



Using Innovative Teaching Techniques in Transition from Teacher-Centered to Learner-Centered Education

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INTRODUCTION

The concept and techniques of the Learner-Centered philosophy is an important process for the recognizing of any educational institution as a first-rate teaching institution.

Learner Centered Education is a strategy of education that places improvement of student learning at the center of decision-making processes and policies at all levels of the institution. It is characterized by the use of clear, measurable goals and student outcomes, and the direct involvement of learners in activities that produce deeper understanding of the content through the development of skills that are readily transferable to life and work. An additional central and very important goal is to prepare self-directed learners who can continue learning beyond their formal education.

The Seven Principles for Good Practice in Undergraduate Education [1] emphasize on:

1. Active Learning – students must discuss about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives thus making what they learn part of themselves
2. Student-Faculty contact – the most important factor in student motivation and involvement is a permanent student-faculty contact in and out of classes.
3. Cooperation among students – good learning is collaborative and social, not competitive and isolated. Working in teams often increases involvement in learning. Sharing one's own ideas and responding to others' reactions improves thinking and deepens understanding.
4. Prompt and appropriate feedback on performance of the students – at various points during college, and at the end, students need chances to reflect on what they have learned, what they still need to know, and how to assess themselves.
5. Effective time management – allocating realistic amounts of time means effective learning for students and effective teaching for faculty. How an institution defines time expectations for students, faculty, administrators, and other professional staff can establish the basis for high performance for all.
6. Diversity of Talents and Ways of Learning - students need the opportunity to show their talents and learn in ways that work for them.
7. Holding high expectations – High expectations are important for everyone - for the poorly prepared and for the bright and well motivated students, for teachers and institutions as a whole.

TEACHER CENTERED V. LEARNER CENTERED INSTRUCTION

The educational goals for the twenty-first century are very different from the goals of earlier times. In the early 1800s, instruction in writing focused on the mechanics of making notation as dictated by the teacher, transforming oral messages into written ones. In the early 1900s, the challenge of providing mass education was seen by many as analogous to mass production in factories [2]. Teachers were viewed as workers whose job was just to pass the facts/knowledge to the students, but not understanding and to measure the progress and the costs through the standardized tests. This approach affected the design

of curriculum, instruction, and assessment in educational institutions.

The traditional style of teaching has not been changed significantly since 1900. Many teachers still use the "I lecture; you listen and write" method of teaching. Despite the proliferation of electronic media and alternative methods of instruction, lecture is often the instructional tool of choice, forcing students to take notes and to listen carefully. The teacher-centered technique is characterized by involving this traditional type of instruction where the teacher lectures, uses the textbook, and sometimes promotes discussion.

Today, students need to understand the current state of their knowledge and to build on it, improve it, and make decisions in the face of uncertainty. The learner-centered instruction is non-traditional instruction where the students worked independently and in-groups on specific assignments. They discussed lessons in the text by focusing upon "real world" applications. The teacher uses visuals, field trips, guest speakers, and current events to teach the lessons. The role of the teacher in this case is to monitor the students and give advice or ideas so that they may draw conclusions and solutions independently or cooperatively.

INNOVATIVE TEACHING TECHNIQUES AND TOOLS OF TECHNOLOGY

Technology has become an important instrument in education. Computer-based technologies hold great promise both for increasing access to knowledge and as a means of promoting learning. Technology can help in establishing effective learning environments by: bringing real-world problems into classrooms through the use of videos, demonstrations, simulations, and Internet; increasing opportunities for learners to receive feedback from software tutors, teachers, and peers; to engage in reflection on their own learning processes; and to receive guidance toward progressive revisions that improve their learning and reasoning; providing "scaffolding" support to augment what learners can do and reason about on their path to understanding [2].

Technology has placed new demands on higher education. Institutions are challenged today with factors that include shifting demographics, rising student expectations, overburdened faculty resources, government mandates, and increased competition. Technology-enabled learning has opened a new world of opportunities. With the right strategy, advanced pedagogical tools, and technological framework, institutions can actually capitalize on this paradigm shift in higher education.

Various innovative teaching techniques can be used to improve the quality of the learning environment: web-based development and delivering of the course materials, electronic presentations, delivering and submission of tests, quizzes, assignments, examination papers and surveys. Even very simple mail-based agents can be of great help to enhance the faculty-student contacts and cooperation among students.

