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THE SELECTION OF FORM FOUR LEAVERS FOR FURTHER EDUCATION, TRAINING
AND EMPLOYMENT*

By

E.R. Rado, James Morgan and Don Shepard

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Any views expressed in this paper are those of the authors. They should not be interpreted as reflecting the views of the Institute for Development Studies of the University College, Nairobi.

The Selection of Form Four Leavers for Further Education, Training & Employment*

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INTRODUCTION

This study is a by-product of a larger research project which aims to find out what has been happening to Kenya Form 4 leavers after they leave school, since 1965. It is the aim of this project to estimate what proportion of the Form 4 leavers of each year since 1965 proceeded to further education and training and how they differed from those who did not; what proportion found employment in what kinds of jobs, and how this group differed on the one hand from those who continued with their education and, on the other, from those who remained unemployed.

This enquiry has naturally led us to take look at those institutions of the labour market which perform the functions of allocating secondary school leavers to further education, training and employment. The Kenyanisation of Personnel Bureau and the Ministry of Education play key roles in this process, and much of the efficiency of this process of selection depends on the career form that students fill in about themselves (popularly known as Form A). Three considerations are involved here: what information Form A should contain; how this information should be processed; and how such information should be used in the various stages of the selection process. Early this year, we were asked by the then Director of the Kenyanization of Personnel Bureau to consider how these functions were presently performed, and to suggest improvements where desirable. We were further encouraged in this work by the inter-ministerial Steering Committee on Post School Training, which also expressed some concern about aspects of the selection process, and which contains representatives of the Directorate of Personnel, the Ministries of Education, Labour and Economic Planning, and Works the Kenyanisation of Personnel Bureau, as well as representatives of Commerce and Industry, and one of the co-authors representing the institute for Development Studies.

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In this paper we describe briefly how, and on the basis of what information, the selection and placement of Form 4 leavers now takes place, and we put forward ideas on how some of the functions of selection and placement could be performed more effectively. The key problem, of course, is that already not all Form 4 leavers find opportunities for further education, training or gainful employment. This paper does not deal directly with the question of how to accelerate the rate of growth of employment opportunities. We believe that the problems of how to select for further education, training and employment deserve careful consideration, both from the point of view the efficient use of scarce talent and from the point of view of equity. It may well be the case also, that an efficiently functioning labour market that can find for employers what they are looking for, and continuously inform the educational system of what employers need, may also have a positive impact on the long-term rate of growth of employment opportunities.

Nothing that is said on the pages that follow should be taken as criticism of the present work of the Kenyanisation of Personnel Bureau or of the Ministry of Education. The burden that has been placed upon them is an enormous one both in magnitude and in technical complexity. Their resources, and in particular those of the K.P.B., are under great and continuous strain. It is our hope that this paper may assist the K.P.B. both in securing an increased establishment of staff and in introducing some new and improved procedures that are contingent, in part at least, upon the availability of additional staff.

Lastly, we would like to express our thanks to Mr. Abel Nyamu, Director of the Kenyanisation of Personnel Bureau, for commenting on a previous draft of this paper, and for agreeing that this paper be circulated for discussion and comment.

Part I - The Form A

The openings that are available to secondary Form 4 leavers in Kenya can be divided into the following main categories:

- a. Further education - Form 5, leading to HSC.
- b. Further education - training courses sponsored by the Kenya Government or by the East African Community.
- c. Further education - training courses sponsored (and sometimes also provided) by private employers.
- d. Further education - training courses provided either by voluntary, non-profit-making agencies like the M.C.C.K. or by profit-making training institutions such as secretarial colleges. In these courses the student is not generally sponsored by an employer, but has to meet his/her own fees and living expenses, and has no guarantee of employment at the end of a course.

- e. Employment in the public sector, Central Government, Local Government, parastatal bodies, the E.A. Community; possibly U.N. agencies and foreign embassies also belong to this category.
- f. Employment in the private sector.
- g. Self-employment.

It is understood to be the policy of the Kenya Government that allocation of Form 4 leavers to openings (a) to (f) though not, at present, including (d) should be made by or through the Kenyanisation of Personnel Bureau (though inevitably, other agencies, notably the Ministries of Education and Agriculture, are also intimately involved); and that the principal instrument of allocation should be the "Form A", which each school leaver completes, shortly before he leaves Form 4. On this form the leaver is offered a choice among some of the categories listed in (a) - (g) above, and also more specific choices within these categories. He is then asked to rank his choices in order of preference. He completes this document on his own. The guidance he gets from his careers master on the implications of his choices varies from virtually nothing in some schools, to informed and personal advice in others. As we shall see below, the ranking of his choices has a marked effect not only on whether he gets the opening of his first preference, but also on whether he gets offered anything at all.

Before discussing how the system is working at present, and possible ways of making it work more smoothly, it seems best to outline some criteria on how it ought to work, first, to serve the interests of Kenya as a whole, and secondly, to be fair to the individual school leaver. Suggested criteria are listed below.

1. The general meaning of each of the options put before the leaver on form A should be readily comprehensible to him (or at least to his careers master).
2. The probable implications of choosing a particular set of options, and of ranking them in a particular way, should be clear to careers masters, who should be in a position to advise their students.
3. The options from among which the student is asked to choose should be sufficiently comprehensive to include all major career paths open to him (and for which recruitment takes place via the Form A); but they should not include detail that is unlikely to help the student or the potential employer.
4. The form in which the options are cast should, as far as possible, reflect the way in which the students see the problem of choosing a career.

¹For instance, a straight listing of occupations would not be likely to be optimal if students thought of jobs in terms of categories such as: "outdoor/indoor", "closely supervised/working independently" or "jobs involving talking/doing/writing" and if they did not distinguish between jobs that are similar in these major respects. A rapid enquiry we have conducted indicates that while most students have only a partial understanding of more than 1-2 specific jobs, they also - and perhaps because of this - find it very difficult to think of groups of jobs in abstract categories such as indoor/outdoor etc.

5. The information elicited by Form A about students' attainments, interests, character, etc. should include only those items which, in the opinion of those who do the selecting, are most likely to assist the process of rational selection.
6. The information elicited by the form should be capable of being rapidly and easily retrieved, and it should be possible to group and re-group forms quickly according to certain criteria. This implies that the forms should be designed with machine-readability in mind. The essential information they contain should be transferred to punch-cards, and also onto computer tape, and these should be stored in one place, preferably the KPB. Facilities should also be available for xeroxing, on request, such parts of the form as are not machine-readable, but which employers or heads of training institutions, may wish to see.

