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Central Board of Secondary Education
(An autonomous Organisation under the Union Ministry of Human Resource Development,
Govt. of India)
'Shiksha Sadan', 17-Rouse Avenue, New Delhi – 110 002

CBSE/ACADEMIC/CIRCULAR/2010

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Circular No. 57

All Heads of Institutions
Affiliated to the Board

Dear Principal,

21st century is characterized with the emergence of knowledge based society wherein Information and Communication Technology plays a pivotal role. The convergence of computer, communication and content technologies, being known as ICT, have attracted attention of academia, business, government and communities to use it for innovating profitable propositions. ICT has permeated in every walk of life affecting the fields such as launching satellites, managing businesses across the globe and also enabling social networking. Year by year it is becoming simpler to use devices such as desktop palm top, iPod etc.

In its vision, the national Policy on ICT in School Education by MHRD Govt. of India states "The ICT policy in School Education aims at preparing youth to participate creatively in the establishment, sustenance and growth of a knowledge society leading to all around social economic development of the nation and global competitiveness". The policy envisages three stages of ICT implementation at school level –ICT literacy and Competency Enhancement, ICT enabled teaching – learning and introduction of ICT related elective subjects at Senior Secondary level. The National Curriculum Framework 2005 (NCF 2005) has also highlighted the importance of ICT in school education. With this backdrop, major paradigm shift is imperative in education characterized by technology enabled instructions, collaborative learning, multidisciplinary problem-solving and promoting critical thinking skills.

Government of India has announced 2010-2020 as the decade of innovation. Reasoning and Critical thinking skills are necessary for innovation. Foundation of these skills is laid at school level. It is desirable that affordable ICT tools and techniques should be integrated into classroom instructions right from primary stage so as to enable students develop their requisite skills.

In CBSE circular number 07 dated 22 Feb 2010 it has been stated that the NCERT is contemplating to exploit the potential of WWW for improving the quality of Mathematics teaching in schools. The CBSE would like to extend it to all subjects and all classes.

At Primary and Upper Primary level, focus may be on simple access to information and trying to compile different views and analyze them to conclude in one's own way. At the Secondary level, gathering and structuring of data and computing to arrive at some reports may be taken up in any subject, not necessarily Science and Mathematics. At the Senior Secondary level, when students are so exposed, they will get highly motivated to use ICT tools for taking up complex, multidisciplinary problems such as biochemistry, bioinformatics, environmental science, forensic science, nanotechnology, business intelligence etc. This may necessitate computing tools and techniques of generic nature as well as domain-specific. This is the time when the students and the teachers together will work in global competitive environment.

The schools affiliated to the CBSE have been at the forefront of adopting the most modern innovations and practices to ensure there is a continuous enhancement in the overall quality of teaching and learning. The CBSE believes that it must bring the immense benefits of ICT and computing technology to every classroom across its fraternity of affiliated schools to improve academic outcomes of learners and to enhance the productivity of teachers in classrooms. This can be done by encouraging the use of technology in classroom teaching – learning and instant assessment which shall also go a long way in supporting its CCE initiative as well.

CCE in the right spirit entails periodic assessments which are integrated effectively in the classroom teaching and learning. Infact all assessments must inform teaching. Using technology helps to create interest among learners as, e.g., a quiz may be done online as part of formative assessment. Technology can greatly assist teachers in classrooms to teach difficult and abstract subject matter concepts effectively if the right digital instruction materials, supporting technology infrastructure and intensive training is provided to the teachers to support instruction.

As a note of caution, sometimes teachers are focused more on the new technology than on what students should be learning. The focus on interactivity as a technical process can lead to some relatively mundane activities being over-valued.

One must realize that, technology is a tool to improve student learning. It can motivate and sustain student interest and reinforce learning, offer self-paced practice and create high-interest learning environment. However, technology cannot replace the teacher on quality teacher-student relationship. It cannot make a bad teacher

into a good teacher, but it can help a good teacher become an even better and more productive teacher.

Setting up a classroom equipped with LCD projector and facility for computer mediated instructions of the type will aid the teacher in developing a quality teaching learning environment. Specifically such classroom must have:

- a. A projection or display device which can project a sufficiently large image to be viewed by every student in the classroom with causing eyestrain.
- b. An electronic interactive white board system
- c. Computer with UPS system
- d. Education content library mapped to CBSE curriculum topics covering all major subjects across all grades.
- e. Electronic Response system for each student to enable real time assessment
- f. Resource person to help teachers on a day to day basis to use the digital classroom systems.

As a first step in this direction, all CBSE affiliated schools are advised to setup at least one classroom for each class in their schools equipped with technology to enable usage of digital instruction materials in the classroom so that students are given adequate exposure to digital materials. Schools are encouraged to progressively move to enabling each classroom with technology for usage of digital materials in the classroom.

Students may be encouraged to form Creative Computing Club to try out innovative applications without any stress and compulsion. For future, schools can plan to setup every year more such classrooms Prompt action and reporting by schools in this direction will be highly appreciated by CBSE.

Yours faithfully,



(VINEET JOSHI)
CHIARMAN

Copy to :

1. The Commissioner, Kendriya Vidyalaya Sangathan, 18-Institutional Area, Shaheed Jeet Singh Marg, New Delhi-110 016.
2. The Commissioner, Navodaya Vidyalaya Samiti, A-28, Kailash Colony, New Delhi.
3. The Director of Education, Directorate of Education, Govt. of NCT of Delhi, Old Secretariat, Delhi-110 054.
4. The Director of Public Instructions (Schools), Union Territory Secretariat, Sector 9, Chandigarh-160 017.
5. The Director of Education, Govt. of Sikkim, Gangtok, Sikkim – 737 101.
6. The Director of School Education, Govt. of Arunachal Pradesh, Itanagar-791 111
7. The Director of Education, Govt. of A&N Islands, Port Blair-744 101.
8. The Secretary, Central Tibetan School Administration, ESSESS Plaza, Community Centre, Sector 3, Rohini, Delhi-110 085.
9. All the Regional Officers of CBSE with the request to send this circular to all the Heads of the affiliated schools of the Board in their respective regions.
10. The Education Officers/AEOs of the Academic Branch, CBSE.
11. The Joint Secretary (IT) with the request to put this circular on the CBSE website.
12. The Library and Information Officer, CBSE
13. EO to Chairman, CBSE
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15. PA to Secretary, CBSE
16. PA to Director (Acad.)
17. PA to HOD (AIEEE)
18. PA to HOD (Edusat)
19. PRO, CBSE



**(VINEET JOSHI)
CHAIRMAN**