

Thanks for your Response

Editor's Report on Calculator Questionnaire

Remember the questionnaire mailed to you with the September issue of *Delta-K*? We asked you to respond to a number of questions with regard to the use of the hand-held calculator in mathematics classes, and we promised to publish a summary. Here it is!

How do Alberta teachers feel about the use of mini-calculators in our schools?

The first impression gained from the answers is that we have a valuable instrument. Where it is more convenient, it can replace the slide rule and math tables in solving complex problems. It is used to increase the rate of solving complex problems where the principles to be learned are basically how to interpret data, particularly in areas of science and business.

Answers to specific questions reveal the following:

1. Many students have calculators available at the secondary level, and some have them at the elementary level.
2. Most teachers have a calculator or have access to a calculator and use it.
3. Calculators belong in the secondary schools, and a few teachers in elementary grades would like to see them in elementary classes.
4. Calculators belong to all students, not just to the "good" students.
5. The use of calculators by students who cannot remember their basic skills need to be further explored. Respondents to the question do not agree on this point.
6. The schools should not be made responsible for furnishing calculators.
7. The need for special courses in the use of calculators must be investigated more thoroughly. There is no agreement on this point.
8. Do parents favor or oppose the use of calculators? We don't know the answer to this question as yet. However, it is suspected that most parents are as unsure of this as they are of the "new" math which they do not fully understand.
9. Special materials on the use of calculators are wanted and needed. (See section "PLEASE NOTE ..." in this issue of *Delta-K* as to availability of *Mathematics Teacher*, November 1976, as one way to get such materials.)
10. Most teachers would allow the use of calculators on tests designed to evaluate problem-solving ability and as an aid to improving problem-solving ability.

11. The use of a calculator leading to a breakdown in basic skills may be a liability. This needs extensive investigation.
12. Units of study on how to use the calculator need to be part of the program. We need to ask, "at what level?" From the responses it appears that such units probably should be introduced at the Grade VI or VII level.
13. Special in-service training in the use of calculators should be given to teachers. (MCATA is working on this through the mini-conference and will help to supply expertise for professional development groups desiring workshops as part of professional days, institutes, and conventions.)
14. Calculators are helpful in inspiring students to do more math and to continue their studies in math.
15. There is no agreement on the extent to which machines will replace computation, and about one-third of the respondents has no definite position.
16. No consensus has been reached on the question as to whether the use of the calculator should be a "must" area. (It is speculated, though, that many students with limited basic skills will learn the simple operation of a low-cost mini-calculator regardless of what is being done in the classroom. Therefore, more teachers are seen moving toward the "must" position in time. Do you agree?)
17. The calculator is useful in other subject areas, particularly science, business and industrial arts.
18. Senior high teachers want the calculator to become part of classroom tools now. Other teachers are not so concerned. Most teachers in the senior high schools use calculators when available to the students; junior high school teachers are divided, and elementary teachers are not using them.

Some of you may have answered differently, and you may feel differently. However, the above is the general feeling of those who responded to the questionnaire. The areas where we left doubt are those where the statistics left uncertainty about the majority opinion of the issue involved.

We will have to decide whether we want to teach the use of the mini-calculator as part of the mathematics program or whether we will leave it to the business education teachers to make it a part of the business machine and/or office practice program of studies, with many students becoming self-taught and getting only limited skill in its use.

Our school boards will have to decide whether the purchase of calculators should be the responsibility of each student or should be included in the budget as are texts and other school supplies. This will vary from board to board as it should, unless the ASTA decides to make a policy on this matter. Should we as professionals attempt to influence our boards? We should be prepared to make suggestions and/or recommendations when requested. Perhaps some of us will be in a situation in which a positive influence is desirable. At present, MCATA and The Alberta Teachers' Association have not made any policy statements or policy recommendations. Should MCATA make a statement with ATA approval? Let us know your opinion on this matter so that we can act on your behalf.