with dynamic emerging economies dominating the markets and ever more sophisticated communication tools. Knowledge Society operates within this context, education must inevitably evolve at all levels to meet the requirements of the new public. Education now has new opportunities to create interaction along with greater social responsibilities.

2. THE STUDENT EXPERIENCE-STUDENT CENTERED LEARNING

Students constitute the most central stakeholder group in higher education around the world. Over the last decade, major shifts have occurred in the size, demographic makeup, needs, aspirations, and expectations of the student population across the globe. These developments have exerted significant pressure on individual institutions and entire systems of higher education in many countries. Efforts to respond to new student realities have resulted in a wide range of institutional and systemic adjustments that have changed-and continue to change-the size, shape, and very nature of higher education. These developments, in turn, have affected the student experience of higher education, presenting students worldwide with a new and particular set of challenges and opportunities. Some half-dozen fundamental issues stand out as central to an understanding of the interplay between students and higher education over the last decade. These include:

1. Demographic changes

2. Diversification of the student body

3. Transformation of higher education institutions/systems

4. Rising demands for relevance

5. Increased calls for cost sharing

6. Globalization and internationalization

Student-centred learning is an approach to education focusing on the needs of the students, rather than those of others involved in the educational process, such as teachers and administrators. This approach has many implications for the design of curriculum, course content, and interactivity of courses. Student-centred learning is focused on the student's needs, abilities, interests, and learning styles with the teacher as a facilitator of learning. This classroom teaching method acknowledges student voice as central to the learning experience for every learner. Student-centred learning requires students to be active, responsible participants in their own learning and this can be made possible mostly only in Higher education.

Educational practices such as Bloom's Taxonomy and Howard Gardner's *Theory of Multiple intelligences* also point to the importance of a student-centric learning as it promotes various modes of diverse learning styles. Bloom's taxonomy offers a promising approach for designing classroom experiences for students, experiences that promote critical thinking and constructivist approaches to learning. Bloom's taxonomy represents a tool for planning and implementing the
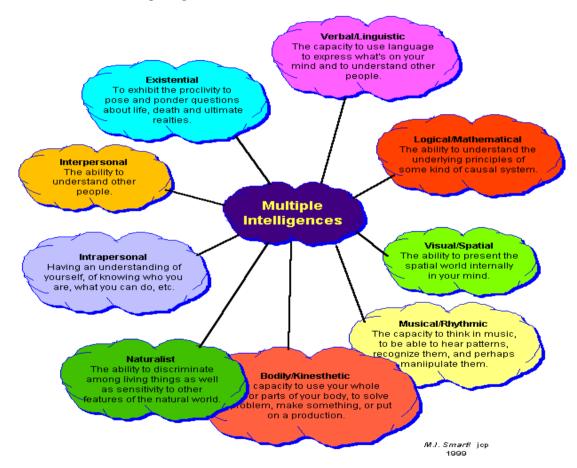
student-centered classroom, because it gives teachers a precise language for articulating the intended outcomes of their instruction expressed in terms of student learning. It also offers instructors a tool for decoupling critical thinking skills from content, the primary emphasis of instruction in the traditional classroom. As a result, the focus of classroom instruction becomes the acquisition of student skills and competencies rather than the instructor's academic knowledge or content coverage. It can be said that creative thinking is purported through students efforts or through student-centred learning.

It helps to:

- Strengthen student motivation;

- Promotes peer-to-peer interaction thus promoting interpersonal skills too;

- Reduces disruptive behaviour and enables the student to feel confident and responsible;

- Builds student-teacher relationships;

- Promotes discovery/active learning;

- Promotes responsibility for one's own learning.

The effective classroom features a multi-sensory approach as suggested by Gardner, one that allows for individualized pacing that is student controlled.

In the student centered classroom, the teacher is a coach and mentor, a support person who troubleshoots and problem-solves when students need such help. The students ask questions, the teacher addresses these questions as they arise. After direct instruction the students work with the materials at hand, beginning with knowledge, where the students become acquainted with the lessons' expectations and materials. After questioning themselves, each other, and the teacher they work their way through comprehension into application, bringing a student-led activity to complete fruition. In contrast, an effective student-centered, learning-oriented classroom requires different perspectives from both instructors and students. Rather than covering content, the goal of instruction becomes the intentional intellectual development of students. This involves

changing the way students think and encouraging them to confront what they believe in light of facts and evidence. At the same time, students must significantly alter their view of knowledge, the role of instructors, and themselves as learners. Moving from dualism to a more sophisticated relativist perspective, students begin to understand that knowledge is context dependent and can judge the merits of ideas, information, and values based on criteria. Increasingly, they view their own role as learning to think independently and the instructors' as the facilitation of that process.

2.1 Levels of Bloom's taxonomy

Student learning outcomes expressed at various levels of Bloom's taxonomy become the foundation for the selection and design of assignments (including examinations), teaching strategies, readings, and instructional materials such as technology. Using the taxonomy, instructors can create a detailed blueprint of a student-centered learning environment that fosters critical thinking and the process of knowledge construction. The blueprint becomes the foundation for all future planning at the course, unit, and individual lesson levels. It also facilitates the design of rewarding learning experiences for students, the identification of student learning difficulties, and the assessment of the impact of our teaching on student learning.