Students' job aspirations are affected not only by what they perceive their own aptitudes to be (relative to the aptitude-requirements of various jobs as they see them). Job satisfaction has many dimensions, and a close "match" between the aptitude of the worker and the aptitude-requirements of the job is only one of these. The social status of the job, whether the work is interesting, the security it offers and the surroundings in which it is performed are others, to mention but a few. But there can be little doubt that, among men especially, the pay that attaches to a job is as important as any of these and more important than most. The earning power of a particular job is, to a large extent, related to the scarcity of the skill involved, hence both the individual school leaver and the economy of the country would benefit in the long run if all students access to reliable information on the earnings (and employment) prospects that attach to different careers. In the absence of such knowledge young workers will attempt to change their jobs as soon as their knowledge of the labour market becomes more accurate and comprehensive. The new careers Guide attempts to provide such information, but it will have to be more comprehensive and accurate, and will have to be kept up to date, to perform this function effectively.

Part II - The Allocation Problem

Our discussion hitherto concentrated on the contents and format of Form A (and applies equally to "Form X," which performs the same function for sixth form leavers.) We now go on to discuss broad criteria for the efficient use of these forms and of the information they contain, in allocating secondary school leavers among the employment and training opportunities that are open to them.

After a brief investigation of the placement situation for Form IV leavers, the authors have estimated that of the 16,550 citizens who finished Form IV in December 1969, about 14% will have been offered places in H.S.C., and another 21% in other government training courses. A further 27% are likely to be absorbed into the labour market in technical, clerical, or skilled jobs during 1970. The remaining 38% will have to find self-employment, work in family enterprises, agriculture, or in semi-skilled work, enter privately-run training courses, or will be unemployed. This break-down excludes about 1500 non-citizen school leavers, and about 2500 private candidates for Cambridge School Certificate, most of whom should probably be added to the 38% who will have to find "non-traditional" jobs.

Thus, the present situation is one in which the demand for jobs and for training opportunities exceeds their supply at all levels of education through School Certificate. This state of affairs is likely to persist for some time to come. It is of the utmost importance, therefore, that the methods used for selecting a proportion of leavers for further training and/or employment should be efficient. By efficiency we mean here that, as far as possible, all of those selected for further education, training, or employment should have a greater probability of performing well in their pursuits than any of those who have not. Yet it cannot be overlooked that the process of selecting those who shall have further training or jobs is also, by implication, the process of choosing those who shall not have them. This raises unavoidable questions of social justice. Specifically, as regards the work of the K.P.B., two such issues are raised:-

The first issue arises because in the selection process both employers and training institutions place great weight on academic performance in the School Certificate examination. Yet, it is probably true that some children who get a Division II at some Harambee schools or as private candidates have shown more promise than many of those who got a Division I at one of the aided secondary schools which are endowed with better teachers, libraries, laboratories and equipment. Should the selection process take note of this, and if so, how?

Secondly, the total number of employment opportunities that annually arises in the economy as a whole is probably significantly in excess of the number of those who leave Form 4, Form 6 and the University, each year. One important reason why the problem of placing all Form 4 leavers in jobs or in institutions of further education and training is a serious one to the K.P.B. today is because it has been instructed to confine its activities to those openings which require education up to School Certificate level as a precondition. By casting its net wider, it could probably place all Form 4 leavers, but only at the expense of depriving youngsters with less education of opportunities they otherwise would have had. Should it, nevertheless, do so?

Neither of these problems can be settled on grounds of efficiency alone. It is likely that a battery of well designed aptitude tests would predict subsequent performance in H.S.C., further training and employment better than the E.A.C.E. results. It is also likely that, if such tests were used as supplementary selection devices, relatively more students from underprivileged schools would get an opportunity for further education or employment. This underlines the potential significance of competent and imaginative research on aptitude testing. But, until such research is brought to a successful completion, we are not in a position to make proposals to tackle the first of these problems.

As regards the second problem, it is clearly rational that there should be a division of labour between the K.P.B. and the labour exchanges, and the present division (under which each specialises on a certain level of jobs) seems as good as any alternative. However, it would be only a slight modification of the present system to suggest that, after a certain lapse of time, the K.P.B. should pass to the labour exchanges copies of the Form A-s of leavers it has not succeeded in placing, and let them compete on an equal footing with less educated job seekers.

Private candidates, it may be noted in passing, do not, at present, complete Form A, and this excludes some of them from opportunities they otherwise might have had. This is a relatively easy matter to remedy, and we shall propose that, in future, all candidates who sit the E.A.C.E. examination should complete Form A, and be considered on their merits for further opportunities.

Our discussion up to now has rested on the assumption that the methods of selection, and the selection criteria that are used, have no appreciable effect on the total number of jobs that become available annually in the economy. While this is probably true in the short run, it is not self-evident that it is also true over a longer time horizon. The quality of labour an employer can expect to hire, and the extent to which he can assume that he has efficient access to those particular job-seekers who most closely match his needs, may well affect both his willingness to expand the scale of his activities and his decision about the number of people he will employ (relative to capital) at any given level of output. This possibility is strengthened if employers can also rely on an efficient feed-back, from the labour market to the educational system, of information on the types of skill that they will be in a position to utilize in the near future.

The selection process raises the question of priorities in the most literal sense of the word. On the present Form A, students are asked to rank their preferences among groups of careers, and selection for Form 5

for training courses of various kinds and for direct employment takes place, on the basis of the first preference students expressed among career groups, and the first preference they gave to a particular institution within a career group. Second preferences are considered only if the representative of a school, college or firm is unable or unwilling to fill all his places from among the first preferences. (Yet, many institutions of training and many employers would undoubtedly do better to select the best available person, irrespective of ranking. This view is reinforced by the fact that, at present, students' ranking both of career groups and of institutions within a career group reflects less a genuine preference for a vocation or for an institution than a gambler's guess at what preference-ranking is likely to maximise his chances of not finishing up empty-handed). Thus the present selection system is essentially simultaneous, each group of selectors bidding in comparative ignorance of what talent is available to another group of selectors, is relatively fast, and avoids the need to establish a 'pecking-order' among groups of educational, training and employment opportunities. The first two of these arguments are easily dealt with: if the Form A were made machine-readable, the selection process would be greatly accelerated - even with sequenced selections - and the task of passing information from one selection meeting to the next would not call for administrative skills of a high order. The question of the 'pecking-order' is slightly more tricky, we hope that our proposals on this score will prove acceptable to all concerned.

The arguments for a sequenced selection process are essentially two, both of them powerful. The first one is that sequenced selection would enable each student to be considered for all opportunities for which he was qualified, thus greatly increasing the probability of available openings being filled with the best available students. Secondly, it would free the student (and those who advise him) from the need to make - inevitably ill-informed - guesses at how alternative ways of ranking his preferences might affect his chances of selection. There would be no need, if he could be sure of being considered for everything he was qualified for.

