

MORE SUGGESTIONS FOR COUNTY COUNCILS.

County Councils and Technical Education. By J. C. Buckmaster. (London: Blackie and Sons.)

UNDER the above title Mr. Buckmaster, who for many years has been connected as teacher, lecturer, and organizer with the Science and Art Department, gives some statistics relating to technical education, and his views on the best way of utilizing the funds in the hands of County Councils. We need hardly say that, backed as they are by so long an experience, his opinions deserve the most careful and respectful consideration.

Briefly stated, Mr. Buckmaster believes in class teaching as opposed to lectures, and in utilizing as far as possible existing elementary and science and art teachers. "Unless," he says, "the sympathy of teachers and other educationists can be enlisted, the most carefully considered schemes of County Councils can only end in partial or complete failure." Again,

"Lectures by themselves are never to be highly valued as a means of education. In a lecture on science, to create and sustain an interest, you must be popular, and to do this you avoid the complex difficulties of the science, which are often the only intellectual parts of it. . . . Lectures, unless followed up by thought and reading on the part of those who hear them, fail as a means of education, &c., &c."

All this is excellent, and the warning is useful. But when Mr. Buckmaster comes to the application of these principles he is not quite so happy. For example, he is unjust to the University Extension system, which he does not clearly understand, and treats as though it were mere popular lecturing, like the work of the old Mechanics Institutes. Now, though we have no belief that the University Extension machinery can fill the place of elementary class teaching, we cannot accept the implied suggestion that courses of ten or twelve lectures (often arranged in sequences of two or three sets of twelve lectures), each lecture followed by a class for the more serious students, and by written paper work corrected by the lecturer, and the whole course tested by independent examination, form an engine of instruction scarcely above the level of a clever conjuror's performance.

His constructive suggestions are, first, to use elementary teachers to give object-lessons in simple science—a most useful proposal, about to be carried out in various counties as soon as the teachers themselves can be properly trained for the work; and secondly, to multiply science and art classes. "The best technical instruction for some time will be a wider development and extension of the educational work of the Science and Art Department by means of night classes and continuation science and art schools." This depends, of course, on the meaning to be attached to "development." If it merely means multiplication, the statement is open to serious question. No one can know better than Mr. Buckmaster the special dangers attaching to the system which he advocates—the abuses which grow up round a system which makes the financial success of the class, and usually the salary of the teacher, depend on the result of an examination. In our opinion, the machinery of the Science and Art

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Department will long continue to be a most useful and important factor (though not to the exclusion of other agencies) in the development of technical instruction. But the present is the great chance to consolidate and improve, rather than merely extend the work. If the County Council funds are so granted as to correct the evils which inevitably arise out of such a system of payments on results as is adopted by the Department—if its control is used to render more effective the *inspection* as opposed to the mere examination of science and art classes—then the portion of the grant given to promote the work aided by the Science and Art Department will be well spent. But no claim on the part of this or any other single agency to a monopoly of all technical instruction above the rank of that which can be given by the village teacher can be conceded. Mr. Buckmaster does not in so many words make the claim, but he sometimes seems to imply it by minimizing the value of most other experiments which County Councils are attempting. It is virtually a plea for educational bureaucracy against local experiment. But we have not yet reached the stage, if, indeed, we ever do so, when variety of experiment can be dispensed with. Some of the experiments will probably fail. But it is only by wide and free experimenting that the "fittest" will be discovered. Mr. Buckmaster has confined himself, probably on purpose, to the elementary branches of technical instruction, and is silent on its higher developments. Manual work he only just mentions, and not with much sympathy. His criticisms on the wood-carving taught by ladies in villages is not, perhaps, too severe; but it is strange that he does not give a hint that systematic manual training may be (as it has been for a long time in other countries, and lately in our own) made of real educational value. Not a word is said of the worst defect of all in our educational system—the want of good, cheap, secondary schools, which the present grant may do so much to remedy.

Though, however, Mr. Buckmaster takes a rather cramped and narrow view of the outlook, his pamphlet is full of valuable, if rather partial, ideas.

The pamphlet opens and concludes with some useful statistical and other information taken from various publications of the National Association for the Promotion of Technical and Secondary Education. Readers who do not know the source from which these pages are derived may be puzzled by a reference to "the Committee" (p. 41), which by some error in editing has been left still standing, without explanation, in Mr. Buckmaster's pamphlet.

! *THE MISSOURI BOTANICAL GARDEN.*

Missouri Botanical Garden: Second Annual Report. By William Trelease. Pp. 188; Plates 48, reproduced Photographs 5, and Plan of Garden. (St. Louis, Missouri: Published by the Board of Trustees, 1891.)

THE Board of Trustees of the Missouri Botanical Garden have instructed the Director to edit for publication each year a volume setting forth the objects of the Garden and the School of Botany, and the results accomplished by each. The first volume of this series was issued in December 1890, and contained an account