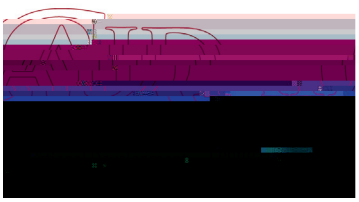

Gknpmtgle ?a_bckgaRc_afgle

Jc_plgle _lb ?a_bckgaT_jsc

T e following suggestions for enhancing teaching and learning are keyed to sections of the Instructor/Course Evaluation (ICE), an instrument adopted for the evaluation of teaching at Saint Mary's University and based on the Students' Evaluation of Educational Quality (SEEQ). T e ICE factors teaching into nine components, eight of which provide formative information that can be used to improve teaching and learning.

T e following suggestions were adapted by Professor Herbert W. Marsh, University of Western Sydney - Macarthur, Australia (developer of the SEEQ) with permission from: Davis, B. G., Wood, L., & Wilson, R. (1983). ABC's of Teaching with Excellence. Teaching Innovation and Evaluation Services, University of California. Minor changes in language were made by Professor Beverly Cameron (University Teaching Services, University of Manitoba) to fit the Canadian context. Teaching Tips is reprinted with permission.

Current resources related to the eight formative ICE factors are available from the O ce of Instructional Development, Saint Mary's University. Copies of the ICE questionnaire are available from the Senate O ce.

Learning and Academic Value (ICE Factor 1): In essence this factor denotes students' subjective feelings of success gained by participation in a course and/or at the hands of a particular teacher. Students who are challenged and stimulated, who consider their learning throughout the course to have been worthwhile, whose interest in the subject was increased, who are conscious of having understood the subject-matter and who generally rate the course highly are clearly expressing feelings of accomplishment with challenging learning tasks.

Jc_plgle _lb ?a_bckgaT_jsc

T e following ideas and suggestions have been used by outstanding university instructors.

/, Egtc wmsp qrsbclrq _ amlacnrs_j dp_kcumpi ml ufgaf rm f_le k_hmp gbc_q _lb rfc d_ars_j gldmpk_rgml md _ amspqc,

T e framework may be a structure, a theme, a conceptual typology, a controversial issue, or a theory. T e conceptual framework should be made salient to students through repeated reference.

As one professor of Physiology points out, "To the uninitiated, our field looks like a mass of facts; by establishing a conceptual framework, I minimize the amount of rote memorization my students have to do."

Often the framework can be represented symbolically or graphically. Another physiologist, for example, begins each lecture by drawing the same outline of the whole human brain on the blackboard. Details of the brain, in terms of structures and processes, change according to the specific topics to be covered in that day's lecture.

A Sociology professor uses a basic typology as a conceptual framework for his course; this typology is sketched on the blackboard each day as a matrix into which new
information is written. He stresses the need to tie basic facts together to make conceptual linkages for students.

A History professor uses the concept "Attitudes toward Natural Resources" rather than chronology as an organizing principle. A professor of Spanish literature identifies two or three major concepts (e.g., irony or tragedy) and applies them repeatedly in lectures, discussions and assignments to reinforce student understanding.

0, Nmqc n_p_bmvcq dmp wmsp qrsbclrq rm qmjtc,

A Chemistry professor emphasizes conceptual understanding by challenging his students with apparent paradoxes. "Several times each semester I set up a demonstration to give a visual result that is at variance with what is described in the textbook. My students are then helped to explain the paradox by applying a variety of problem solving techniques. T is kind of demonstration really gets students thinking. Furthermore, many students tell me that they learn more from seeing than from reading. It gives them another way of understanding and helps them gain self-confidence that they do in fact understand."

1, Bgtgbc wmsp amspqc glrm jctcjq md amlacnrs_j bgńasjrw,

A Zoology professor focuses the first part of the course on fundamentals and the second part on state-of-the-art research. " T e first six weeks cover basic concepts and fundamental processes all my students must learn about the subject. In this segment I eliminate many 'nice to know' concepts in favour of going over the basics in a very thorough way."

"Because students are quite heterogeneous (including undergraduates who have taken only introductory Biology as well as graduate students in Zoology), I spend the first six weeks making certain that everyone is brought up to approximately the same level of understanding of the fundamentals. T en in the last weeks of the course, I introduce the latest research experiments in the field. In e ect, the first half of the course is made up of 'little white lies,' that is, the simplified constructs of the field. In the later weeks, the emphasis is on how research is actually done and how little we really know."

A professor of Physics uses a similar strategy throughout his lower-division courses. He divides course topics into three levels: those which are "Basic" (i.e., should be mastered by every student); those which are "Recommended" (i.e., should be mastered by every student seeking a good understanding of the subject); and those which are "Optional" (i.e., need to be mastered by those students with special interest in the subject).