The essence of our proposals is simple, and rests on two mutually supportive suggestions. The first of these is that the selection process should be sequenced, H.S.C. selections coming first, followed by selections for three-year, two-year and one-year training courses and for direct employment in that order. The second proposal is that, instead of being asked to 'opt in' for courses and for employment they are most interested in (knowing they will be considered for no others), they should be considered, in turn, for all opportunities for which they are qualified, unless they have specifically 'opted out'. All students whose grades justified it

(and who did not 'opt out') would be considered for H.S.C.; those who were not considered and those who were unsuccessful being passed on to the next selection meeting - and so on until either all openings were filled or all students placed.

Part III - Detailed Discussion of Form A.

We may now turn to a discussion of the actual contents of Form A. This form was drawn up by the KPB and the Ministry of Education, in close consultation with the Kenya Headmasters' Association. The form has undergone certain changes since it was first introduced in 1967, and the discussion that follows relates to the version that is currently in use.

The form is divided into eleven main sections. Parts I, X and XI deal with personal details of the school leaver and do not immediately concern us. Parts II through IX offer him broad options among which he has to choose, ranking his choices numerically. Each Part is further divided into subsections, indicating specific training or employment options. Having ranked his main options (Parts II to IX) as 1-8, the student is also asked to rank his specific options within each of the eight broad option groups. One implication of this system should be noted immediately. By ranking (say) Part IV as 1, and Part IX as 2, the student is saying, in effect, that he prefers any of the 17 sub-options in Part IV to any of the 14 sub-options in Part IX. Such a "two-digit" system of preference ranking has obvious administrative and data-processing advantages; but it makes it imperative that the sub-options listed within each of the eight main options should be more closely related to one another than any one of them is to any sub-option within another main option. It also raises the question of the criterion by which occupations should be grouped, for there are several possible criteria, each with its own rationale. This issue will be discussed in a later section. We shall now turn to an evaluation of the form according to the criteria proposed in the first part of this paper.

Until the recent publication of the Careers Guide for Kenya (prepared for the Kenyanisation of Personnel Bureau by the Ministry of Economic Planning and Development), most students must have experienced great difficulty in completing Form A. There was no reliable information on what training courses and jobs were available that normally required an education up to Form 4; no description of the type and work each occupation entailed, and only hearsay knowledge of earning - and employment prospects in each occupation.

The new Careers Guide removes much of this uncertainty and, provided it can be placed in the hands of every Form 4 student, it is a great step forward. Certain weaknesses will have to be corrected in future editions (there are several occupations and training courses in Kenya that are available to Form 4 leavers, but omitted from or inadequately described in the Careers Guide); and the Guide and Form A should be made fully compatible

with one another by numbering occupations and training courses in both the Guide and Form A on the same system.

Even with the Guide, however, certain important weaknesses remain in Form A, and to these we now turn.

First criterion - clarity of the choices offered. Parts II, III and IV of the form are generally clear when read together with the new Careers Guide for Kenya. But not all the training courses offered on Form A are described in the Guide (and vice versa) and it is hard to see why this should be so. Moreover, while the nature of the courses listed is generally clear if one consults the Guide, the occupations they lead to are not always so. Nor is it made consistently clear whether the successful completion of a course normally leads to the offer of an appointment in the relevant occupation. Part V does not make clear whether it is to be treated as an application for employment (and if so, whether in the public or in the private sector or in either) or an application for a training course (and if so, where). Parts VI to IX are particularly confusing. This is so mainly because within a given Part there is often a mixture of options some of which describe an occupation, while others refer to an employer, as if these were mutually exclusive. This can get particularly worrying to the student when he has an option of choosing between "finger print technologist" (Part VI) and "Police" (Part VII), when he knows that finger print technologists are employed by the police. Occupations in the East African Community are somewhat similarly split between Parts VI and VIII, with the added problem that the form lists only five of the seventeen corporations of the Community. In our revised form we propose the amalgamation of Parts V through IX as one section. Second criterion -

knowledge of the implications of ranking options in a particular sequence. The present form does not make clear to the student that, under the present system of selection, there is little chance of him being considered for any but his first "major" choice (i.e. Part I or Part II or Part IX, as the case may be). Nor is it made clear to him that, even within a particular set of options, grouped together as one of the Parts of the form, his chances of acceptance may depend as much on his having made of good blind guess at how many others would apply for that particular course/school/job, as on his own abilities and accomplishments. He has to rely on verbal - often inevitably inaccurate - information and hearsay on how the system of placements works in practice, and has to make choices that reflect not his preferences, but his - inevitably partial - understanding of the present supply and demand situation in each of the options put before him. Thus, some first-rate students do not put Form 5 as their first option, not because it is not what they would like to do,

but because they are too diffident to back their own guess of how well they will do in their examinations - and opt for a supposedly "safe bet" instead, where they expect to face less competition.

We have already indicated that we would like to see some changes both in the timing and in the methods of selection. We shall also propose that there should be a covering note to Form A, and that this should contain a brief explanation of how the system of selection works. We welcome the attempt in the Careers Guide to indicate the chances of getting jobs in each occupation. But at the moment, these are very rough guesses and it would probably be better to print, in addition to predictions, the number of school-leavers who got such jobs last year, and how this compared with the number forecast. Meanwhile, it would be a considerable improvement on the present situation if students could feel free to state their preferences, knowing that they would be considered for all of them, and without having to fear that an unskilful ranking of their choices may prejudice their chances of being considered for anything. The function of Form A should be to elicit information about the demand for jobs and not poorly informed guesses about the supply of them.

Third and fourth criteria: whether options are comprehensive, not excessively detailed and are grouped in meaningful categories. We have already indicated that neither the courses nor the occupations listed on the present Form A are comprehensive. The form also suffers from the disadvantage that the occupational groupings are unsatisfactory: some sections contain occupations as unlike as accountant and probation officer, while occupations in the engineering field are found in three different sections. The comprehensiveness of training courses listed in Part IV is easy to achieve, and we hope that our suggested draft does so. Comprehensiveness of occupations is a much more difficult problem. Essentially, one can seek it at two levels. First, one can list all occupations that are significantly different from one another and that exist in the Kenya economy. The I.L.O.'s International Standard Classification of Occupations lists over 1500 such occupations (and about 3000 job titles). This list is as near comprehensive as one can get, but even if we omitted those occupations which do not exist in Kenya and unlikely to exist in the near future, we are still left with about 1000 occupations. This is an unmanageable number of options to put before a student. The alternative is to group the 1000 or so occupations into a much smaller number of categories that are still comprehensive (in the sense that all occupations can be fitted into some group), clear-cut (in the sense that no occupation falls into more than one group) and are meaningful and intelligible to students. Moreover, the groupings should be such that any two occupations within any broad category are more closely related to one

another than either of them is to an occupation that is in another category. This is a task of great difficulty, for it involves the finding of a criterion that enables us to separate and group occupations consistently and unambiguously; and which results in groupings that are apposite for purposes of choosing a career.)