Many software systems exist promoting innovative teaching tools. Some of them provide tools useful just for a particular part of the teaching process, for example assignments and homework delivering, like WebAssign (<http://webassign.net>) that offers increased opportunity to practice skills, and the immediate feedback encouraging students to monitor their own progress and ad-

Transforming the Educational Experience

	Capability	Impact	Value
Administrators	+ Expands academic capacity + Student performance tracking	+ Student Retention + New Revenue Streams - Expense Management	+ Rapid ROI
Faculty	+ Course Management + Content Management + Assessment Tools	- Preparation Time + Content Availability	+ Increased Productivity
Students	+ Personalization + Academic Support	+ Content Sharing + Course Completion + Grades	+ Improved learning
IT Professionals	+ Scalability + Standards-based architecture	+ Campus-wide Deployment + Integration	+ Increased Efficiency

just the focus of their study accordingly. Other systems offer tools for creating an integrated learning environment suitable for on-line and distance education like WEBCT designed to address the needs of the entire educational enterprise - from administrators serving the needs of a broader student demographic, to students and faculty looking for ways to enhance teaching and learning. The following table taken from <http://www.webct.com/transform> summarizes the capability and impact of implementation of such systems on the entire educational enterprise:

TRANSITION TO LEARNER-CENTERED INSTRUCTION IN BULGARIAN UNIVERSITIES

The educational traditions in Bulgaria are rather old and their establishment began in the 1888 (October 1, 1888 is the birth date of Bulgarian university education) when the oldest Sofia University has been opened following the model of the famous European universities at that time. These traditions were and are still very close to teacher-centered style of teaching and although this approach had shown good results, now we have to recognize the drawbacks of this approach, mainly in applying the principles of active learning, an understanding the collaborative and social nature of the learning process, an appropriate feed-back on the student performance and assessing student learning.

The transition towards learner-centered teaching has been supported by the number of the ongoing pilot projects carried out together with the partners from other universities and funded through various programs like TEMPUS, NATO R&D projects, EU projects, Phare projects, etc. [3]:

- Intelligent Learning Environment for Course Telematics (INTELLECT) - This project aims at developing processes for transforming text/paper-based masters level course material into an interactive distance-learning environment based on the Internet, developing hypertext features, multimedia content and intelligent agents into a student-centered information system.
- Multimedia Applications for Telematic Educational Networks (MATEN) - The project attempts to combine the unique capabilities of different media with the power of computer networks in World Wide Web platform in order to design a rich educational environment for everyone. That environment removes the limitations and at the same time enhances the strong points of the traditional educational system. Multimedia application of computer networks provides people with the equal chances for life-long education, for flexible learning not only at the school, but as well as at home at work place. The Web is delivery distance medium, content provider, subject matter and "instructional designer" all in one.
- DEsign, implementation and MANagement of telematics based Distance education (DEMAND) - the project aims at developing a meta-level course for educational managers and practitioners at higher and further education level in order to be able to design and implement distance education courses using telematics. DEMAND itself will be implemented on the World Wide Web and will be delivered basically via the Internet. In settings for which this delivery option is not appropriate, an off-line version of the course will be offered.

The basic idea of these projects is to combine the strong points of the traditional education system with the innovative teaching techniques and modern methodological approaches and to disseminate the results in other Bulgarian universities. The implementation of these results affects the design of curriculum, instruction, and assessment in universities. The emphasis is set on getting an extensive feedback from the learners during the whole process of teaching and using this information in the pursuit of continuous improvement. Another very important issue is the assessment and self-assessment of the students, finding and applying the objective and measurable performance criteria for the evaluation of the learner's outcomes.

CONCLUSION

A scientific understanding of learning includes understanding about learning processes, learning environments, teaching, sociocultural processes, and the many other factors that contribute to learning. A truly effective learning solution must be aligned with an institution's mission and goals and designed to meet the needs of every constituency in the academic enterprise. The most successful educational institutions will be those who leverage emerging technology to: target, attract, retain, and cultivate students; continually improve the learning experience; maintain lifelong learning relationships with students; leverage institutional resources as efficiently and effectively as possible.

The transition towards learner-centered approach requires reformatting and keeping the courses up to date, implementing classroom innovations together with the adoption to different student learning styles. Applying modern IT techniques to the course design and development makes them suitable for distance learning education purposes also. This is extremely important nowadays taking into account the existing and foreseen budget cut constraints.

The latest achievements in the information technologies and communications create new opportunities and at the same time great challenges both for the educators and student.

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