2, Qrpcqq rfc kmqr clbspgle t_jscq md rpsrfq gl wmsp bgqagnjglc,

"I stress the permanent values in literature, the emotional responses that a particular novel or collection of novels elicits from us all," says one professor of English. "I try to get my students to understand why they respond to a given novel the way they do." After a class has discussed how they feel about a novel - the common emotions it arouses - he tries to lead them to analyze, understand, and explain why nearly everyone feels the way they do. He poses questions such as: 'What must literature be like in order to get us to respond the way we do?' and 'Why does a particular novel e ect everyone in the same way?' "Behind all my questions is the search for a way of analyzing and discussing literature that will explain the most with the fewest assumptions."

3, Rmsaf `_qc pcnc_rcbjw ugrf rfc dslb_kclr_jq mp `_qgaq,

One Engineering professor believes that too much of science and engineering is presented to students in a rote, plug-in-the numbers way. " T ere are thousands of formulae, but all of these are variations on a limited number of basic ideas or theories. T ese basic ideas are 'ideal theories' from which are derived all the 'approximate' or 'technical theories' which engineers use. I try to teach my students how to judge when they can use an approximate theory with confidence and when they are obliged to go to a more rigorous level. In this way, I keep touching base with the fundamentals to reinforce students' understanding of them."

Another Engineering instructor concurs. ''Students are typically presented with 100 di erent equations in each course they take. T ey are exposed to 1100-1200 equations overall. Rote

problems are then seen as common to many students not just the group's representative. Faculty members can be very intimidating for some first year students, even those of us who try very hard not to be. Also, many of these students were at the top of their high school classes and it is di cult for them to adjust to the competition at university. While it is di cult for them to admit that they don't understand something, there is a certain comfort in knowing that some of their fellow students are in the same boat and that by joining forces they can help one another."

/4, Qafcbsjc_l glbgtgbs_j_nnmglrkclr ugrf c_af qrsbclr,

A Statistics professor felt that he was not being successful in generating class discussion. At the end of the third week, stil ľ Ł adm } f ! ě ế ľ ľ

y Ę

/7, ?qi qrsbclrq rm _l_jwxc _l cqq_w mp hmspl_j _prgajc _lb rm upgrc _ apgrgosc md gr,

One professor of English assigns the work of a literary critic and then asks students to write an essay taking an adversary position. "If my assignments are provocative, I get better results. I stress the importance of their presenting a personal point of view. T ey should enjoy doing the paper; it should provide them with a personal learning experience."

A Psychology professor asks students to write an evaluation or critique of a paper by a professional psychologist. " T e process of analysis and evaluation captures what I am trying to do in the course," he explains.

0., Egtc _qqgelkclrq ufgaf nsr wmsp qrsbclrq gl rfc pmjc md _lmrfcp,

A History professor reports that she used to give rather standard writing assignments, e.g., "compare author X and Y's views on A," where the two authors tended to be professional historians. "Most undergraduates, however, find the arguments of current historians somewhat arcane," she says. '' T erefore, most recently I have asked students to read a collection of the 18th century speeches on why Louis XVI should be killed and assigned them the task of writing their own speech as if they had been living during the French Revolution."

"Undergraduates really are enthusiastic about this kind of assignment and do an incredibly good job. It helps them to identify with the issues of the time; in fact many students went to great lengths to research the authenticity of their own empathic interpretations. Next year, I intend to take this assignment a step further by dividing students into small groups and having them actually deliver their speeches to the group."

0/, ?qqgel §rfmsefr npm`jckqµ ufgaf _pc rwnga_j md rfc npm`jckq d_acb `w npmdcqqgml_jq gl rfc «cjb,

A Forestry professor assigns weekly "thought problems" which are the same type of questions professional foresters are asked, such as, 'What is killing that tree?'; not name six factors which can kill trees."

00, Sqc pc_j npm`jckq _lb f_tc wmsp qrsbclrq qmjtc rfck,

An Engineering professor presents students with problems based on real cases. "For example," he

T e value of this approach is to give students experience solving the type of practical problems they will encounter as professionals," he explains. "Also, because the problems are based on actual cases, it gives students a chance to compare their own problem-solving skills with those of practicing engineers."

01, Sqc a_qc qrsbgcq rm egtc qrsbclrq np_argac _r _lqucpgle np_argac oscqrgmlq,

A professor of Anthropology carefully prepares case study assignments to give her lower division students exposure to primary research techniques and strategies. Students are presented with a collection of photos, maps, and narrative information which depict a site as an archaeologist would see it. Students must answer a series of questions, e.g., "What changes in eating habits can you infer from the artifacts found at two di erent levels?"