We have considered three different approaches to this problem. The first approach rests on the assumption that occupations are extremely difficult to define unambiguously. An "engineer" can range all the way from motor-mechanic to the designer of spacecrafts; stenographer-secretaries can perform strikingly different tasks depending on the firm they are working for, etc. This approach argues that the only questions we can meaningfully ask a student relate to what he is looking for in a job (e.g. office work or manual work, a job that offers security or one that enables him to take risks that may make him or break him, etc.). Thus students would be asked not about specific occupations but about the kind of things they were looking for (or wanted to avoid) in jobs. Similarly, when employers had jobs to offer, they would be asked to characterise them in the same terms as the students had been asked to. Selection would then take place by matching up what students were looking for with what the job had to offer. This would not be difficult to do by computer; the difficulty lies in selecting "job characteristic" questions that are likely to be meaningful to the great majority both of students and of employers.

The second approach still relies on asking students a series of questions about what they are looking for (or wish to avoid) in a job. There are persuasive arguments in favour of starting this way. If what the majority of students look for in a job (or feel they are good at) can best be described by the satisfaction of 4-5 criteria, then all jobs that meet all of these criteria are acceptable substitutes for one another, for a particular group of students. Four well chosen screening questions, each with two alternative answers, would enable us to divide students into sixteen distinct groups. If jobs can also be divided into the same sixteen groups by the same set of criteria, we have achieved the twin tasks of grouping jobs in a relevant and meaningful way, and channelling each student to that set of jobs which is most likely to appeal to him. The advantage of this approach would be that it would enable the student to opt (albeit indirectly) for a specific set of occupations, which the first approach does not permit; its disadvantage is that, given the ambiguity of most job-descriptions, it is extremely difficult to group jobs into sixteen unambiguous, non-overlapping, categories.

The third approach is frankly empirical, and has none of the intellectual appeal of the other two. It involves making a list of all those occupational groups in I.S.C.O. which exist in Kenya, and which are likely to be open to Form 4 leavers, and "shuffling them around" until one ends up with

a manageable number of occupational groups (we chose eight) which appear to be fairly distinct from one another, and within which occupations bear more resemblance to each other than they do to occupations outside the group. The question of deciding which of these 3 approaches to follow is an empirical one: it involves finding out how students actually think about jobs (do they group them according to characteristics like indoor/outdoor, individualwork/team-work, etc.), and whether it is possible to divide both students and jobs according to salient job characteristics.² In order to test our ideas, we carried out a rapid survey in five secondary schools, asking some students whether they felt strongly for or against certain job-characteristics, and asking others to write essays on how they thought about the kinds of job they would or would not like to have.

Although the sample was too small, and the analysis has rapid to pursuit confident generalisation; certain tentative conclusions emerge. Most students appeared to find great difficulty in thinking about characteristics that several jobs might have in common, and saying whether this characteristic appealed to them or not. Perhaps it is not reasonable to expect most students to have preferences among varying job-characteristics in abstraction, without their being able to relate the characteristic to a group of jobs to which it applies. As most secondary school students in Kenya have but a fragmentary knowledge of the types of work they might do and of the similarities and differences among various jobs, they find it difficult to express preferences in a vacuum. In fact, many students answered the questionnaire by thinking of one particular job they know something about, and saying whether that job did or did not have certain characteristics.

² It should be emphasised that a good screening question must meet two distinct criteria. First, it must polarise students into two groups, one of which strongly seeks and the other equally strongly wishes to avoid a certain job characteristic, with only a small number of "don't mind"-s in between. Thus "would you like a high-paying or a low-paying job?" is a bad screening question, for it would not polarise students. "Would you prefer an indoor or an outdoor job?" might do so. Secondly, it must also differentiate jobs. Even if students were to care strongly about whether a job was secure, underately well paid, but dull, or varied, well paid, but risky and insecure. (and half were risk-takers, the other half risk-avoiders), this would not be enough. We would also need to know whether most employers were capable of placing most jobs into one or another of these two categories.

This is not to say that the students we surveyed do not have good reasons for liking some careers better than others. We are suggesting that what we did find out (that most students want jobs that are secure, well-paid, with reasonable working hours, offer possibilities of training and promotion, have paid holidays, employers provided housing and medical insurance) does not help us to frame questions that would polarise students. It is possible that a more thorough and skilful enquiry would uncover some job characteristics that would effectively polarise students. It is equally possible that, so long as most students are poorly informed about the world of work and their main problem is whether they find a job and not which job they will choose, no enquiry, no matter how well conceived, will uncover polarising job characteristics. We are therefore unable at present to recommend the inclusion in Form A of question concerning preferences among job characteristics, and recommend the adoption of our third alternative: an inductive grouping of available jobs.

Fifth criterion - relevance of information on student's attainments and qualities for the selection process.

We have been able to interview the personnel managers of five leading firms on what they would like to know about potential employees for purposes of shortlisting. Although our sample was small and contained only large employers, we are prepared to place considerable weight on what we learnt from these interviews. This is so first, because all the managers we had talked to had obviously given long and careful thought to these matters, before we ever interviewed them. Secondly, although we told none of our informants what we had learnt in previous interviews, the advice we received was virtually unanimous. The essence of this advice can be summed up in a number of propositions, to which we propose to give effect in our recommendations:

- a) All employers would be glad to recruit through the K.P.B. if they could specify a number of essential, and a further number of desirable, characteristics that shortlisted candidates should have, and if they could rely on receiving a shortlist that meets these criteria within a short period of submitting the request.

(Problems will still arise, because many employers, especially the smaller ones, do not really know what student attainments and characteristics they ought to be looking for; because "up-country" employers cannot personally communicate with the K.P.B.; and because up-country students find it difficult to attend interviews far from their homes, even if short-listed. These will be problems to consider once the principles of our proposals have been accepted and the stage of implementation is being reached).

- b) Most employers wished to be able to specify as a minimum requirement either the EACE division a student received, or his grade aggregate or both. The E.A.O.E. divisions are based on a rather complicated formula which most employers do not, in fact, know, whereas the grade aggregate is simply the sum of a student's six best grades (the minimum or best being 6, and the maximum or worst being 54). We are inclined to provide for the employer specifying both. At the same time, it may be worth pointing out to employers that there may be many students who may have done very well in 1-2 subjects which may be highly relevant to a particular job, in spite of getting a rather low division or poor grade aggregate. It would also be highly desirable to inform employers of the number of students who exist with certain academic characteristics, especially after the H.S.C. selections have taken place. (For instance, only a negligible proportion of those who take mathematics get a grade 1, and virtually no students get a 1 in both maths and physics. Virtually all those who get a grade of 3 or better in either subject continue their education beyond Form 4. Most employers would be wasting their time if they specified minimum requirements in ignorance of what was available.)
- c) Most employers we talked to were anxious to be able to specify that a student should have taken certain subjects, and also to specify maximum acceptable grades in these subjects. No employer wished to specify more than four subjects (and although the essential subjects varied from employer to employer, all wished to specify English and Mathematics). We shall propose, therefore, that employers should be able to specify performance in up to four subjects. The same provisions apply as to section b): employers should be told what is likely to be available before they are asked to specify what they insist on.

