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<th>Bioethical issues in teaching</th>
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Bioethical issues are very diverse and can stretch from everyday issues of the home into space. This would involve topics like, pollution; organ donations and implants; mercy killings or euthanasia; human gene transfers into non-human species; abortion controversies and invitro fertilization; space exploration research that has unlocked whole areas of information about life under non-gravity; and many other startling advances.

Biology teachers must reconsider their traditional views of what science means to them and think of how they are to present it in their classrooms.

There are many controversies between the scientific community, religious groups, the courts, government agencies, organised citizen groups and individuals who question the various legal, social, moral and ethical aspects of the new technologies and their implementation. Opinions may differ as to how we will deal with situations. Neither is there alone right answer for many of these issues under controversy.

This puts on the teacher the responsibility of introducing moral decision-making processes to her students, to help them face the value decisions of the society of tomorrow. We have to educate our pupils to the fact that while we are free to make choices, we are bound by the consequences of our choices. Neither are we free to ignore how our choices will affect others, both now and in the future.

On way to deal with bioethics in the classroom is to develop case studies which simulate real decision-making situations and allow students to learn through direct confrontation with facts, ideas or issues. Another method is to investigate actual case histories through interviews with clergymen, doctors, lawyers, social workers, psychologists and other professionals. These investigations would provide an opportunity to go through the decision-making process with our students, allowing them to
express their decisions and rationale for each case and then compare their decisions with those made in the real case.

Teachers could also identify societal and personal bioethical issues pertaining to topics within the school curriculum and, by using simulated courtroom procedures, place the issue under trial. Other topics can be tackled as projects, panel discussions, debates or group discussions, with students being set to collect a wide variety of materials and information that would broaden their understanding of the issue.

To help students develop sensitivity to bioethical issues, we could pose questions that permit them to probe for the fundamental values that are inherent in the issue under consideration.

Students can be asked the following questions to make them think about their obligations to the environment and to develop/improve their understanding of nature.

1. Are we justified in destroying micro-organisms, algae and lower invertebrates rather than vertebrates for our learning?
2. Are we justified in breeding frogs and rates for scientific study? What about monkeys?
3. Would we learn as much from a video-taped dissection? – from a computer simulation? – from a field trip?

In order to place more emphasis on decision-making, biology teachers must develop the skills necessary to implement this goal. Teachers will need to:

- adapt their topics for their audiences,
- encourage active participation among their students,
- use small group discussions,
- use a variety of teaching modes,
- remain neutral.

Ethical decision making methodology is a procedure in which different values are compared, weighed and a judgement made. Teachers have to identify values as:
what is judged to be 'good',

- implying preferences,
- being supported by rational justification,
- countenancing strong feelings or intense attitudes,
- specifying a course of action.

In decision making we thus have to:

a) perceive that a bioethical problem exists and state it in simple language,

b) list all recognised alternative courses of action with both immediate and long term effects,

c) state all values that bear on the selected course of action,

d) analyse individual values and their consequences in the present and future,

e) make a decision that is validated in ethical terms,

f) stress on the students that the results of such a procedure should not end in a single 'good' or 'right' answer.

We should not try to force an ethical position on our students but try to develop a procedure that student can use in decision making. We should help them understand in ethical/moral thems how valid alternative choices are made.

The wisdom with which a society uses new technologies depends on an informed public that can made decisions based as a value system developed in schools. Students should learn to make sound, rational decisions that are defensible with their biological knowledge especially when dealing with value laden problems. When children leave our schools they should be able to say,

"this is what I believe is right and therefore my decision is. . . ."
Headlines from daily newspapers.