2.2 Assessment of Student Centric learning

In a student centered classroom, students are encouraged to participate actively in learning the material as it is presented rather than being passive and perhaps taking notes quietly. In the student centered classroom students are involved throughout the class time in activities that help them construct their understanding of the material that is presented. The instructor no longer delivers a vast amount of information, but uses a variety of hands-on activities to promote learning.

Through this survey and study an attempt is made to survey four aspects involved in creative thinking and the role played by student centric approach in learning. Assessment of the use of student centric learning and various attributes is done by questionnaire method. Cognitive strategies like rehearsal, elaboration, organization and critical thinking were evaluated through the tests which reflected the exquisite importance of student centric learning as a purporter of creativity. Four aspects of Creative thinking are involved in Student centred learning. They are:

Inquiry: It is closely associated with science, inquiry or research is the task of acquiring knowledge pertaining to empirical questions. Students should know the language of science like theories, laws, hypotheses etc. and principles of scientific method. They can be taught and instructed to evaluate the credibility of information sources.

Reasoning: Commonly also called inference is the relatively overt mental process which helps us to reach conclusions on the basis of evidence, lies at the heart of higher-order thinking as reasons can be communicated to others.

Inferential errors: It is a means of inoculating people against mistakes.

Argumentation: Students should develop skills of argumentation by constructing and analyzing arguments which also plays a key role in purporting creative thinking.

Test conducted:

Comprehensive passages were given to the students for reading and questions were framed from different corners and the evaluation of the students was taken up in questionnaire format.

Questionnaire used:

Attributes	Yes/No
1. **Do autonomous learners have an insight into learning strategies?**	Yes
2. **Do they take an active approach to the given task?**	Yes
3. **Do they really take risks and avoid any help from others?**	No
4. **Are they good guessers?**	Yes/No(Few yes and a few no)
5. **Do they really concentrate upon learning with accuracy and appropriateness?**	Yes/No
6. **Are they willing to revise/reject theories/concepts/ideas that do not apply?**	Yes
7. **Do they have a tolerant approach to the reception of target language?**	Yes

2.3 Result

Learning Strategies – Cognitive strategies

Cognitive strategies	Rate
Rehearsal	10%
Elaboration	20%
Organization	30%
Critical thinking	40%

The following results were tabulated. The students were able to co-ordinate with peer efforts and also by following all the four aspects of creative thinking through student centric learning: inquiry, reasoning, inference and argumentation. The answers were quite accurate and faster in response. A questionnaire was given to the students to get feedback. Assessment of various attributes attained was done by the questionnaire. Cognitive strategies showed rehearsal, elaboration, organization and critical thinking were evaluated through the tests and critical thinking and elaboration reflected @ 40% and 30% respectively.

3. EDUCATIONAL PRACTICES-NEED FOR CHANGE

As our educational practices change, so should our approach to teaching and learning change.

The whole methodology has been subject to changes in the modern context to make it reach to diversified learners. Learning becomes more productive when the student is given room to inquire and set the stage for shouldering his academic success.

Successful learning also occurs when learners are fully engaged in the active learning process. A further distinction from a teacher-centred classroom to that of a student-centred classroom is when the teacher acts as a facilitator. In essence, the teacher's goal in the learning process is to guide students into making new interpretations of the learning material.

In student-centred learning, in terms of curriculum practice, the student has the choice in what they want to study and how they are going to apply their newfound knowledge. According to Ernie Stringer, "Student learning processes are greatly enhanced when they participate in deciding how they may demonstrate their competence in a body of knowledge or the performance of skills." This pedagogical implication enables the student to establish his or her unique learning objectives. the teacher evaluates the learner by providing honest and timely feedback on individual progress. Building a rapport with students is an essential strategy that educators could utilize in order to gauge student growth in a student-centred classroom.

4. CONCLUSION

Project-based learning, problem-based learning, and inquiry-based learning all three closely relate to the information processing approach. They all fit well with technology-rich learning environments where the focus is not on the hardware and software, but on the learning experience. In each case, technology is used to facilitate learning. It may be a tool to organize ideas (such as Inspiration), search for current information (such as an online news source), or present ideas (such as PowerPoint presentations). However the focus of learning environment is the student's excitement about solving a problem or addressing an issue they find meaningful. Student feels the creative urge to figure out what he really wants to learn.

Evolving approaches to teaching are also quite important to the discussion of relevance. Key developments here have been the introduction of new program options, such as part-time programs, online study possibilities, and courses that allow students to acquire credit for current or prior professional experience, among others. These innovations seek to more effectively meet the needs of contemporary students, many more of which are balancing work and/or family obligations, returning to schooling after a break of some years, or pursuing lifelong learning interests and goals. In countries where the focus has long been on rote learning, emphasis has shifted in recent years to developing students' analytical and critical thinking skills, as well as a clearer understanding of how to learn. Along with curriculum and pedagogy, research has also been an important factor in the move toward relevance.

Technology can play an interesting and essential role in an institution's centralized approach to teaching and outcomes-based handling of student learning. For example, faculty may be required to use e-learning platforms such as Black Board or Web CT. This process-painful though it may be for many individuals-typically forces teachers to think more reflectively about course design, delivery, and assessment. It can stimulate creative new ways to engage students and to incorporate highly contemporary materials, while sensitizing faculty to the range of new challenges and possibilities inherent in the application of educational technologies.

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