Our discussion so far raises one issue that we have not yet been able to resolve, and wish to submit for discussion. Our proposals presume that H.S.C. courses, and a few of the more prestigious training courses, take the cream of fourth form leavers, and that students available for direct employment will be mostly those with a result no better than a weak division two. Now it is probably true that most of those who get a first division would choose to continue their education at any price. On the other hand, it is perfectly possible that at least some employers would be willing to pay a premium to a student with a good division one, and equally possible that some students would respond to such an incentive - if they knew of it. Neither the present system of selection nor the one we proposed makes allowance for this possibility, and we would welcome suggestions on how to deal with this problem.

- d) Most employers were agreed that they placed little store by subjective assessments of students' integrity, leadership, ability to co-operate, etc.; nor did they attach much significance to the ranking of a student in his class, term by term, for all four years of secondary schooling. For this they had cogent reasons. They thought most teachers did not know their students well enough to assess their character on an A-B-C-D scale; one mentioned that, even if they did, the answers were difficult to interpret as some teachers grade everyone 'A' for integrity unless he has been caught cheating, lying or stealing, while others graded everyone 'C' unless he had done something outstandingly honest like returning valuable lost property. Most careers teachers we talked to agreed with this view, and preferred to eliminate subjective assessments from Form A. We propose that this should be done, though we are prepared to consider the inclusion of a ranking question on overall performance in the student's third and fourth year.
- e) All employers were agreed that one of the things they most wanted to know about was whether a student had held positions of leadership or not, and whether they were appointed by their teachers or elected by their fellow students. We include such questions on our draft Form A, especially as careers teachers said they would have no difficulty in providing such information.
- f) Several employers were interested in a student's extra-curricular activities, though not for the same motives. Some wished to know about participation in team activities as a predictor of who will co-operate well with his fellow employees; others were particularly interested in individual activities the student pursued on his own initiative. We make provision for the inclusion of each kind of extra-curricular activity on Form A and on the form where employers specify desirable characteristics. We also make provision for the listing of sporting activities which some employers were interested in. Information on such activities will be provided by the student, as many teachers are not conversant with their students' outside activities.

Some employers raised the question: what should be done if, on the basis of their minimum criteria the computer selects many more qualified candidates than he would wish to interview. All those with whom we discussed this problem agreed on the desirability of building into the selection programme a "second elimination device" which would be capable of narrowing the list to the required number. Thus, for instance, if one of the employer's

minimum criteria was that all candidates should have taken mathematics and passed, his excessive shortlist would contain persons with maths grades ranging from 8 to 1. The second elimination could then be on the maths grade only: i.e. the computer could be instructed to eliminate progressively those with grades of 8-7-6-5 etc., until the required number was reached. We intend to make provision for this contingency in our programme, and, to take account of the possibility that one "elimination device" may be insufficient to reduce applicants to the required number, we intend to make provision for two elimination devices, with the employer specifying which should be used first.

Our draft of the employer's job-specification form appears at the end of this paper as Appendix III.

The reader should note that not all parts of the personal details section of Form A can be made machine-readable. We can make machine-readable whether or not a student held positions of leadership in his school, whether or not these were elective, and whether or not he had outside interests of various kinds - but not what these positions and activities were. As employers are likely to ^{want to} have this information and to see the headmaster's general comments for those candidates whom they have decided to short-list, we propose that the personal details section of Form A should be xeroxed for the use of employers - but only in respect of short-listed candidates.

Sixth criterion - machine readability of all essential information contained on Form A.

The problems and difficulties that currently obstruct the efficient processing of Form A-s are due quite as much to the fact that the forms have to be sorted by hand as to the fact that their design is imperfect. One has only to think of the work involved in sorting through 20,000 forms by hand to find (say) those 12 students who got a grade one in mathematics, chemistry and biology and had the lowest grade aggregates overall, to see that no matter how simple and concrete employers' requests may be, the KPB is not in a position to fulfil them until the information of Form A-s is machine-readable and - sortable. If this view (and our related proposals on sequencing the selection process) is accepted, we shall go on to the next step and propose exact procedures for processing and handling information that appears on Form A, and estimate the manpower implications of setting up such a system. Meanwhile, it may be worth mentioning that our draft of Form A was designed with machine-readability in mind, and that most of the information it contains would go onto one punch-card, thus permitting the use not only of the computer but also of the far simpler less expensive, (and often much faster) card counter-sorter.

Should the Government decide to implement these proposals, the Institute for Development Studies would be prepared to provide staff to help write the necessary computer programmes, and to train the staff of the K.P.B. and the

Ministry of Education in their use and in the use of a counter-sorter.

It should be added that we are not recommending an "instant switch" from the present system of hand-sorting to computers. We would recommend that K.P.B. and Ministry of Education staff should first be trained in the use of punch-cards on counter-sorters (this should be combined with a test-run of the draft Form A), and that the computer programme should be tested (again, in conjunction with a second test-run of Form A) when staff are fully conversant with the counter-sorter. This would ensure that, when the scheme finally goes into full operation, both Form A and the computer programme will have been adequately tested, and required staff properly trained.

The reader's attention is drawn to the fact that subjects taken and results achieved in the E.A.C.E. examinations do not appear on the draft Form A. This is because these can be transferred direct from the computer-tape of examination results to the computer tape or punch-cards made from Form A-s, and then printed out as required. However, should it be thought desirable, we could make provision for the inclusion of subjects taken on Form A.

IV - The Process of Selection and Placement.

In parts I and II of this paper we considered certain criteria of efficiency that Form A and the subsequent series of selection processes ought to meet. In part III we evaluated the present Form A against these criteria, and suggested certain changes which, if made, would aid the K.P.B. and the Ministry of Education in their task of selecting students for further education, training and employment. We now summarise our views on the selection process.

We have already indicated in Part II above that the present selection system suffers from certain weaknesses. The most important of these is that at present, school leavers can be certain only of being considered for their first preference. At present, it is possible - indeed likely - that many institutions of further education and training do not get the best students that are available, and that many of those who are accepted for some course or other are less well qualified than a good number of those who are not. We have also suggested that the best way of improving upon this system lay in holding the various selections in an agreed sequence, each meeting considering the claims of all those who have not previously been considered, or who were turned down by a preceding selection meeting and who had expressed an interest in being so considered. We also recommend that the burden of this live meeting be made as light as possible, by using a computer or card-sorter to select those applicants who passed minimal objective criteria for each level of training. These criteria would be established by representatives of the courses, and would probably include minimum division on E.A.C.E., or courses taken, or grades in selected subjects.

Our tentative suggestion (incorporated in our suggested draft of a revised Form A) is that selections should take place in five stages. Form 5 selections would come first, followed by three-year, two-year and one-year training courses, and finally by selections for direct employment. Candidates would be entitled to be considered for each of these broad options in turn, unless they specifically opted out by not completing one or more of the sections of the form. Within each section they would be able to select - and rank - up to four options, but they would not be asked to rank the sections themselves, as these would already be implicitly ranked by the sequencing of the selection process.³ The flow-chart in Appendix I illustrates the proposed selection process diagrammatically.

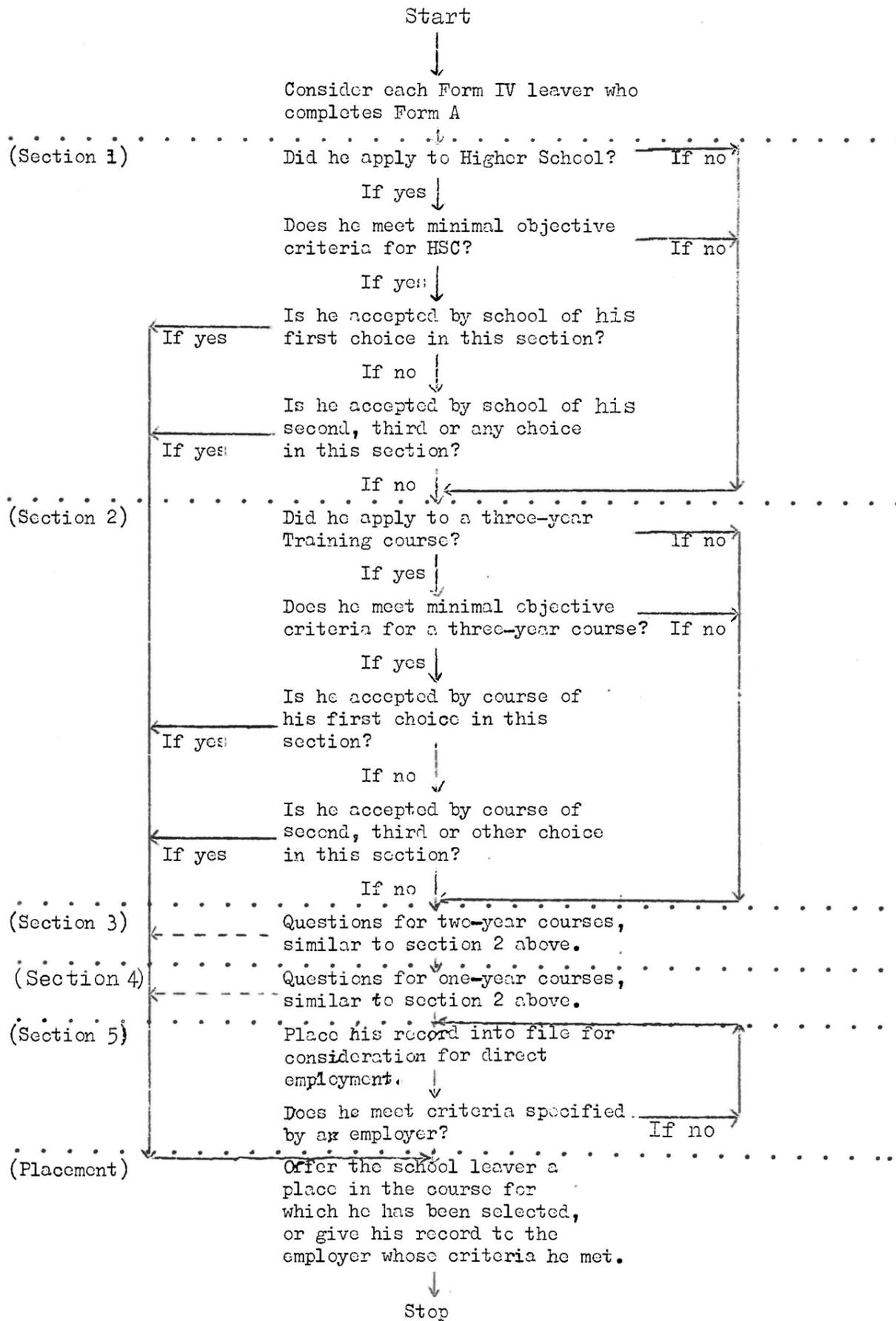
While the adoption of these procedures would eliminate most of the disadvantages of the present system (and result in a shorter and simpler Form A), certain problems would still remain. The most important of these is that, although most occupations that are potentially open to persons whose general education did not go beyond Form 4, require some further vocational training, there are altogether too few firms that have taken the trouble of providing or sponsoring such schemes. Post-school vocational training in Kenya is still inadequate both in scale and in contents. It may not be altogether unfair to suggest that private industry and commerce - and to some extent even the public sector - are only just beginning to face the fact that they cannot continue to rely on non-citizen skilled labour for very much longer. We do not wish to anticipate the findings of the Inter-Ministerial Committee on Post School Training, but it would be surprising if it did not recommend a substantial expansion in the scale of vocational training for almost every industrial and commercial skill that is now employed in the Kenya economy. Fortunately, the imminent introduction of an industrial levy should provide the larger part of the financial resources that will be required for an effective policy of manpower development.

We hope that the KPB will be in a position to provide active leadership and guidance in the development of vocational education and training, thus supplementing its present placement activities by an active policy of creating new avenues of training and employment. If it were to assume the task of monitoring the training needs of all sectors of the economy, fostering the formulation of training schemes and policies throughout the economy wherever they were needed, as well as undertaking the development of effective selection procedures, it would be discharging functions that would place the whole economy - and not merely the school leavers - in its debt.

³Our proposed Form A, in Part II Section 6, does ask students to indicate which section is their overall first choice. This answer will be used to measure whether the proposed ranking of sections is satisfactory. If, as the authors believe, the ranking is satisfactory for all but a small minority of the students, then a special allowance could be made for these few students by offering them places in more than one training course.

PROPOSED FORM A

Illustration of the Proposed Selection Process



Appendix II - I

Suggested detachable covering note to Form A.

This form has been designed to help you express your career preferences, and to help us place you in some form of training or employment that you would like. Before filling it in, study carefully both this form and the attached list of Opportunities in Further Education Training and Employment Open to Form 4 Leavers. Consult your careers master if there is anything you are not clear about.

This form is divided into six parts. You will complete Parts I, II, and III, and your headmaster Parts IV, V and VI. In Part I, you should furnish the personal data requested in the spaces provided. It is essential that the examination number be correct, for your Form A will be filed according to it. In Part II, you are asked to rank your preferences for various types of training courses and direct employment. Section 1 refers to Higher School Certificate courses. Section 2 refers to three-year courses of professional training in teaching, agriculture and health. Section 3 refers to a wide range of two-year professional courses, and Section 4 refers to one year courses. All these courses are offered in government training institutions and - with the exception of H.S.C. - normally lead to employment in a government department. Section 5 refers to employment opportunities likely to arise in government or in the private sector (other than those referred to above). Many of these occupations require some training for their adequate performance: normally this will be provided by your employer after he has engaged you. A full list of the opportunities that may be open to you appears on a separate sheet.

In each section of this form you may express up to four preferences from among the options that are open to you. You don't have to choose four: you can choose fewer, or you may even leave a whole section blank if you are not interested in the particular options in that section.

Your first three choices in each section must be specific course or institution. Your fourth choice may be another specific choice, or a category, "any one of the institutions in the above group". These categories which may be used only as fourth choices are marked with an asterisk.

In part III you should briefly list and describe your activities and interests.

Appendix II - 2

Opportunities in Further Education, Training and Employment Open to Form 4
L e a v e r s

(Note * = this option may be used only as a fourth choice in its section).

Section I. - H.S.C. Schools.

01)
02) Alphabetical list of H.S.C. Schools
etc.)

* 99 Any other H.S.C. school

Section 2 - Three Year Training Courses.

01 Egerton College (Agriculture)
02 Londiani Forestry Training School
03 Kenyatta College - 'Arts' teacher
04 Kenyatta College - Science teacher
05 Kenya Science Teachers College
06 Kenya Polytechnic - Technical teacher
07 Medical Training Centre (medical assistant, registered nurse,
physiotherapist, occupational therapist, health inspector); and
Kenyatta National Hospital, Nairobi Hospital and Aga Khan Platinum
Jubilee Hospital (registered Nurse)
08 Medical Training Centre (radiographer, laboratory technician,
dental technician)

* 99 Any three year training course

Section 3 - Two Year Training Courses.

01)
02) Alphabetical list of P.1 Teacher Training Colleges
etc.)

* 39 any P.1 T.T.C.

* 49 Would accept admission to P.2 T.T.C.

51 Egerton College (Dairy technology)
52 Embu Institute of Agriculture
53 Animal Health Industry Training Institute
54 African Wildlife Management College (park warden)

* 59 Any one of agricultural courses 51-54

61 Mombasa Technical Institute (business studies)
71 Kenya Institute of Administration (Social Worker)
72 Kenya Institute of Administration (Admin. & financial courses)
81 Kenya Institute of Mass Communications (Engineering technician
and radio operator)

Opportunities, cont'd.Section 4 - One Year Training Courses.

- 01 Government Secretarial College Nairobi
- 02 Coast Secretarial College, Mombasa
- 03 Kenya Polytechnic (Secretarial & office practice)
- * 09 Any one of secretarial courses 01-03
 - 11 Hides & Skins Training Centre, Athi River
 - 12 Fisheries Training School Mombasa
 - 13 African Wildlife Management College (game scout, ranger)
 - 14 Londiani Forest Training School (forest ranger, guard)
- * 19 Any one of agricultural course 11-14

Section 5 - Opportunities for Direct Employment.

- 1. Technical Workers. (mathematical & science skills important)
 - 1.1. Draughtsman
 - 1.2. Engineering computer and physical sciences technician
 - 1.3. Biological sciences technician
 - * 1.9 Any occupation in the "1 group"
- 2. Craft and Production Workers. (Manual and science skills important)
 - 2.1 Building trades workers (incl. carpenters & joiners, masons, bricklayers, painters).
 - 2.2. Metal workers (incl. machine-tool setters & operators, blacksmiths, welders and plumbers).
 - 2.3. Electrical & electronics workers
 - 2.4 Motor mechanics & fitters
 - 2.5 Textile & leather workers
 - 2.6 Printers and photographic workers
 - 2.7 Vehicle operators (incl. drivers of trains, buses, lorries, cars, cranes or earth-moving equipment)
 - 2.8 Other production workers (incl. chemical, food and tobacco industries)
 - * 2.9 Any occupation in the "2 group"
- 3. Service Workers. (Verbal and social skills important)
 - 3.1 Hotel and restaurant workers and workers in other catering establishments
 - 3.2 Tour guides and related skills in tourism
 - 3.3 Hairdressers and barbers (including beauticians)
 - * 3.9 Any occupation in the "3 group"
- 4. Sales Workers (Social and verbal skills important; science background useful)
 - 4.1 Sales representatives (incl. insurance salesmen)
 - 4.2 Salesmen & shop assistants
 - * 4.9 Any occupation in the "4 group"

5. Clerical Workers. (Verbal and mathematical skills important)
 - 5.1 Secretaries (incl. stenographers, typists, receptionist & similar skills)
 - 5.2 Book-keepers, accounts-clerks and cashiers
 - 5.3 Statistical assistants and office machine operators
 - 5.4 Junior executive officers
 - * 5.9 Any occupation in the "5 group"
6. Professional Workers. (Verbal skills important)
 - 6.1 Journalist (incl. related skills in broadcasting, television and advertising)
 - 6.2 Librarian
 - * 6.9 Any occupation in the "6 group"
7. Agricultural Workers. (Manual skills and some science background helpful)
 - 7.1 Workers in farming, forestry and fishing, and game management
8. Protective Service Workers.
 - 8.1 Armed forces, police, prisons, fire-fighting services
- * 9.9 Any occupation (no preference)

Proposed Form A

Application for Admission to Post-School Certificate Courses and Employment

Part I - Personal Data

Family/Surname

Other names

School

School Address

Home Address of Student

Contact Address after Dec.

Examination Number		
Centre	Index No.	Year
Date of birth		
Date	Month	Year
Sex	Citizenship	

Part II - Application for Training or Employment

Section 1. Higher School Certificate Courses. (If you wish to be considered for H.S.C. , list schools below, in order of preference).

- | | |
|----|----|
| 1. | 2. |
| 3. | 4. |

Rank your preferences (by 1, 2, and 3) among the following types of H.S.C. courses:

Arts _____ Science _____ Mixed Arts/Science _____

Section 2. Three-year training courses. (If you wish to be considered for courses in this section, list your choices, in order of preference, below).

- | | |
|----|----|
| 1. | 2. |
| 3. | 4. |

Section 3. Two-year training courses. (If you wish to be considered for courses in this section, list your choices below, in order of preference).

- | | |
|----|----|
| 1. | 2. |
| 3. | 4. |

Section 4. One - year training courses. (If you wish to be considered for courses in this section, list your choices below, in order of preference).

- | | |
|----|----|
| 1. | 2. |
| 3. | 4. |

Section 5. Direct employment and employer-sponsored training. (If you wish to be considered for placement into employment or employer sponsored training, list the types of job you would like, in order of preference).

- | | |
|----|----|
| 1. | 2. |
| 3. | 4. |

If you could choose the type of employer, which would you prefer:

Public sector _____ Private Sector _____ No preference _____

Section 6. Overall preference. Which section above is your overall first preference? _____

Part III Activities and interests

a) List any organized clubs or groups in which you have been active in the past two years (more than an hour a week):

b) List any other activities or hobbies on which you spent time:

Proposed Form A (Continued)

The Following Parts are to be Completed by the Headmaster

Part IV. Offices held. Please supply the information requested below on any offices held by the student. List sports separately.

1. Elected offices. (Student elected to leadership by fellow students).

Name of office	Duties involved	Student's performance §
----------------	-----------------	-------------------------
2. Appointed offices. (Student appointed by teacher or headmaster).

Name of office	Duties involved	Student's performance §
----------------	-----------------	-------------------------
3. Sports

Name of office	Duties involved	Student's performance §
----------------	-----------------	-------------------------

§ Note: Please indicate quality of each performance as follows:
 2 = Outstanding. 1 = Satisfactory. 0 = Unsatisfactory.

Part V. Student's record. Taking all subjects together, indicate in which quarter of his form the student ranked.

(1 = First (Top) Quarter; 2 = Second Quarter; 3 = Third Quarter;
 4 = Fourth (Last) Quarter).

Form III Quarter: _____ Number of students in Form: _____
 Form IV Quarter: _____ Number of students in Form: _____

Part VI. General Comments of Headmaster. (Write below any comments on the student's character, special qualities or weaknesses).

Date: _____ Signed: _____

Employer's Specification Form:

covering note.

The attached form enables you to specify the number of vacancies you wish to fill; the number of candidates you wish to short-list for interview, and the minimum qualifications of candidates to be shortlisted. We shall send you the names, addresses and personal details only of such candidates as meet your minimum specifications, and not more than you wish to short-list.

You may specify, as minimum requirements the following:

- a. E.A.C.E. Division: 1,2,3, E.A.C.E., or Fail
- b. Grade Aggregate: this is the sum of a student's grades in his six best subjects. It can range from 6 (all distinctions) to 54 (all fails). Please specify as "not more than"
- c. Performance in up to four subjects: Subject grades range from 1 to 9. (9 = fail). For each one of up to 4 subjects you specify a candidate must have taken, you may also specify the highest acceptable grade. Note that if you specify a subject as a minimum requirement, no student will be considered unless he sat the EACE examination in that subject.
- d. Leadership positions held: You may specify as a minimum requirement whether or not a candidate held an appointed or an elected leadership position, or both. (From the xerox copy of the personal details section of Form A for short-listed candidates which will be sent to you, you can also find out what these positions were.)
- e. Participation in out-of-school activities: You may specify as a minimum requirement that a candidate should have been active in out-of-school activities (either group activities or activities he did on his own, or both). A xerox copy of the personal details section of Form A will tell you what these were.
- f. Participation in sport: You may, if you wish, specify active participation in sport as a minimum requirement.

Please note that you do not need to specify any or all of the above. If any of the information a - e above is of no great interest to you as a selection criterion, leave it blank on the form: specify only those things that really matter to you.

In case the search for candidates who meet your minimum requirements results in a larger number than you said you wished to interview, you may specify one or more of any of the selection criteria as a "second elimination device" by placing a tick against that criterion in the last column of the form. (For instance, if your minimum requirements were a pass (=8) in Maths and Physics, and you ticked these subjects in the last column, we shall progressively eliminate those with marks of 8,7,6, etc., until the desired number of students only is left. The "second elimination" criteria may be items 1,2, and 3, and those sections of items 4,5, and 6 not used as "requirements".

Employer's Specification Form.

Name & Address of Employer:

Name and Title of Officer requesting information:

Title of job you intend to fill:

Number of vacancies in this job:

How many applicants do you wish us to short-list? (We will short-list ten applicants per vacancy unless you request otherwise).

Minimum Requirements for Short-listing

	Minimum Requirement = not worse than ;	Second Elimination
1. E.A.C.E. Division	<input type="text"/>
2. Grade Aggregate	Minimum Requirement = not worse than: <input type="text"/>
3. Performance in the following 4 subjects:	Minimum Requirement = not worse than grade	
a.	<input type="text"/>
b.	<input type="text"/>
c.	<input type="text"/>	
d.	<input type="text"/>	
4. Leadership positions held	Is this a minimum requirement? (Answer yes or no)	
(a) Appointed	<input type="text"/>
(b) Elected	<input type="text"/>
5. Participation in out of school activities	Is this a minimum requirement? (Answer yes or no)	
(a) Group activities	<input type="text"/>
(b) Other activities	<input type="text"/>
Participation in sport	Is this a minimum requirement? (Answer yes or no)	
	<input type="text"/>

APPENDIX IV

Summary of Form IV Placement

Output - 1969 Form IV enrollment (citizens only)		<u><u>16,550</u></u>
<u>Vacancies</u>		
I Form V		2,300
II Three-year courses		
1. Teaching (Sec.)	510	
2. Technical Training	450	
3. Agricultural	230	
4. Medical	<u>560</u>	1,750
III Two-year courses		
1. Pl Teacher	830	
2. Agriculture	410	
3. Technical	390	
4. Social	<u>20</u>	1,650
IV One year courses		
1. Fishing	20	
2. Secretarial	100	
3. Agricultural (est.)	<u>50</u>	<u>170</u>
		5,870
V Direct employment (modern non-agric.)		
1. Growth-average rate 1967-69 of jobs (2.8%) non-agric. (448,500)	12,500	
2. Wastage 10% (10 year work span)	<u>45,000</u>	
	57,500	
Proportion of jobs requiring Form IV (i.e. - class D) as % of total non-agricultural employment	<u>x 7.8%</u>	4,450
VI Remainder		
Form IV, citizen school leavers (Unemployed, self employed, working family enterprise, agriculture, or semi-skilled wage employment, or take training in privately-operated course)		6,230
		<u>16,550</u> =====

Note: The above placement figures were derived by the authors from enrollments, projections, or actual growth rates of places in training institutions and employment from the 1969-1974 Development Plan, and the 1970 Economic Survey.

Not counted in the tabulation above are non-citizen Form IV leavers, and "private" candidates for the E.A.C.E. examination. In total there were 17,279 students enrolled in Form IV in 1969, and 20,918 candidates for the E. African Certificate of Education.